FUSRAP
Maywood Superfund Site

Groundwater Remedial Investigation Report

Volume 1
Report Text and Tables

Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

Prepared for:

US Army Corps
of Engineers®

Contract No. DACW41-99-D-9001

July 2005, Revision 4

FINAL
GROUNDWATER REMEDIAL INVESTIGATION REPORT

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, NEW JERSEY

SITE-SPECIFIC ENVIRONMENTAL RESTORATION
CONTRACT No. DACW41-99-D-9001
TASK ORDER 0004
WAD 01

Submitted to:

Department of the Army
U.S. Army Engineer District, New York
Corps of Engineers
FUSRAP Project Office
26 Federal Plaza
New York, New York 10278

Department of the Army
U.S. Army Engineer District, Kansas City
Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106

Submitted by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

July 2005
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U.S. Army Engineer District, Kansas City
Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106

Submitted by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

July 2005
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Reviewed/Approved by: _____ Date: 7/19/05
Andy Mills
Project Manager

Reviewed/Approved by: _____ Date: 7/19/05
Maurice Hanashy
Contractor Quality Control System Manager

Reviewed/Approved by: _____ Date: 7/13/05
Gary Gaillot, P.G., CGWP
Groundwater Task Manager

Reviewed/Approved by: _____ Date: 7/18/05
Robert DeMott, P.G.
Project Hydrogeologist

Prepared/Approved by: _____ Date: 7-7-05
Michael R. Kulbersh, P.H.G.
Hydrogeologist

Prepared/Approved by: _____ Date: 7-11-05
Kenneth J. Goldstein, CGWP
Malcolm Pirnie Project Manager

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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

µg/L	microgram per liter
Af	Artificial Fill
ALT	Advance Logic Technologies
ANL	Argonne National Laboratory
AOC	Area of Concern
ATV	Acoustic Televiewer
bgs	Below Ground Surface
BOD	Biochemical Oxygen Demand
BNI	Bechtel National, Inc.
BRA	Baseline Risk Assessment
BSA	Bureau of Site Assessment
BTEX	benzene, toluene, ethyl benzene, and xylene
Btu/lb	British Thermal Units per Pound
CD	compact disk
CDQMP	Chemical Data Quality Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CFU/mL	Colony Forming Units per milliliter
CH_4	Methane
cm/s	centimeters per second
COC	Contaminant of Concern
COD	Chemical Oxygen Demand
COPC	Contaminant of Potential Concern
dbf	database format
DCE	dichloroethene
DO	dissolved oxygen
DOE	United States Department of Energy
DQO	Data Quality Objective
EDSA	Electronic Data Submittal Application
EE/CA	Engineering Evaluation/Cost Analysis
EMP	Environmental Monitoring Program
EPA	United States Environmental Protection Agency
Fe_{dis}	Iron Dissolved
Fe_{solid}	Precipitated Iron
Fe_{Tot}	Iron Total
FFA	Federal Facilities Agreement
FMSS	FUSRAP Maywood Superfund Site
ft/day	feet per day
ft/ft	feet per foot
FUSRAP	Formerly Utilized Sites Remedial Action Program
Geoprobe® or Geoprobe	Denotes a Registered Trademark
gm/cc	gram per cubic centimeter
GMS	Groundwater Modeling System
gpd/ft	gallons per day per foot
gpm	gallons per minute
GPR	Ground Penetrating Radar
GWQC	Groundwater Quality Criteria
GWRI	Groundwater Remedial Investigation

GWRIWP	Groundwater Remedial Investigation Work Plan
H	Henry's Law Constant
HPLC	High Purity Liquid Chromatographic
IGWC	Impact to Groundwater Criteria
IDL	instrument detection limit
K-40	potassium-40
KCS	Known Contaminated Sites
Kestrel	Kestrel Environmental Technologies, Inc.
Kd	soil distribution coefficient
km^2	square kilometers
LMAS	Leaky Multi-Unit Aquifer System
m	meter(s)
m^3/s	cubic meters per second
MBtu/hr	million British Thermal Units per hour
MCA	Methods for Chemical Analysis
MCL	Maximum Contaminant Level
MCW	Maywood Chemical Works
MDA	Minimum Detectable Activity
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter
MGD	million gallons per day
MISS	Maywood Interim Storage Site
mL/g	milliliters per gram
mL/m	milliliters per minute
mm Hg	Millimeters mercury
MNA	Monitored Natural Attenuation
MN_{dis}	Manganese Dissolved
MN_{Tot}	Manganese Total
mrem/yr	millirems per year
MSL	Mean Sea Level
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MW	monitoring well
NAD	normalized absolute difference
NE	Northeast Azimuth
NGVD	National Geodetic Vertical Datum
NH_4^+	Ammonia
NO_3^-	nitrate
NJ	New Jersey
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NJGS	New Jersey Geological Survey
NJSA	New Jersey Statutes Annotated
NNE	North Northeast Azimuth
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NTU	Nephelometric Turbidity Units
NW	Northwest Azimuth
NYSW	New York Susquehanna & Western Railway Corporation
ORP	oxidation-reduction potential
OU	Operable Unit

PAHs	polycyclic aromatic hydrocarbons
PAR	Pathways Analysis Report
PARCCS	precision, accuracy, representativeness, comparability, completeness, and sensitivity
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
pCi/g	picocuries per gram
pCi/µg	picocuries per microgram
pCi/L	picocuries per liter
PDI	Preliminary Design Investigation
PET	polyethylene terephthalate
PID	Photoionization Detector
ppb	parts per billion
ppm	parts per million
PQL	Practical Quantitation Limit
PRG	Preliminary Remediation Goal
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
Qor	Quaternary Oradell Terrace Deposits
Qpr	Quaternary Glacial Lake Paramus Deposits
Qst	Quaternary Stream Terrace Deposits
Qt	Quaternary Glacial Till Deposits
Ra	radium
Ra-226	radium-226
Ra-228	radium-228
RCRA	Resource Conservation and Recovery Act
Rd	distribution ratio
redox	reduction/oxidation
REE	Maywood Rare Earth Elements (Cerium, Dysprosium, Lanthanum, Neodymium, and Yttrium) List
Region IX	U.S. Environmental Protection Agency Region IX
RESRAD	Residual Radioactivity
Rf	retardation coefficients
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
Rn-220	radon-220
Rn-222	radon-222
ROD	Record of Decision
RPSC	Rochelle Park Swim Club
S^{-2}	sulfide
SE	Southeast Azimuth
Shaw	Shaw Environmental, Inc.
SM	Standard Methods
SO_4^{-2}	sulfate
SP	spontaneous potential
SPR	single-point resistance
SSL	Soil Screening Level
SSW	South Southwest Azimuth
SU	Standard Unit
SVOC	Semi-Volatile Organic Compound
SW	Southwest Azimuth
SWQC	Surface Water Quality Criteria

SWQS	Surface Water Quality Standards
TAL	Target Analyte List
TCA	trichloroethane
TCE	trichloroethene
TCL	Target Compound List Organics (VOCs, SVOCs, Pesticides/PCBs)
TCLP	toxicity characteristic leaching procedure
Th	thorium
THOD	Theoretical Oxygen Demand
Th-232	thorium-232
U-238	uranium-238
$U_{(tot)}$	Total Uranium
USACE	United States Army Corps of Engineers
USCS	Unified Soil Classification System
USGS	United States Geological Survey
Validata	Validata Chemical Services, Inc.
VC	vinyl chloride
VOC	Volatile Organic Compound
WNW	West Northwest Azimuth
yd^3	cubic yard

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

Shaw Environmental, Inc. (Shaw) is under contract to the U.S. Army Corps of Engineers (USACE) for the environmental restoration of the Formerly Utilized Sites Remedial Action Program (FUSRAP) Maywood Superfund Site (FMSS). This *Groundwater Remedial Investigation* (GWRI) *Report* documents the findings of work performed at the FMSS. The FMSS consists of property owned by the Federal Government, the Stepan Company, and other government, commercial, and private properties in Maywood, Lodi, and Rochelle Park, New Jersey (NJ). Shaw prepared this *GWRI Report* for the USACE based on the December 2000 *GWRI Work Plan* (GWRIWP) (USACE 2000b), *GWRI Pump Test Work Plan* (USACE 2001b), recommendations outlined in the *Draft Phase I - Groundwater Data Report* (USACE 2000a), GWRI Addendum Work Plan (USACE 2002) and various Technical Memoranda/Position Papers approved by the Regulators. A summary of the Physical Characteristics, Analytical Results, Nature and Extent of Contamination, and Fate & Transport along with Recommendations are presented as follows:

ES.2 PHYSICAL CHARACTERISTICS

- Five subsurface overburden units were mapped from well and Geoprobe® data. Overburden reaches a maximum thickness of 36.0 feet at the southern corner of the FMSS. Overburden locally thins against bedrock highs located along the northeastern boundary of the FMSS, and areas southwest and southeast of the Maywood Interim Storage Site (MISS).
- Evaluation of bedrock cores show that most fractures are associated with open bedrock bedding planes. Water bearing fractures both show a dominant north-northeast azimuth (NNE) strike and shallow (7-15 degree) northwest azimuth (NW) dip, which is consistent with the bedding plane orientation. Measured fracture density was greatest in the upper 10 feet of borehole, and decreased with depth to 25 feet, below which the fracture density remained the same.
- The technical literature and field observations predominantly support the Leaky Multi Unit Aquifer System (LMAS) bedrock aquifer model (with a weathered shallow zone), with a significant component of the "near vertical joints" model (Michalski and Britton, 1997). The shallow and deep bedrock zones would be hydraulically connected by a network of discontinuous, but interconnected bedding plane and high angle joint fractures, and typically show unconfined conditions in overburden and shallow/deep bedrock cluster wells.
- A comprehensive water level measurement round was conducted on July 26, 2001, which included all shallow and deep bedrock wells within the FMSS. Bedrock groundwater flow on the MISS is predominantly west-southwest towards the Saddle River. The bedrock groundwater contours closely follow the bedrock topography, and indicates that shallow (bedrock) aquifer is under water table conditions.
- A total of 20 bedrock wells were packer tested, with a median permeability of 6.9×10^{-4} cm/s. Short-term aquifer tests were performed during development of nine bedrock test wells/piezometers, and obtained a median permeability of 1.63×10^{-3} cm/s. The bedrock linear seepage velocity is estimated in the range of 0.43 to 1.01 feet per day (ft/day), based upon an average FMSS gradient of 0.0109 ft/ft. The calculated range of shallow bedrock velocities is comparable to the 0.3 to 2 ft/day range reported by the U.S. Department of Energy (DOE 1992).
- Local MISS groundwater flow varies from northwest to southwest, and has an average overburden groundwater gradient of 0.0085 ft/ft. The overburden aquifer underlies the MISS,

149-151 Maywood Avenue Property and parts of the adjacent Stepan Company property, and extends downgradient of the MISS to the Saddle River. The overburden aquifer ranges in thickness from 0 to 36 feet, and is absent in a large area of the FMSS.

- In-situ aquifer slug testing was conducted in 35 USACE and Stepan Company overburden monitoring wells to determine the hydraulic conductivity of the overburden aquifer. The geometric mean hydraulic conductivity of the overburden aquifer is 8.7×10^{-4} cm/s. A pumping test was conducted at test well OVPW-1S, and obtained a permeability of 6.48×10^{-3} cm/s. The resultant overburden seepage velocity is 1 ft/day, which is comparable to the 0.55 ft/day velocity reported by DOE (DOE 1992).
- Most overburden/bedrock well clusters on the MISS show a downward groundwater gradients, whereas other clusters located further downgradient in Rochelle Park and Lodi show net upward gradients.
- A video-inspection survey was completed on portions of the Lodi Brook and Westerly Brook that are routed through subsurface concrete culvert pipes. The survey found that the Westerly Brook pipe leaks heavily at open and cracked joints, and that groundwater is infiltrating into Westerly Brook through open joints in the culvert pipe.

ES.3 ANALYTICAL RESULTS

- Results of the individual isotopes for radium (Ra-226 and Ra-228) and uranium (U-234, U-235, and U-238) were summed for comparison to the respective total radium and total uranium Federal/State Maximum Contaminant Level (MCL). Although there is no Federal/State MCL for individual thorium isotopes, the isotopes are alpha emitters, and the total thorium results were compared to gross alpha Federal/State MCL. Lithium groundwater concentrations were compared to the U.S. Environmental Protection Agency (EPA) Region IX (Region IX) Preliminary Remediation Goal (PRG) for tap water, which is 730 µg/L.
- Phase I Geoprobe® radiological samples were not filtered in the field. Geoprobe® groundwater samples reported very high turbidity (>999 Nephelometric Turbidity Units [NTU]) during purging and sampling. A comparison of unfiltered and filtered total radium Geoprobe® data show higher measured activity at 9 of 10 unfiltered samples, and 7 of 10 unfiltered and filtered thorium samples. These data indicates that the majority of total radium and total thorium activity measured in unfiltered (turbid) Geoprobe® samples may be derived from sediments or colloids entrained in the groundwater sample.
- Gross alpha and gross beta analysis was added to the Phase II sampling program. Filtered radiological samples were also collected during Phase II sampling if well turbidity exceeded 50 NTU during purging. Gross alpha values were adjusted for total uranium activity.
- Batch sorption (soil distribution) testing was conducted to measure the potential for site radiological constituents (Ra-226, thorium-232 [Th-232], and U-238) and metals (arsenic, chromium, and lithium) to sorb to site soils or leach to groundwater. The test data indicates that chromium and Th-232 are tightly sorbed to the soil matrix, and would not be mobile in the environment. Uranium-238 (U-238) and radium-226 (Ra-226) would be moderately sorbed to soils and somewhat more mobile in the environment. Lithium would sorb weakly to soil and be mobile in the environment.
- Background soil and groundwater benzene data was evaluated as part of the Supplemental Investigation to identify potential benzene source areas and determine the historical plume concentrations and dimensions over time. Evaluation of soil and overburden groundwater data also did not show any evidence of a former benzene source to the bedrock aquifer. Historical

bedrock benzene data shows intermittent benzene exceedances at bedrock wells in the area of the current plotted plume, and indicates the existence of a MISS bedrock benzene plume from the start of sampling in 1985.

- Biogeochemical sampling was conducted during the Supplemental Investigation to characterize the bedrock aquifer reduction/oxidation (redox) conditions and microbial activity. Biogeochemical sampling data show strongly reduced groundwater conditions, high Chemical Oxygen Demand (COD)/Biochemical Oxygen Demand (BOD), and utilization of alternative electron acceptors in benzene-impacted wells. These data suggests ongoing anaerobic degradation of benzene in plume areas, and probable aerobic degradation along the plume fringe.

ES.4 NATURE AND EXTENT OF CONTAMINATION

- GWRI Phase II overburden groundwater exceedances include total radium, total uranium, gross alpha, arsenic, barium, cadmium, chromium, lead, lithium, thallium, benzene, xylene, PCE, TCE, 1,2-DCE and vinyl chloride (VC). Bedrock groundwater exceedances included total radium, adjusted gross alpha, adjusted gross beta, arsenic, barium, boron, chromium, lithium, thallium, benzene, toluene, tetrachloroethene (PCE), trichloroethylene (TCE), 1,2-dichloroethene (1,2-DCE), 1,1-dichloroethene (1,1-DCE), and VC.
- PCE (and other degradation products) were detected in 12 overburden and 18 bedrock wells in Rochelle Park. PCE was detected in 5 of 55 and 18 of 71 overburden and bedrock groundwater samples at concentrations exceeding the Federal/State MCL. Large overburden and bedrock PCE, TCE and DCE plumes are plotted in Maywood and Rochelle Park, and cut the northwest portion of the MISS. The probable source of both the overburden and bedrock plumes is the 158 West Central Avenue property.
- A total of 35 Ra-226 + Th-232 and 2 U-238 exceedances were detected. Soil metal results were compared to site specific soil screening levels (SSLs) and found exceedances of antimony (1 exceedance), arsenic (3), cadmium (1), chromium (12), copper (1), lead (2), lithium (17), mercury (5), nickel (1), selenium (1) and thallium (1). VOC soil exceedances of the EPA Generic SSLs include benzene (2), carbon tetrachloride (1) and methylene chloride (5).
- Twenty-one (21) surface water samples were submitted for radiological and chemical analysis from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. Three total radium surface water exceedances were detected in Lodi Brook. Surface water metals data was compared to the more stringent of the New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria (SWQC) and Federal Freshwater Ambient Water Quality Criteria (both chronic and acute). Low level exceedances were reported for aluminum (5), arsenic (11), copper (10), iron (4), lead (7), silver (2), thallium (2) and zinc (1).
- Twenty-two (22) sediment samples were collected from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. There was one Ra-226 + Th-232 exceedance reported at the headwater of Lodi Brook. Sediment metal exceedances included arsenic (3), cadmium (5), chromium (7), copper (11), lead (16), nickel (7), and zinc (13). A large majority of sediment metal exceedances fall within the reported range of average metal concentrations for sediments in seven NJ watersheds, and probably represents background metal concentrations.
- A total of 16 groundwater, 5 surface water and 1 sediment FUSRAP Contaminants of Potential Concern (COPCs) are identified on the FMSS (see Table 5-8), and will be evaluated as FUSRAP Contaminants of Concern (COC) in the Feasibility Study. Principal FUSRAP groundwater COPCs include lithium, arsenic, benzene, total radium, adjusted gross alpha and adjusted gross beta. COPCs were detected in both the overburden and bedrock aquifers.

- Probable FUSRAP Areas of Concern (AOCs) were identified for each of the groundwater, sediment and surface water media. A total of seven groundwater AOCs were identified in the FMSS study area. In addition, one sediment/surface water and one surface water AOC was identified.
- Elevated concentrations of lithium were detected in soils at AOC 1 and AOC 2, and are the probable source of lithium in overburden and bedrock groundwater at those locations. Overburden and bedrock lithium plumes have been plotted from AOC 1 and AOC 2 source areas, and with the exception of the AOC 1 overburden lithium plume, extend offsite from the MISS.
- Two small arsenic plumes were plotted in the overburden aquifer, and are probably derived from AOC 1 and AOC 3. One arsenic plume was plotted in the bedrock aquifer, and probably originates from AOC 2. Arsenic (and lithium) detected in bedrock and overburden downgradient wells B38W15S/D may be in part derived from Former Retention Ponds D or E, which were remediated for radiological constituents in 1994.
- AOC 5 is located in the area (and upgradient) of bedrock well B38W18D, which detected exceedances of total radium, gross alpha, lithium and arsenic in groundwater. The FUSRAP COPCs in bedrock groundwater are probably derived from the overlying overburden aquifer and impacted fill in the area of the Former Cerium/Thorium Manufacturing Building on the MISS.
- Benzene bedrock groundwater exceedances were detected in 14 MISS and Stepan Company wells sampled during the Supplemental Investigation. The maximum concentration of benzene (9,500 µg/L) was detected at MISS well BRPZ-5. The plotted benzene plume extends approximately 1,075 feet, and is oriented NNE-south southwest azimuth (SSW) along the plume axis. The probable benzene source area was identified by bedrock monitoring wells, and is located within AOC 7.
- The source of benzene in bedrock is not known, or no longer exists. Although data does not show a current soil and/or overburden groundwater source to bedrock, past benzene releases may have occurred and since been attenuated. Historical data from downgradient and sidegradient plume wells show that the benzene plume was limited in extent and stable due to benzene attenuation in the aquifer. A comparison of Phase II (2000-2001) and Supplemental Investigation (2002-2003) benzene data show a substantial decline in 10 of 12 bedrock monitoring wells, and may be attributed to attenuation.
- One Ra-226 + Th-232 sediment exceedance was detected at the headwater of Lodi Brook, and is considered a probable FUSRAP waste. Lodi Brook is designated as AOC 8. MISS groundwater leakage (from AOC 1) into the Westerly Brook culvert pipe is the probable source of surface water total radium, iron, lead and thallium exceedances in Westerly Brook. The metals are potentially derived from the MISS, and are considered potential FUSRAP wastes. Westerly Brook is designated AOC 9.
- Data generated during these Remedial Investigations (RIs) is considered adequate for remedial planning and the evaluation of potential remedial alternatives in the Feasibility Study.

ES.5 FATE AND TRANSPORT

- The identified groundwater transport mechanisms include advection, dispersion, retardation, volatilization, radon transport and decay, and colloidal transport. Transformation processes include complexation, biodegradation and biotransformation, oxidation-reduction reactions, and precipitation.

- Colloidal transport should be a major transport mechanism involving radionuclides and selected metals (lead, thallium) due to their high measured distribution coefficients, and tendency to sorb to particulate and colloidal matter in the aquifer.
- Anaerobic conditions were encountered in most MISS bedrock wells, and may have resulted from degradation of benzene, toluene, ethylbenzene and xylene (BTEX) and/or other organic compounds. Geochemical indicators (alternate electron acceptors) suggest ongoing anaerobic degradation in wells impacted by benzene in AOC 7, and probable aerobic degradation along the plume fringe.
- Retardation coefficients (Rf) were calculated for radium, uranium, thorium, arsenic, lithium, benzene and PCE in the overburden and bedrock aquifers. Chromium (III) and chromium (VI) Rf values were only calculated for the overburden aquifer. Overburden aquifer Rfs were calculated for radium (1841), uranium (745), thorium (73,841), lithium (6.12) and trivalent chromium (74,329) based upon site-specific distribution coefficients (Kds), soil density, and fraction of organic carbon data. Other (overburden aquifer) Rfs were estimated from published Kd data for arsenic (233), hexavalent chromium (113), benzene (15.6) and PCE (27.8 – 31.5).
- Rf values in bedrock were estimated for all COPCs based upon published Kd values, rock bulk density and fraction of organic carbon. The estimated Rf values in bedrock include radium (38,533), uranium (521), thorium (780,000), lithium (24.92), arsenic (73.8), benzene (66.2) and PCE (120.5 – 137.1).
- A well search was performed to identify all wells within a 0.5-mile radius, and industrial and public water supply wells within a 1-mile radius of the FMSS. Ten (10) domestic supply wells were identified in the search. Two wells with water allocation permits (>100,000 gpd) were identified within a 1-mile radius of the FMSS. One well is owned by Malt Products (an industrial user) is located 0.5 mile southeast of the MISS, and is considered a potential groundwater receptor.

ES.6 RECOMMENDATIONS

- Due to the demonstrated bias of unfiltered radiological samples, it is recommended that all future groundwater samples be analyzed for both filtered and unfiltered radiological constituents and metals, where measured turbidity (during purging) is 50 NTU or higher.
- Since an MCL for individual thorium isotopes do not presently exist, and since these isotopes are alpha emitters, it is recommended that future groundwater samples be analyzed for gross alpha in place of isotopic thorium. Since an MCL exists for gross alpha and since a database of the individual thorium data exists, it is cost effective to analyze for gross alpha solely.
- For future analyses, it is recommended that total uranium be analyzed by the Kinetic Phosphorescence Analyzer (KPA) method, with results reported in µg/L and not pCi/L. This would be consistent with the Safe Drinking Water Act.
- Since the gross beta MCL excludes naturally occurring beta emitters associated with K-40, it is recommended that K-40 data be obtained from the laboratory in order to correct/adjust the gross beta concentration. If feasible, the analysis should account solely for beta emissions associated with K-40. Presently, a conversion factor is used to determine potassium-40 (K-40) from potassium results.
- A low level total radium exceedance was detected at overburden well MW-9S, which is located on the New York Susquehanna & Western Railway Corporation (NYSW) property, adjacent to Maywood Ave. Soil samples collected in proximity to this well did not report radiological

exceedances, and the source of total radium in groundwater is not known. Resampling of the well MW-9S is recommended to confirm the results of the Phase II sample.

- Adjusted gross alpha exceedances were detected in bedrock wells BRPZ-5 and BRPZ-2 in AOC 2. Overburden groundwater radiologic data are needed in the area of those wells to determine the source of the bedrock exceedances. Overburden well OVPZ-17 is located in the plotted plume area, and should be sampled along with the bedrock wells in the next sampling round.
- Low concentrations of benzene are detected at well MW-3D, which is located upgradient from the MISS on the NYSW property. Annual groundwater sampling for VOCs is recommended at well MW-3D, and upgradient MISS bedrock well MW-27D, to monitor for any potential upgradient contribution and/or source of benzene to the MISS.
- Seven domestic wells without addresses were identified in the 0.5 mile FMSS well search. Further investigation is recommended to locate these wells, and determine the status of any potential groundwater receptors.
- Results of the water allocation (permit) well search identified an active (bedrock) industrial well within 0.5 mile of the MISS and AOC 3. Although the well at Malt Products is located sidegradient from the MISS, its proximity and depth suggests further investigation as a potential groundwater receptor.

1.0 INTRODUCTION

1.1 OVERVIEW

This Draft Final GWRI Report documents the findings of work performed at the FMSS. The FMSS consists of property owned by the Federal Government, the Stepan Company, and other government, commercial, and private properties in Maywood, Lodi, and Rochelle Park, NJ. The interim storage of material removed from previously remediated properties has been at the federally-owned MISS property. The location of individual FMSS properties is shown on **Figure 1-1**. Additionally, this figure contains properties of additional interest that may impact the interpretation of FMSS data.

USACE prepared the GWRI pursuant to the scope of work in the approved GWRIWP (USACE 2000b), recommendations outlined in the *Draft Phase I - Groundwater Report* (USACE 2000a), the *GWRI Pump Test Work Plan* (USACE 2001a), RI Addendum Work Plan (USACE 2002) and applicable Technical Memoranda/Position Papers and recommendations. The GWRI Study Area includes the majority of the FMSS properties and is shown on **Figure 1-1**. Many GWRI objectives involved the research and field investigation of data gaps identified in the *Remedial Investigation Report for the Maywood Site* (DOE 1992). The objectives of the GWRI are as follows:

- Further research the land use and process history on the FMSS to help identify FUSRAP wastes and determine the source of COPCs.
- Characterize the FMSS groundwater, surface water, and sediment environments and prepare a site conceptual model.
- Provide updated and expanded sampling data for use in the GWRI and revised Groundwater Baseline Risk Assessment (BRA).
- Evaluate the mobility of COPCs in unsaturated soil through the performance of Batch Sorption Soil Distribution Coefficient (Kd) Tests.
- Determine the nature and extent of COPCs in the FMSS groundwater, surface water, and sediment media.
- Delineate groundwater, surface water, and sediment COPC source areas.
- Identify potential COPC transport pathways in groundwater, surface water, and sediment.
- Collect data for use in a Groundwater Feasibility Study.

A Groundwater BRA was prepared as part of the GWRI, and was submitted separately in October 2004 (USACE 2004). The Draft Final BRA was conditionally approved by the USEPA in April 2005, pending resolution of USEPA comments. The Final BRA will be issued concurrently with the Final GWRI Report under separate cover. The BRA utilizes GWRI sampling data, and supplements the previously submitted *Baseline Risk Assessment for the FUSRAP Maywood Superfund Site* (DOE 1993).

Site specific soil screening levels were determined for metal COPCs on the MISS. The USACE submitted a Soil Screening Level (SSL) Work Plan to the USEPA/NJDEP in January 2004, and responded to USEPA comments received in April 2004. SSL soil sampling and fieldwork were completed in July 2004, and results were submitted to the USEPA/NJDEP in the *Soil Screening Level (SSL) Technical Memorandum* (USACE 2004). The USEPA reviewed the Soil Screening Level Technical Memorandum, and in their letter of May 2, 2005, accepted the document without comment

(USEPA 2005). The site specific SSLs were used for comparison to soil metal sampling results in the Final GWRI Report.

1.2 SCOPE OF THE GWRI

Pursuant to the GWRIWP, work was conducted in two phases. The information gathered during Phase I was used to evaluate the nature and extent of contamination and to refine the Phase II field activities proposed in the GWRIWP. Phase I sampling results were reported in the Draft Phase I Groundwater Data Report (USACE 2000), and a number of well locations were adjusted based upon evaluation of the soil and groundwater Geoprobe® data. Two additional overburden monitoring wells (MW-21s and MW-22s) were proposed/installed by the USACE in 2001 to monitor radiological groundwater exceedances detected during the Phase I Geoprobe® investigation (Response to EPA Phase I Data Report Comments, dated March 1, 2001). Additional field work was required by the EPA in 2002, and field investigations were conducted in 2002-2003 pursuant to the RI Addendum Work Plan, herein after also referred to as the Supplemental Investigation. A detailed chronological summary of Phase I, Phase II, and Supplemental Investigation field activities is provided in **Table 1-1**. The Phase I and II GWRI and Supplemental Investigation scope is summarized in the following sections.

1.2.1 Phase I and II GWRI

The Phase I field program was conducted during 1999 - 2000, and the results of the Phase I Investigation is reported in the *Draft Phase I - Groundwater Data Report* (USACE 2000a) and *Draft Phase I - Groundwater Data Report - Addendum* (USACE 2001d). The Phase I Investigation involved the following tasks or elements:

- Review and research FMSS history and processes.
- Geoprobe® soil and groundwater investigation.
- Existing USACE well inventory.
- Sampling of USACE overburden and groundwater wells.
- Groundwater level measurements.
- Surface Geophysics and borehole geophysics survey.
- In-situ permeability tests.
- Video inspection of the Westerly Brook and Lodi Brook culverted areas.

The Phase II field program was conducted on the FMSS during 2000, 2001, and 2002, and culminated in the submittal of the Draft GWRI Report to the EPA and the NJDEP in June 2003. The Phase II Investigation involved the following tasks or elements:

- Area water purveyor and well search.
- Soil and groundwater Geoprobe® investigation.
- Installation of overburden and bedrock monitoring wells.
- Overburden and bedrock aquifer testing.
- Borehole geophysics survey on newly installed bedrock wells.
- In-situ permeability testing of newly installed overburden wells.
- Survey of all existing and newly installed USACE wells, and Stepan Company wells.

- Groundwater sampling of USACE and Stepan Company wells.
- Sediment and surface water sampling.
- Groundwater level measurements.
- Batch Sorption Kd testing.

1.2.2 Supplemental Investigation

Preliminary results of the Draft GWRI were presented to the EPA on February 19, 2002. Subsequent to the meeting with EPA, USACE conducted additional work to investigate the source and downgradient extent of a bedrock benzene plume that was partially delineated on the MISS. An RI Addendum Work Plan was approved by the EPA and NJDEP in May 2002, and field work was conducted during 2002-2003. The results of the field investigation are presented in the GWRI Report Addendum, and were submitted to the EPA and NJDEP in April 2004. The Supplemental Investigation field program included the following tasks or elements:

- Evaluation of existing soil and groundwater benzene data on the MISS.
- Installation of additional bedrock wells to delineate the benzene plume.
- Conduct permeability testing at new install wells.
- Groundwater VOC Sampling at 38 bedrock wells.
- Biogeochemical sampling at selected wells to characterize groundwater biodegradation in the bedrock aquifer.
- Measure water levels at study area shallow and deep bedrock wells.
- Conduct borehole geophysics at selected new install wells.

1.2.3 Draft Final and Final GWRI Report

The Draft GWRI and Draft GWRI Addendum Reports were submitted in June 2003 and April 2004, respectively, and were revised per USEPA comments. Comments were not issued during this period by the NJDEP. The revised Draft GWRI Addendum Report was incorporated into the Draft Final GWRI Report, and issued to the USEPA and NJDEP in November 2004.

The Draft Final GWRI Report was conditionally accepted by the USEPA in May 2005, pending resolution of USEPA comments. Comments were not issued during this period by the NJDEP. Site specific SSLs were determined for metal COPCs in the *Soil Screening Level (SSL) Technical Memorandum* (USACE 2004), and were used for comparison to GWRI soil sampling results in the Report.

The introduction and description of the FMSS, FMSS history, and surrounding environment, as well as a summary of the Phase I results, is provided in Section 1.0 of this report. Section 2.0 provides a description of the RI activities that were implemented. The physical characteristics, on a local and regional scale, are presented in Section 3.0. The laboratory results are provided in Section 4.0. The nature and extent of contamination detected during the field program are provided in Section 5.0. An analysis of the fate and transport of FMSS COPCs is provided in Section 6.0. Conclusions/Recommendations are provided in Section 7.0. The references cited in this Report are listed in Section 8.0.

1.3 REGULATORY REQUIREMENTS AND AGENCY COORDINATION

The 1998 Energy and Water Development Appropriations Act transferred responsibility for execution and management of FUSRAP from the U.S. Department of Energy (DOE) to USACE. The USACE's portion of the Maywood Chemical Company Site is referred to as the "FUSRAP Maywood Superfund Site (FMSS)" for the remainder of this document. USACE is the lead Federal agency for the FMSS. In a Federal Facilities Agreement (FFA) between the EPA and the DOE (USACE's predecessor on this site) for the FUSRAP portion of the Maywood Chemical Company Site, FUSRAP waste was defined as:

- All contamination, both radiological and chemical, whether mixed together or not, on the MISS;
- All radiological contamination above cleanup levels related to past thorium processing from the Maywood Chemical Works (MCW) occurring on any of the Vicinity Properties; and
- Any chemical or non-radiological contamination on Vicinity Properties that would satisfy either of the following requirements:

    1. The chemical or non-radiological contaminants which are mixed or commingled with radiological contamination above cleanup levels; or,

    2. The chemical or non-radiological contaminants that originated at the MISS or were associated with the specific thorium manufacturing or processing activities at the MCW that resulted in the radiological contamination.

1.4 FMSS BACKGROUND INFORMATION

The FMSS consists of 88 designated properties: The Stepan Company property, which includes contaminated buildings and the 3 Nuclear Regulatory Commission (NRC)-licensed burial pits; MISS and contaminated building; 59 residential properties; 3 state or Federal government-owned properties; 4 municipal properties; and 20 commercial properties. Of the 88 properties, 64 Phase I properties (including all residential and municipal properties) have already been cleaned up by DOE or the USACE. During cleanup actions on these properties, additional properties were remediated. This occurred if the contamination extended on to an adjacent undesignated property.

Radioactive contamination at the FMSS resulted from rare earth and thorium processing operations conducted by MCW and associated material storage and waste disposal practices. Historical records indicate that processing of thorium from monazite sands may have begun as early as 1895; other records indicate that thorium processing was initiated in 1916, and continued until 1957. Processing operations created wastes containing thorium and lesser amounts of radium and uranium as well as Maywood rare earth elements (REEs). REEs are defined as oxides of metals in the lanthanide series of elements, plus the elements of yttrium and scandium.) Some of these process wastes and residues were stored, treated, or disposed on the original processing site where MISS and Stepan Company are now located. In addition, radioactivity was spread to nearby properties by the use of the waste materials as mulch and fill or through soil and sediment transport along Lodi Brook (Although currently an underground culvert, Lodi Brook was formerly an open channel).

In 1959, MCW sold the plant to the Stepan Company. In the late 1960s, Stepan Company took corrective measures at some of the former disposal areas located on the original MCW plant site property both east and west of NJ Route 17 (NJ Route 17 was built in the early 1930s over and through the MCW's thorium waste lagoons). Stepan Company's corrective measures included relocation and burial of approximately 19,100 yd^3 of excavated waste materials. Between 1966 and 1968, these waste materials were relocated to three burial areas on property currently owned by Stepan Company. Stepan Company sold the portion of the original plant property located west of NJ Route 17, now known as 96 Park Way, after relocation of

the waste materials. Stepan Company currently holds an NRC license for the storage of thorium-bearing materials in Burial Pits 1, 2, and 3.

EPA listed the Maywood Chemical Company on the Superfund National Priorities List (NPL) in 1983. In late 1983, Congress assigned DOE a research and development project to clean up the radioactive wastes at the Maywood Chemical Company site (via the FY84 Energy and Water Appropriations Act). DOE then assigned the site to FUSRAP. In 1997, the FY98 Energy and Water Development Appropriations Act transferred responsibility for the execution and administration of FUSRAP from DOE to the USACE. The inclusion of chemical contaminants under the FMSS definition of FUSRAP waste is limited to chemicals on the MISS or chemicals on vicinity properties that are commingled with or related to the radioactive waste, chemicals associated with thorium processing at MCW, and chemicals on or migrating from the MISS. The Stepan Company, which operates an active chemical manufacturing facility at the Maywood Chemical Company site, is conducting an RI/FS on chemical, non-radiological contamination on its facility and on the adjacent property at 149-151 Maywood Avenue. The EPA is overseeing the Stepan Company RI/FS and is coordinating that RI/FS and cleanup with USACE.

DOE began investigating the FMSS and surrounding area in 1983, and during 1984 through 1985 cleaned up 25 residential properties and a portion of 1 commercially zoned property. Due to the limited commercial disposal capacity for radiological wastes, the excavated materials from these cleanups were stored on property that was a part of the original MCW processing site. DOE acquired this property from Stepan Company and named it the MISS. During a cleanup action conducted by DOE in 1995 and 1996, these stored materials were removed from the MISS and sent to a permanent, off-site commercial disposal facility. Also, during 1995, the cleanup of the remaining residential properties, four municipal properties (three parks and a fire station), and one commercially zoned property (96 Park Way) was initiated. These interim property cleanups were implemented as removal actions as proposed in DOE's September 1995 EE/CA under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). These interim cleanup actions were completed in 2000 by the USACE.

A time critical removal action was completed during the winter of 2000 to remove contaminated sediments from portions of Lodi Brook and a swale located at the terminus of West Howcroft Road. The removal action re-established the hydraulic grade of the brook and swale.

In July 2001, the USACE published the Engineering Evaluation/Cost Analysis (EE/CA) for a Removal Action in Support of NJ Department of Transportation (NJDOT) Roadway Improvement Projects at the FMSS for public comment. The Action Memorandum was approved in November 2001. The removal action was initiated in January 2002.

1.5 STATUS OF THE SOILS/BUILDING OPERABLE UNIT

The FMSS consists of 88 designated commercial, governmental, and residential properties. Sixty-four (64) residential and municipal properties have been remediated by DOE and USACE. These residential and municipal properties were addressed by interim removal actions that were initiated by DOE and completed by USACE in 2000. During cleanup actions on these properties, additional properties were remediated if the contamination extended onto an adjacent undesignated property.

The MISS, Stepan Company property, and 22 other commercial and governmental properties are collectively referred to as the Soils/Building Operable Unit (OU). Eight (8) of the 24 properties were remediated through a *Removal Action in Support of NJDOT Roadway Improvement Projects at the FMSS*, dated July 2001. During cleanup actions on these properties, additional properties were remediated if the contamination extended onto an adjacent undesignated property. These eight properties as well as the remaining 16 commercial and governmental properties are included in the *Feasibility Study for Soils and*

Buildings at the FUSRAP Maywood Superfund Site, dated August 2002 and the *Record of Decision for Soils and Buildings at the FUSRAP Maywood Superfund Site*, dated August 2003 (USACE 2002a, 2003). The decision by the USACE and EPA, in consultation with the NJDEP, on the cleanup remedy for the Soils and Buildings OU was Excavation and Disposal, which includes excavation of materials and offsite disposal. The Record of Decision (ROD) was signed by the USACE on August 19, 2003, and by EPA on September 22, 2003. Construction began immediately after the ROD was signed. For additional information, refer to the Administrative Record for the FMSS.

1.6 FORMER MCW OPERATIONS

Thorium was extracted and processed from monazite sands at the MCW site from 1916 to 1957. In addition, lithium metal was extracted and produced from lithium ore during the first half of the 20th century. These processes were initially reported in the Maywood RI Report (DOE 1992) to be potential sources of seven metals (arsenic, cobalt, copper, lead, nickel, selenium, and vanadium) detected in MISS soils. However, based on a review of the Stepan Chemical Company Docket Book I papers (Memo from E.H. Nichols to D.H. Francis 1963) and other sources (Brady 1991; Cuthbert 1958; Dreesen 1982; Luetze 1988; Meldrum 1997; and Weast 1983), these metals are not known to be associated with monazite sands or chemicals used in thorium processing and/or lithium processing. Former MCW operations are summarized in the *Feasibility Study For Soils And Buildings At The FUSRAP Maywood Superfund Site* (USACE 2002a).

1.6.1 Thorium and Lithium Processing

Monazite Sands and Thorium

Monazite sand is the chief source of industrial thorium on domestic and international levels (Brady 1991). Monazite ores are found in India, Brazil, Sri Lanka, Australia, South Africa, Canada, Malagasy, the United States, and some parts of Europe (Cuthbert 1958). Analyses of monazite sands from several significant areas are provided on **Table 1-2**. None of the seven metals historically detected in MISS soils are reported in **Table 1-2** as constituents of monazite sands.

As documented in the "Part 40 Inspection" of the MCW conducted on August 30 and September 4, 1963, monazite sands were obtained from sources in the Carolinas, as well as from foreign imports (Stepan Chemical Company Docket Book; Docket No. 40-8610). Monazite sands originating in the Carolinas are not known to contain the seven metals, nor are Carolina monazite sands associated with uranium (**Table 1-3**).

Thorium Processing

The thorium extraction process is designed to separate the thorium, rare earth, and uranium content of monazite sand from its phosphate and silica matrix. Monazite sand processing at MCW for the production of thorium is documented in the Stepan Company Docket Book papers (Memo from E.H. Nichols to D.H. Francis, 1963, and a "Process Description" in an inspection report conducted on May 24, 1957). The process employed at MCW was a heated sulfuric acid extraction process and is described as follows:

1. Monazite is received in 50-pound bags that arrive in freight car lots. The bags are carried to the sulfate mill and the ore is dumped into a hopper.
2. The ore is fed from the hopper into an open dissolving vat and made into a sulfate solution by dissolving in sulfuric acid at an elevated temperature.

3. The contents of the sulfate vat are then dumped into water, and the solution is pumped into evaporating tanks in the Evaporator Building.
4. Thorium and REEs are separated by evaporation. The thorium content is removed as an oxalate precipitate, and then dissolved from the oxalate precipitate with a carbonate solution.
5. The thorium is then separated as a hydroxide, the hydroxide is converted to a chloride, and the chloride is reconverted to a hydroxide. These steps are wet operations, except for the final filtering operations. The oxalate and hydroxide filter cakes are shoveled into drums for temporary storage and transferred to the hydroxide building.
6. The final operations involve dissolving the hydroxide in nitric acid in large silica dishes. The solution is hand-stirred and evaporated until crystallization takes place. The crystals are ground by hand with mortar and pestle and then packaged.

A review of this process shows that the seven metals historically detected in MISS soils are not present as components or as residues of thorium processing.

Lithium Ore Processing

The Maywood RI Report (DOE 1992) identified lithium ore processing activities that took place at MCW in the first half of the 20th century as a potential source for metal constituents at the MISS. The following discussion of lithium ore processing demonstrates that neither processing operations nor process residues are a potential source of the seven metals.

Spodumene is a lithium aluminum silicate, $LiAlSi_2O_6$, and it is the most dominant industrial lithium ore mineral. Sulfuric acid digestion is the preferred industrial method of lithium extraction from spodumene ore. The first step of the extraction process is to convert spodumene to a more reactive form by heating in a brick-lined rotary kiln. The kiln discharge is cooled, ground by ball milling, and mixed with sulfuric acid. The mixture is heated in a small rotary kiln to produce an exothermic reaction, which forms soluble lithium sulfate, leaving an insoluble lithium ore residue. The lithium sulfate solution contains small amounts of aluminum, iron, and other alkali sulfates, as well as excess sulfuric acid, which are neutralized with ground limestone. The slurry is then filtered to separate the ore residue, producing a mixed alkali sulfate solution that is free of iron and aluminum though saturated with calcium sulfate. Magnesium from the limestone is precipitated using hydrated lime, followed by the precipitation of calcium using soda ash. Further process operations are utilized to separate out sodium sulfate, which is centrifuged and converted to an anhydrous salt for by-product sale (Kirk-Othmer 1995).

An electrolytic process devised in 1893 has also produced lithium. This method and other methods of lithium metal production have not had the commercial success of the sulfuric acid digestion process. Based on a review of lithium recovery by the sulfuric acid process (and electrolytic production methods), there is no evidence that the use and processing of lithium ores or its process residues produce the seven metals in measured quantities.

Based upon the available information presented in this Section, the metals historically detected in MISS soils apparently do not originate from former MCW thorium or lithium processing activities.

1.6.2 Composition of Coal - Coal as a Source of Energy at MCW

Until the 1950s, energy was supplied to the MCW site through coal combustion. Significant energy use during the first half of the 20th century is evidenced by aerial photos of the FMSS (EPA 1984) that show five tall stacks on-site.

Portions of the ash resulting from past coal firing on the MCW site were ultimately disposed of at the MISS. Geologic cross-sections of the MISS soils (DOE 1992) show fill areas (designated as ash and sludge, and undifferentiated fill) up to 10 feet in depth or more across the MISS. The potential chemical constituents of coal ash are presented on **Table 1-4** (Hart 1978).

As indicated on **Table 1-4**, arsenic, copper, and lead are significant constituents of coal ash. Arsenic concentrations in coal ash range from about 1 to 1,700 parts per million (ppm), copper ranges from about 3 to 3,000 ppm, and lead ranges from about 3 to 1,600 ppm.

Data are not available regarding coal analyses and quantities used at MCW during the first half of the last century. For estimating purposes, USACE assumed that the FMSS used an Eastern coal with a heating value of 13,000 British thermal units per pound (Btu/lb) and an ash content of 15% (Hart 1978). Eastern coal heating values are presented on **Table 1-5** (Babcock and Wilcox 1972).

Presently, the Stepan Company boilers are rated at 53 million British thermal units per hour (MBtu/hr) (Mr. Walter Hill, Plant Engineer, Stepan Company, February 8, 2000). Present operations utilize one stack compared to the five stacks referred to previously, and fuel use under past coal operations was considerably higher than today. In order to provide a conservative estimate of metal concentrations, USACE assumed that the coal fuel use was based on 50 MBtu firing. The total coal use was based on 50 years of operation (although coal was used until 1957).

Utilizing the concentrations of arsenic, copper, and lead in **Table 1-4**, and assuming only the disposal of bottom ash (20% of the total coal ash quantity) at the MISS, the potential concentrations of these metals in MISS soils were estimated. The estimated concentrations of arsenic, copper, and lead in MISS soils resulting from the disposal of bottom ash on the MCW site are reported and compared to the BRA soil data in **Table 1-6**.

The potential ash concentrations were averaged over a 10-foot depth for the entire MISS site (11.7 acres). This is considered a conservative estimate due to the thick ash and undifferentiated fill within the retention ponds, and the large pond areas on the MISS. The potential metals concentrations resulting from the disposal of coal ash are presented in Appendix B. At shallower depths and smaller disposal size areas, the calculated metal concentrations would be much higher. As demonstrated in **Table 1-6**, the potential metals concentration resulting from the disposal of coal ash is significant and comparable to the values reported in the BRA. The concentrations for arsenic, copper, and lead as reported in the BRA can be attributed to the past use of coal at MCW for energy purposes and the subsequent on-site disposal of bottom ash.

1.7 SUMMARY OF PREVIOUS SITE INVESTIGATIONS

1.7.1 DOE Investigation Results

DOE conducted radiological surveys throughout the FMSS from 1984 through 1987. DOE conducted a RI at the FMSS from 1989 through to 1991, resulting in the 'Remedial Investigation Report for the Maywood Site, New Jersey' (DOE 1992). The RI covered the Stepan Company property, the MISS, eight residential properties, and five commercial/governmental properties, which were defined as OUs by the DOE.

At the Stepan Company property, the focus was radiological contamination, and potential hazardous waste mixed with radiological waste. The DOE RI determined that the surface and subsurface soils at the Stepan Company property were contaminated with radiological parameters. Elevated radioactive contamination was present in the vicinity of Burial Pits 1, 2, and 3 (see DOE 1992, CH_2M Hill 1994, and

USACE 2000b), in areas where thorium-processing operations were conducted, and where process residues were used as fill material in low-lying areas (**Figure 1-1**).

At the MISS, the focus was radiological and chemical contamination, and potential pathways for chemical contaminants. Analytical results indicated the presence of metals and REEs at elevated concentrations (i.e., either above applicable criteria or above background levels). VOCs (predominantly PCE, trichloroethene [TCE], DCE, and VC) were detected in the groundwater at concentrations above existing Safe Drinking Water Act MCLs. The source of the VOCs in the groundwater was not determined.

At the residential properties, the focus was radiological contamination. Radioactive contamination was present in both surface and subsurface soils on the residential properties investigated. It was concluded that subsurface contamination resulted from sediment deposition in the former channel of Lodi Brook or its floodplain in all but two areas. At these two locations, contaminated building materials were manually transported to the properties.

At the commercial/governmental properties, the focus was radiological contamination, and potential presence of chemical contaminants associated with thorium processing.

Limited radioactive contamination was detected in the surface and subsurface soils on these properties.

The DOE RI identified primary and secondary sources of (soil) contamination, which included the following:

- Primary Sources:
  - NRC Burial Pits 1, 2, and 3
  - Former Retention Ponds A, B, C, E, and F
  - Former storage pile locations on the MISS, 149-151 Maywood Avenue, Stepan Company and Ballod properties
  - Interim Storage Pile on the MISS
- Secondary Sources:
  - Buildings on the MISS and Stepan Company properties
  - Impacted Fill
  - Lodi Brook soils and sediment

The locations of the burial pits, retention ponds, and Lodi Brook are shown on **Figure 1-1**. Locations of storage piles and mounds of material are presented in Appendix A. These graphics were excerpted from the DOE RI. Additionally, the DOE RI Report concluded that the nature and extent of groundwater contamination was incomplete. Additional delineation activities were proposed, including the completion of a BRA, and a more detailed radiological survey of the Stepan Company buildings.

1.7.2 Phase I Investigation Results

Geology

Classification of soil samples collected during the Phase I investigation indicates that the overburden material is a heterogeneous mix of urban fill, gravel, sand, and silt. This observation concurs with the findings of previous investigations (DOE 1992; CH_2M Hill 1994a).

The thickness of the overburden in the northern portion of the FMSS ranges from 0 feet (near the northeast corner of the FMSS) to approximately 25 feet (near the southwest side of the MISS). (Borings were not extended to the bedrock in the southern portion of the FMSS during Phase I.)

The mean bedrock dip direction of northwest identified from the statistical analysis of the borehole geophysics survey corresponds with the dip direction identified by geologic measurements of bedrock outcrops in the vicinity and with the dip direction identified by literature about the area. The strike orientation of northeast-southwest identified from the analysis agrees with the strike of bedrock outcrops in the area, the strike identified in literature about the area, and the strike of major fractures identified in the surface geophysical survey.

Hydrogeology

The direction of groundwater flow in the overburden (south and southwest) corresponds to the general flow direction reported in previous investigations (DOE 1992; CH_2M Hill 1994a). According to the Stepan Remedial Investigation Report (CH_2M 1994a), a ridge or groundwater divide exists in the overburden near the northeast portion of the FMSS. Further, as theorized in the GWRIWP (USACE 2000b), a local overburden groundwater divide exists somewhere between the FMSS and Coles Brook, located further to the east. As mentioned in the GWRIWP, Coles Brook flows to the north and east, and ultimately discharges to the Hackensack River.

Groundwater flow in the bedrock aquifer is also predominantly to the south and west. There are some minor deflections to the north and west. These deflections are likely caused by the varying degree of interconnectivity of the bedrock fractures, both horizontally and vertically. The vertical hydraulic gradient is predominantly downward from the overburden. However, an upward flow was detected at three well clusters (MISS-4A/4B, B38W25S/25D, and B38W12A/12B). Well clusters MISS-4A/4B and B38W25S/25D are located on the Stepan Company property. Well cluster B38W12A/12B is located east of the 149-151 Maywood Avenue property, adjacent to a wetlands area.

According to Michalski and Britton (1997), one of five conceptual groundwater flow models for the Passaic Formation consists of an overburden and weathered zone superimposed on a LMAS. In this model, the prevailing groundwater flow direction within the bedrock tends to be near parallel to the strike of the beds. Measurements obtained as part of the surface features survey, and the geophysical surveys, indicate that the strike trends to the northeast/southwest, or near parallel to bedrock flow direction.

The hydraulic conductivity of the bedrock was estimated between 2.0×10^{-04} and 4.6×10^{-04} centimeters per second (cm/s). The hydraulic conductivity of the overburden was estimated between 8.8×10^{-05} to 1.4×10^{-04} cm/s. A previous investigation (DOE 1992) reported average in-situ permeability test results of 7.4×10^{-04} and 3.9×10^{-04} cm/s in the bedrock and overburden, respectively.

Non-Radiological Analytical Results

Non-radiological parameters included VOCs, metals, and REEs. Elevated levels of PCE were detected in groundwater samples collected from three Geoprobes® located west of the MISS and from three Geoprobes® located near the northern boundary of the MISS. However, a Preliminary Assessment and Site Investigation Report completed by the NJDEP on July 29, 1998 of the 158 West Central Avenue property stated that the company is a primary source of PCE contamination in area groundwater.

Elevated levels of benzene were detected in four groundwater samples collected from Geoprobe® samples advanced on the MISS. A previous report (SAIC 1997) documented isolated areas of elevated

benzene levels throughout the MISS, Stepan Company, 149-151 Maywood Avenue, and adjoining NJ Route 17 properties. The presence of benzene in groundwater is discussed further in Section 1.8.2.

Arsenic, chromium, and lead were detected at elevated concentrations in groundwater samples collected from Geoprobes® and overburden and bedrock monitoring wells located throughout the FMSS. Further, elevated concentrations of arsenic and chromium were detected in soil samples collected throughout the FMSS. As described in Section 1.6 of this Report, recent research suggests that the presence of arsenic and lead is more likely due to historical coal firing and ash deposition and may not be related to the thorium or lithium processing activities. As described in Section 1.8.2 of this Report, chromium has been specifically linked to tanned leather hide processes at Stepan Company. Elevated levels of chromium were detected near buried leather hides, and surface runoff from the tanned leather hide storage area was found to drain into a storm sewer manhole leading to Lodi Brook. Lithium was detected in groundwater and soil samples collected throughout the FMSS.

The REEs neodymium, yttrium, dysprosium, cerium, and lanthanum were detected in soil and groundwater samples collected throughout the FMSS. These REEs are associated with monazite sand and the thorium extraction process. However, there are no regulatory standards for these REEs.

Radiological Analytical Results

Radium, thorium, and uranium isotopes were detected in unfiltered groundwater samples collected from Geoprobe® borings located throughout the FMSS. Total radium was detected in 84 of 88 Geoprobe® borings with concentrations ranging from 0.25 to 105.43 picocuries per liter (pCi/L). Forty-two (42) of the samples contained total radium at a concentration exceeding the Federal/State MCL of 5 pCi/L. Total uranium was detected in 88 Geoprobe® samples, with 15 sample concentrations exceeding the proposed Federal/State MCL of 30 micrograms per liter (µg/L) or 20 pCi/L. The Phase I results were formerly reported in the *Draft Phase I - Groundwater Data Report* (USACE 2000a), and compared to the NJDEP interim standard of 30 pCi/L. In this document, Phase I and II total uranium sample results are compared to the proposed Federal/State MCL of 30 µg/L.

In the *Draft Phase I - Groundwater Data Report* (USACE 2000a), thorium data was compared to the NRC Discharge Limits of 30 pCi/L for Th-232 and 100 pCi/L for Th-230. Two Phase I samples exceeded the Th-232 limit, whereas there were no exceedances of the Th-230 limit. In this document, Phase I and II total thorium results are discussed in relationship to the Federal/State MCL of 15 pCi/L for Gross Alpha, since there is no individual or total thorium MCL. Fifteen (15) Phase I samples had total thorium concentrations greater than 15 pCi/L.

Elevated turbidity measurements were recorded during groundwater sampling at 70 Geoprobe® wells. Although attempts were made to lower the pumping rate and therefore the turbidity, 70 of 73 samples had turbidity measurements exceeding 50 Nephelometric Turbidity Units (NTUs), and 41 samples measured turbidity greater than 999 NTUs (off-scale). As a result of sediments or colloids being entrained in groundwater samples, radiological results may be biased high.

Groundwater samples collected from monitoring wells detected a total of four radiological exceedances. The groundwater sample collected from monitoring well B38W18D had total radium and gross alpha exceedances (as determined by summing the results of the three thorium isotopes). Two uranium exceedances were present in samples collected from wells B38W12A and MISS-5A. Thorium concentrations detected in the monitoring well samples did not exceed the Gross Alpha MCL.

Eighty-four (84) soil samples were analyzed for Ra-226 and Th-232. Ra-226 was detected in 83 of 84 soil samples at concentrations ranging from 0.05 to 40.99 pCi/g. Th-232 was detected in each of the 84

soil samples at a concentration ranging from 0.18 to 254 pCi/g. Ra-226 + Th-232 concentrations ranged from 0.43 to 294.99 pCi/g. The maximum concentration of Ra-226 + Th-232 was detected in boring 07a001.

The clean up criteria for radiological contaminants Ra-226 + Th-232 of 5 pCi/g, and U-238 of 50 pCi/g, in soils was determined to be protective based on a dose assessment. The dose assessment is presented in Appendix C to the Feasibility Study for Soils and Buildings (USACE 2002a). This dose assessment further indicated that the cleanup levels were protective of the groundwater pathway.

Twenty eight (28) soil samples had concentrations of Ra-226 + Th-232 that exceeded the 5 pCi/g criterion. Eleven (11) of the 28 exceedances were obtained from the MISS.

U-238 was detected in 37 of 84 soil samples obtained from the FMSS at concentrations ranging from 0.23 to 81.86 pCi/g. Three soil samples had concentrations of U-238 that exceeded the FMSS soil cleanup level of 50 pCi/g. The maximum concentration was detected in boring 12b017, which was obtained from Transect A on the MISS.

1.8 SUMMARY OF OTHER FMSS AND ADJACENT SITE INVESTIGATION RESULTS

1.8.1 Known Contaminated Sites within the FMSS

A review of environmental reports generated for surrounding properties was performed. The objective of this review was to evaluate which COPCs can be attributed to off-site sources and which COPCs can be classified as a FUSRAP waste. This effort included a review of the NJDEP list of known contaminated sites (KCS). In addition, the Bergen County Health Department was contacted to determine if there was any environmental-related information on file. Available EPA files were also reviewed.

Based upon the review of the KCS, a list of properties and corresponding NJDEP case numbers and oversight divisions were compiled (**Table 1-7**). These properties are presented on **Figure 1-3**. Each division of the NJDEP did a site-specific file search for each location. Upon completion of this search, the files were made available for review. The majority of these files pertained to standard regulatory and permitting compliance, such as underground storage tank registrations, air emissions, and Resource Conservation and Recovery Act (RCRA) permits. However, there are two properties (Stepan Company and 158 West Central Avenue, Rochelle Park) that are specifically significant to this RI. The investigations completed at these properties are summarized below.

1.8.2 Summary of Stepan Company Investigation Results

A Remedial Investigation/Feasibility Study (RI/FS) is on going at the Stepan Company property. The findings of the RI were documented in a RI Report (CH_2M Hill 1994a) and are briefly summarized below.

The RI completed at the Stepan Company property included the advancement of soil borings, the performance of a surface geophysical survey, the installation of overburden and bedrock monitoring wells, the performance of an aquifer testing program, and the collection of soil, surface water, sediment, and groundwater samples. Analytical results generated from the RI indicated the presence of elevated levels of benzene in the soils and groundwater, buried containers containing organic residue and aromatic hydrocarbons, ketones, and/or chlorinated solvents were present on the 149-151 Maywood Avenue property. Chlorinated hydrocarbons were detected in the bedrock groundwater, and elevated radiological readings were detected in soil samples collected throughout the study area and in unfiltered groundwater samples.

In addition to the RI/FS, the findings of a Focused Investigation (CH_2M Hill 1994b), a Groundwater Remediation Pilot Test Work Plan (CH_2M Hill 1997), and a Groundwater Remediation Pilot Test Report (CH_2M Hill 1998) are briefly described.

As described in the Focused Investigation, 13 test pits were dug near the southwest corner of the Stepan Company property. The purpose of these test pits was to further delineate the general horizontal and vertical extent of buried tanned leather hides. Samples of raw products or filter cakes associated with the former leather processing operation were found to contain total chromium at concentrations ranging from 20,100 to 117,000 ppm. Concentrations of total chromium detected in adjacent soil samples ranged from 306 to 2,500 ppm (elevated levels of chromium have historically been detected in FMSS monitoring well cluster B38W17, located hydraulically downgradient from these areas). In addition, an investigation by NJDEP on June 10, 1995 found floor drains from the protein extraction building draining into a storm sewer manhole leading to Lodi Brook. Surface runoff from the tanned leather hide storage area was also found to drain into that manhole.

The Groundwater Remediation Pilot Test Report (CH_2M Hill 1998) documented the presence of three separate BTEX plumes in the groundwater beneath the Stepan Company property. The first plume is located at the former Aromatic and Essential Oils Manufacturing Area (Aromatics Area). This plume was the subject of an in-situ groundwater remediation pilot test using oxygen release compounds. Samples collected from the Aromatics Area plume contained more than 30,000 parts per billion (ppb) total BTEX in the overburden aquifer and, as stated in the Report (CH_2M Hill 1998), consisted primarily of benzene.

The second plume is located approximately 100 feet northwest of the Aromatics Area plume. Total BTEX concentrations of up to 150,000 ppb were detected in the overburden groundwater near a concrete subsurface structure that was identified during the pilot test. As stated in the Report (CH_2M Hill 1998), significant concentrations of BTEX compounds were identified in the liquid and sludge contained within the structure.

The third plume is located at the former Central Tank Farm Area. Total BTEX concentrations of up to 7,400 and 5,700 ppb have been detected in the bedrock and overburden aquifer, respectively.

Approximately 2.4 million gallons per day (MGD) of non-contact cooling water, scrubber water, cooling water, cooling tower blow down, and storm water are discharged to Lodi Brook. However, several spills occurred at Stepan Company and were noted as being discharged into Lodi Brook (**Table 1-8**). During on-site NJDEP investigations, observations were made of waste product being washed down the storm sewer leading to Lodi Brook.

1.8.3 Summary of Dixo Company Investigative Results

Dixo Company is located North of the MISS (Figure 1-1), at 158 West Central Ave., Rochelle Park, and is involved in the packaging of industrial adhesives. A preliminary Assessment and Site Investigation Report was completed by the NJDEP for the Dixo company property in 1998 (NJDEP 1998). The Report confirmed the release of PCE to groundwater from the location of a 5,000 gallon above ground PCE tank, and identified the Dixo Company as a primary source of PCE contamination in area groundwater. The NJDEP conducted sampling in 1999/2000 at the Dixo Company as part of a Site Investigation Work Plan (NJDEP 1999), and reported the sampling results in the NJDEP Mobile Laboratory Final Report (NJDEP 2000). In 2001, the NJDEP prepared a Remedial Action Work Plan for the Dixo Company Property, which proposed the installation of three overburden monitoring wells and another round of groundwater sampling. The NJDEP collected split samples from USACE overburden monitoring wells MW-7S and MW-8S, and bedrock monitoring wells MW-7D, MW-8D, MW-19D and MW-19DD as part of that investigation.

The results of the NJDEP investigations at the Dixo Company Property are addressed in the NJDEP Report titled *Expanded Site Investigation – Dixo Company Inc.* (NJDEP 2002). With respect to area chlorinated solvent contamination, the Report states as follows:

"Ground water samples collected by the NJDEP, BSA (Bureau of Site Assessment) have confirmed a release of PCE to the underlying aquifer as a result of operations at the Dixo facility in Rochelle Park. Gross concentrations of PCE (140,000 ppb.), the primary regional ground water contaminant, were detected in the ground water adjacent to the former 5,000-gallon PCE AST at the Dixo facility. The contaminated RPSC (Rochelle Park Swim Club) well as well as the contaminated potable wells in Rochelle Park are hydraulically downgradient or geologically downdip of the source area at the Dixo facility. Potable wells along West Magnolia Avenue and the MSC (Maywood Swim Club) were also likely affected by the contamination at the Dixo facility." (Clarification added.)

With respect to contamination of USACE monitoring wells in Rochelle Park, the Report stated the following: "USACE monitoring well clusters MW7 and MW8 are hydraulically downgradient of the Dixo facility on Central Ave. based on direction of shallow groundwater flow. Elevated concentrations of PCE (and its degradation by-products) were detected in the shallow bedrock monitoring well at each cluster and in the overburden well at the MW7 cluster. These contaminants were also detected at gross concentrations on the Dixo Facility during NJDEP groundwater sampling in 1998."

An RI Report was prepared by Dixo Company in July 2002 (Environmental Strategies and Applications, Inc. 2002), which reports the results of the hydrogeologic investigation and soil and groundwater sampling at the Dixo Company Property. High concentrations of PCE (and degradation products) were detected at cluster overburden well MW-4 (75,000 ppb) and bedrock well MW-4D (20,000 ppb) on the Dixo Company Site. The high PCE and other compound concentrations reported in overburden and bedrock groundwater on that property is a potential source of PCE (and other compound) contamination detected in downgradient USACE monitoring wells.

1.8.4 Summary of Annual Environmental Monitoring Program

As part of on-going environmental activities at the FMSS, a yearly program consisting of quarterly water levels are obtained from 14 overburden and 20 bedrock monitoring wells in order to determine groundwater flow direction within and adjacent to the MISS.

Similarly, groundwater samples are obtained once a year from 23 monitoring wells and analyzed for radiological, TAL metals and TCL VOCs. These samples along with the collection of 11 surface water and 9 sediment samples are obtained from both Westerly Brook and Lodi Brook. These samples are analyzed for radiological constituents and TAL metals. Both the groundwater and surface water/sediment samples are obtained in the second quarter of each year.

Additionally, during the first and third quarter of each year, 15 air samples are obtained from select locations within the MISS and analyzed for external gamma radiation and radon gas. The data are compiled on a yearly basis and submitted to the regulators.

1.9 FMSS SETTING

1.9.1 Westerly Brook

Westerly Brook is a perennial stream fed by surface water runoff and groundwater discharge. The brook originates approximately 3,200 feet north of the FMSS. Historically, Westerly Brook flowed south in a

natural open channel towards the FMSS. Currently, portions of the brook north of the FMSS are diverted through culverts as it passes beneath township roads.

The original course of Westerly Brook through the MISS was in a south-southwest direction, towards what is now NJ Route 17. As the brook approaches the area of NJ Route 17, it bends nearly 90 degrees to the west. The brook follows a meandering westerly course, ultimately reaching a small pond immediately east of the Saddle River. A walled channel diverts water from the pond directly to the Saddle River. The original course of the Westerly Brook is documented on a site plan provided in Appendix C.

Westerly Brook was routed through a 72-inch culvert in the early 1970s starting just north of the MISS. Inside the MISS, the culvert changes direction (approximately 90 degrees) at three locations before exiting the MISS towards the west. The culvert changes to a 90-inch tunnel beneath NJ Route 17. After passing beneath NJ Route 17, the culvert again changes to a 72-inch by 60-inch elliptical pipeline. The culvert runs beneath an assisted living facility to a residential area before surfacing west of St. Anne Place. Westerly Brook then extends as a natural channel for approximately 600 feet, ultimately discharging directly into the Saddle River.

A 36-inch diameter storm system line exits the MISS immediately south of, and is tied to the Westerly Brook culvert. This 36-inch diameter pipe within the MISS follows the same north-south orientation (approximately 100 feet to the east) as the Westerly Brook culvert. This segment of the 36-inch line appears to connect with an 18-inch diameter pipe (Appendix C). The pipes join at a manhole south of the rail spur. Flows in this pipe exit the MISS from this manhole through a nominal 65-inch diameter pipe. A headwall is present and a smoke test completed on the 65-inch pipe indicated that this pipe was connected to the 72-inch elliptical pipe (Westerly Brook). Based upon historic site plans, Stepan Company apparently discharged non-contact cooling water through this 65-inch pipe.

1.9.2 Lodi Brook

The following summary of the Lodi Brook development was derived from the review of aerial photographs of the FMSS included in the EPA Report entitled "Maywood Chemical Sites, Maywood and Rochelle Park, New Jersey," dated May 1984, as well as other aerial photographs that have been independently acquired. Selected historic aerial photographs are provided in Appendix C.

An analysis of the 1940s aerial photograph of the area shows that two reaches located north of NJ Route 17 (on what is now the 149-151 Maywood Avenue Property) joined to form the Lodi Brook south of NJ Route 17. Lodi Brook is aligned in a fairly straight southwest direction south of NJ Route 17 until reaching an area currently identified as 80 Industrial Road. At this point, the brook meanders to the east by about 260 feet before returning to the southwest. The brook continues in this direction to a drainage conduit at Route 46 and ultimately discharges into the Saddle River through a 48-inch corrugated metal pipe approximately 1,000 feet south of Route 46.

An aerial photograph dated 1951 shows additional smaller sources of water feeding into the primary reaches of the brook. Several of the sources appear to be drainage channels feeding the easternmost reach and may be the result of continued development to the east of Maywood Avenue. A coal storage area was identified in the 1940 aerial photograph near an MCW power plant (EPA 1984). This is of particular significance in that the 1951 aerial photograph indicates a drainage channel from this area running to the westernmost reach of the Lodi Brook headwaters.

The course of Lodi Brook south of NJ Route 17 in the 1951 aerial photograph is essentially the same as in the 1940 aerial photographs as far south as the 80 Industrial Road property. At this location, the brook diverts to the east, similar to the 1940 aerial photograph. However, the course of Lodi Brook has been

rechanneled, and is much straighter than in 1940. Traces of the former meandering path are still evident in the 1951 aerial photograph. The brook continues through a straight channel to Route 46.

Development adjacent to the Lodi Brook headwaters is evident in the 1961 aerial photograph. Properties located along NJ Route 17, currently occupied by the Gulf and Sunoco gas stations and SWS Realty, have been developed. These developments altered the course of Lodi Brook headwaters. The western upper reach of the brook appears to have been at least partially filled. The brook is no longer visible between Essex Street and NJ Route 17 and has been diverted through a subsurface culvert. South of Essex Street, Lodi Brook appears much the same as it did in the 1951 aerial photograph.

Continued development in the vicinity of the Lodi Brook headwaters is evident in the 1974 aerial photograph. The 149-151 Maywood Avenue and 29 Essex Street buildings are present; however, the western upper reach of the brook is no longer present. The brook is no longer visible south of NJ Route 17. Currently, Stepan Company discharges approximately 2.4 MGD of non-contact cooling water, scrubber water, cooling tower blow down, and storm water to Lodi Brook at Outfall 001.

2.0 INVESTIGATION SCOPE OF WORK AND METHODOLOGY

A geological investigation was conducted to augment existing data from previous investigations. This was achieved through surface, soil boring, bedrock coring, and borehole geophysical surveys, and a hydrogeologic investigation. The investigation scope of work and methodology for the Phase I and II investigation is presented in Sections 2.1 through 2.13. The Supplemental Investigation scope of work and methodology is presented in Section 2.14.

2.1 GEOLOGICAL INVESTIGATION

The Geological Investigation consisted of two types of geophysical surveys: a surface geophysical survey and a borehole geophysical survey. In addition to these surveys, a Geoprobe® investigation was completed, overburden and bedrock monitoring wells were installed, and a limited rock coring program was completed. The Geoprobe® and monitoring well installation methodologies are described in Sections 2.3 and 2.4, respectively. These tasks also generated overburden and bedrock geology information. The results of the Geological Investigation are presented in Section 3.0 of this Report.

2.1.1 Well Search

Pursuant to New Jersey Administrative Code (NJAC) 7:26E-3.7, a well search was completed to locate wells in the vicinity of the FMSS. A file search of the NJDEP - Bureau of Water Resources database was conducted for monitoring wells within a 0.5-mile radius, and a 5-mile radius for all wells with a water allocation permit. Due to the size of the FMSS, three 0.5-mile monitoring well searches were required. The monitoring well searches were centered on the MISS, 111 Essex Street property, and the 8 Mill Street property (**Figure 1-1**). The results of these 0.5-mile radius searches are presented in Appendix D. A summary of the well records presented in Appendix D is provided on **Table 2-1** and **Figure 2-1**.

The water allocation permit search included irrigation, industrial, public supply wells, and other wells with water allocation permits within a 5-mile radius, centered on the MISS. The results of the 5-mile radius search are presented in Appendix D. A summary of permitted wells, data, and well locations are provided (see **Table 2-2** and **Figure 2-2**) for all wells within a 1-mile radius of the MISS, 111 Essex Street and 8 Mill Street properties.

2.1.2 Borehole Geophysical Survey

Geophysical Applications, Inc. performed borehole geophysical logging as part of the Phase I Investigation in May 2000, and Phase II Investigation in April 2001. The first geophysical logging program was completed at five existing wells: MISS-2B, -3B, -4B, -5B, and -7B (**Figure 2-3**). Logging was attempted at a sixth borehole, MISS-1B, but that boring was obstructed by a rock dislodged from the borehole wall. The second geophysical logging program was completed at the newly installed bedrock monitoring wells MW-1D through MW-20D, MW-25D, MW-26D, pumping well PW-1D, and bedrock observation piezometers BRPZ-4 and BRPZ-9 (**Figure 2-3**). Bedrock monitoring well MW-11D was not installed since there was an existing bedrock well in the vicinity of the proposed location. The borehole geophysical methods are described below.

2.1.3 Survey Control - Borehole Geophysical Logging

All borehole logs were referenced to depths below the top of the outer steel casing (except for the MISS-1B video log, which was referenced to ground surface). The geophysical logging winches contain

optical depth encoders that maintain depth measurements accurate within approximately ± 0.2 feet throughout each borehole.

A Mount Sopris Model MGX-5A digital logging winch was used with a heat-pulse flowmeter and caliper probes to obtain conventional geophysical log data. The caliper probe included a fluid resistivity/fluid temperature subassembly at the probe's bottom. Caliper and fluid temperature/fluid resistivity data were recorded at 0.1-foot depth increments, as determined by the logging winch's digital depth encoder. The fluid logs were recorded using a relatively slow speed of 3 feet per minute to allow the thermistor to measure subtle temperature variations. Caliper logs were recorded at higher logging speeds (typically 8 to 10 feet per minute).

Acoustic televiewer (ATV) data were recorded using Geophysical Applications' Advanced Logic Technologies (ALT) Model FAC40 ATV probe with the Mount Sopris logging winch. This televiewer can adapt to a wide range of borehole diameters (up to 16-inch diameter) and is not hindered by suspended sediments in the water column. ATV data were recorded at 0.01-foot intervals throughout each borehole at speeds of approximately 3 feet per minute. The FAC40 contains a high-frequency sonic transducer aimed upwards at a rotating mirror. This mirror is tilted approximately 45 degrees from the probe's vertical axis to direct the sonic pulses at the borehole wall. The transducer divides each sweep around a borehole's circumference into 144 arc segments, and records two-way sonic travel time and reflected signal amplitude for each segment. The FAC40 chooses the largest-amplitude reflected signal within the measurement time window as representing the borehole wall.

Optical televiewer logging was performed using an ALT Model OBI40 optical televiewer probe provided by the manufacturer. This device contains a video camera aimed downwards at a conical mirror. The mirror provides a continuous 360-degree view around the borehole. OBI data were recorded on a laptop computer at 0.005-foot depth increments.

Flowmeter data were recorded at specific depth ranges above and below possible bedrock fractures indicated by the caliper and fluid temperature/resistivity logs. The flowmeter probe was not operated in the wells where sediment was suspected of falling from the borehole walls and increased the risk of trapping the probe. Flow data were recorded in ambient conditions on the downward run to measure natural groundwater flow between fracture zones encountered by each boring. Flowmeter data were subsequently repeated under low-flow (less than 1.0 gallon per minute, or gpm) pumping conditions to help determine which fracture zones were providing significant recharge into the wells.

All geophysical logs were recorded on a laptop computer's hard drive and transferred to floppy diskette or Zip disks as a backup precaution. Post-survey plot scales were adjusted to display as much detail as possible. All conventional logs from the same borehole were merged onto one log plot to aid data correlation. Acoustic and optical televiewer logs are presented on a separate page for clarity. All geophysical log data are presented in this report using ALT's WellCad software package, with a special image-processing module for the acoustic and optical televiewer data.

Conventional video imaging was performed at wells MISS-1B, -2B, -3B, and MW-19DD where flowmeter logging was not performed. The objective of this video imaging was to help confirm whether soft sediments were indeed accumulating in those boreholes, as indicated by discrepancies between current borehole depths and geologic drill logs. Video images were recorded with a Laval Model Cam-Pak 200 color video camera and a Sony 8mm videocassette recorder. The Laval instrument includes an optical depth encoder that indicates camera depth in feet and inches on the video image.

The borehole geophysical survey report is presented in Appendix E.

2.2 HYDROGEOLOGICAL INVESTIGATION

In addition to the Geophysical Surveys described above, the Hydrogeological Investigation consisted of three parts: groundwater level measurements, in-situ permeability tests, and aquifer tests. The results of the Hydrogeological Investigation are presented in Section 3.0 of this Report.

2.2.1 Groundwater Level Measurements

A synoptic round of groundwater level measurements was obtained from the 35 existing DOE monitoring wells in March 2000 as part of the Phase I Investigation. However, a more complete synoptic round of groundwater level measurements was obtained in July 2001 from the 35 existing monitoring wells, 43 Stepan Company-owned monitoring wells, 20 installed aquifer test observation wells, 42 installed Phase II monitoring wells, and 2 staff gauges located in the Saddle River. In addition, a limited synoptic round of groundwater level measurements was obtained from 82 monitoring wells in December 2001. Groundwater levels were obtained using electronic water level devices, and measurements were referenced to the inside casings of the monitoring wells.

Garden State Surveyors, Inc. surveyed the monitoring wells. Horizontal controls were based on the North American Datum, 1927. Vertical elevations were based on the National Geodetic Vertical Datum (NGVD), 1929. After the monitoring wells were surveyed, the groundwater level measurements were converted to elevations relative to the 1929 NGVD.

2.2.2 In-Situ Permeability Tests

Two types of in-situ permeability tests were performed:

1. Slug tests on 28 overburden monitoring wells.
2. Pressure packer tests on 20 bedrock monitoring wells.

Slug Test and Packer Test procedures are described in the following sections.

Slug Tests

Slug tests were performed on 28 overburden monitoring wells located throughout the FMSS. Rising head and falling head tests were performed depending upon the position of the water level relative to the well screen. A pressure transducer and data logger were used to record the water level inside the well. A slug, which consisted of a sand-filled Polyvinyl Chloride (PVC) pipe, was lowered into the water column causing the water level to rise. The subsequent fall back to the equilibrium level was measured (i.e., falling head test). Once the equilibrium water level was re-established, the slug was removed from the water column causing the water level to drop. The subsequent rise of the water level back to equilibrium was measured (i.e., rising head test). The raw data and graphs of time versus displacement are provided in Appendix F. The slug test data was analyzed following the methods described by Bouwer and Rice (1976 and 1989, respectively). Results of the slug testing are discussed in Section 3.2, and slug testing data are presented in **Table 3-8**.

Packer Tests

Constant head packer tests were conducted in two isolated zones in the core or well borehole interval of pilot holes or bedrock wells, below the potentiometric level. The packer tests were conducted on the Phase II bedrock monitoring wells MW-1D through MW-19D, MW-19DD, and MW-20D (except MW-11D, which was not installed). Packer tests were initially completed in cored pilot holes located

adjacent to monitoring wells MW-2D, MW-3D, MW-4D, MW-6D, MW-9D, MW-10D, and MW-16D (the pilot borehole program is discussed further in Section 2.4.2). In the cored holes, packer test intervals were determined after the evaluation of rock cores. The remaining packer tests were conducted in the open boreholes of completed bedrock monitoring wells (**Figure 2-3**). Two packer test intervals were selected in each well after the evaluation of borehole geophysical (ambient and pumped flow) data. Individual fractures or fractured zones were selected for packer testing in all wells except for well MW-19DD, and the lower intervals of wells MW-1D and MW-14D. In these wells, packer tests were also conducted to measure the permeability of unfractured bedrock.

Inflatable packers were inserted into each open borehole and were connected to 1-inch inside diameter steel pipe. The steel pipe was connected to a ball valve and flow meter assembly. Water pressure, recorded totalizer readings, and flow rates were controlled at this assembly. Packers were inflated with nitrogen gas, and monitored via a tank pressure gauge during testing. A water level indicator checked the seal of the top packer by positioning the probe just above the static water level. Any rise in the water level indicated a leak from the isolated zone and would stop the current test.

During the tests, water was pumped into the test section. Constant pressure was maintained with a ball valve near the flow meter. Three different pressure settings were used for each test. Water was pumped at a constant pressure head until the flow rate stabilized. Stabilization was verified by three to five consecutive readings of the same flow rate. After stabilization was achieved, the pressure was increased and maintained until the flow rate stabilized again. When stabilization was achieved at the third pressure setting, the pressure was reduced to the second setting and then to the first, as the process was repeated at each setting.

Each section was tested at a minimum of three pressures, in excess of the in-situ water pressure. The results of these tests were used to estimate the bulk rock hydraulic conductivity of the tested zones. The following equation and parameters required to estimate the hydraulic conductivity, K, are presented below (US Department of the Interior 1977):

$$K=Q/(C_s*r*H)$$

Where:

- Q: Flow Rate
- H: Effective head (feet); $H=h_1+h_2-L$

- h_1: Distance from pressure gauge to water table (feet).
- h_2: Gauge pressure (feet).
- L: Head loss (feet) due to friction, length of pipe between pressure gauge and top of test section.
- C_s: dimensionless conductivity coefficient for semi-spherical flow in saturated strata for partially penetrating cylindrical test wells. This coefficient is estimated from the ratio of A/r.
- A: Length (feet) of test section.
- r: Borehole radius (feet).

Head losses due to friction in the 1-inch diameter delivery system were estimated by totaling the allowances from losses from the pressure gauge branch and one 90-degree elbow in the pipe, plus the total length of the steel pipe.

The raw data and data plots are provided in Appendix G.

2.2.3 Aquifer Tests

The aquifer testing program was implemented using a newly installed overburden pumping well (PW-1S) located on the MISS (**Figure 2-3**). The program consisted of four phases: background groundwater level measurements, a step-drawdown test, a constant rate test, and a recovery test. The purpose of this program was to evaluate the hydraulic properties of the overburden in the vicinity of the MISS. The results of the aquifer test were used to characterize the overburden aquifer, determine the linear flow velocity, and to provide hydraulic data for remedial selection and design.

A limited background groundwater level monitoring program was conducted from June 8 to June 13, 2001. Continuous groundwater level measurements were collected from eight wells (PW-1S, OVPZ-9, OVPZ-10, OVPZ-12, OVPZ-13, OVPZ-15, OVPZ-16, and BRPZ-9) over a 5-day period preceding the step-drawdown test. Groundwater level measurements were collected using In-Situ, Inc. Hermit Data Loggers and transducer arrays or In-Situ, Inc. mini-troll® data loggers. Continuous barometric readings were also obtained.

On June 13, 2001, a step-drawdown test was performed at Well PW-1S to determine the optimum pumping rate for the constant rate test. Continuous groundwater level measurements were obtained for the duration of the step-drawdown test from the eight wells originally included in the background groundwater level monitoring program. The step-drawdown test consisted of four 60-minute steps of progressively higher pumping rates. Groundwater was pumped from Well PW-1S at constant rates of 3.8, 6.0, 8.2, and 10.4 gpm in Steps 1 through 4, respectively. The flow rate was measured using two sequential, in-line digital flow meters that were regularly checked in the field using a stop watch and totalizer. The water generated during the step-drawdown test was piped to a temporary holding tank. The water was batch tested for VOCs and used for dust suppression on the MISS. The step-drawdown data are provided in Appendix H.

Background groundwater level monitoring was continued from the step test (June 13) through the start of the constant rate pump test on June 25, 2001. During this period, groundwater level measurements were obtained from wells OVPZ-11, OVPZ-14, OVPZ-17, BRPZ-4, BRPZ-6, MISS-3A, MISS-5A, MISS-6A, MISS-7A, MW-9S, MW-9D, B38W19S, and B38W19D, in addition to the eight step test monitoring wells. Barometric readings were also obtained during this monitoring period. Background groundwater level measurements are provided in Appendix H.

On June 25, 2001, a constant rate test was performed at well PW-1S, which was pumped at a constant rate of 3.14 gpm. The flow rate was measured using the step test equipment and procedures. Continuous groundwater level measurements were obtained for the duration of the constant rate test (72 hours) from the expanded list of 21 wells. The water generated during the constant rate test was piped to a holding tank, where it was batch tested for VOCs. This water was ultimately used for dust suppression on the MISS. The constant rate data are provided in Appendix H.

Upon completion of the 72-hour constant rate test (June 28, 2001), a recovery test was performed to obtain additional aquifer hydraulic data. After 72 hours of pumping, the pump inside Well PW-1S was shut off, and the recovery of the groundwater level was monitored. Continuous groundwater level measurements were obtained for the duration of the recovery test (81 hours) from the expanded list of 21 wells. The recovery test data are provided in Appendix H.

2.3 GEOPROBE® INVESTIGATION

Groundwater and soil samples were collected as part of the Phase I activities for radiological and environmental parameter analyses from 79 direct push Geoprobes® located throughout the FMSS

(**Figure 2-4**). During Phase II activities, 13 Geoprobes® borings were advanced. Four borings were associated with transects H and I, whereas nine borings were advanced at discrete locations to fill data gaps and to complete borings from the Phase I program that could not be drilled due to right-of-entry issues. As discussed in Section 4.11, and separate from the aforementioned numbers, five borings were advanced for the Batch Sorption (Soil Distribution) tests. Geoprobe® borings are presented on **Table 2-3**.

2.3.1 Geoprobe® Sample Rationale

Fifty-five (55) Geoprobes® were completed as individual sample points across the FMSS (**Table 2-3** and **Figure 2-4**) as part of Phase I and II GWRI activities. Forty-six (46) of these Geoprobes® were completed as Preliminary Design Investigation (PDI) "environmental borings," and they were located throughout the FMSS in areas designed to fill in gaps in the existing PDI database in terms of the environmental quality of the soil and groundwater. Five of the remaining seven Geoprobe® borings were advanced on the MISS as part of the benzene-related evaluation. The remaining two borings were advanced within the 111 Essex Street property (Property No. 7a) in order to further define radiological groundwater contamination. Chemical and radiological analyses of soil and groundwater samples collected from these Geoprobes® were used to evaluate the potential presence and concentration of COPCs within the soil and groundwater at the FMSS, and for use in developing cut lines and soil volume calculations as part of the PDI.

Groundwater samples obtained from these Geoprobes® were used to provide a preliminary screening of groundwater quality at the FMSS. This information was also used to optimize the proposed locations of the monitoring wells to be installed as part of the Phase II activities. In general, the soil samples collected from the Geoprobes® were used to determine the presence of COPCs and broaden the stratigraphic record across the FMSS.

2.3.2 Transect Geoprobes® Sample Rationale

Thirty-seven (37) Geoprobe® sampling locations were advanced as "transects" located in and around the MISS. Chemical analyses from the soil and groundwater samples collected from these Geoprobes® were used in combination with existing soil and groundwater data to evaluate the nature and extent of COPCs in the vicinity of the MISS. Ten (10) transects (A through J), each consisting from 2 to 6 Geoprobes®, were completed across the FMSS (**Figure 2-4**). Each transect is described below.

Transect A

Subsurface soil and groundwater samples were collected from five Geoprobes® along Transect A located on the MISS immediately west of Building 76 and given sample identifiers 12B-015 through 12B-019 (**Figure 2-4**). Soil samples previously collected from a test pit located adjacent to Building 76 verified the presence of benzene and toluene at respective concentrations of 380 and 73,000 milligram per kilogram (mg/kg). Chemical analyses of soil and groundwater samples collected from these Geoprobes® were completed to provide the information necessary to evaluate the subsurface distribution of aromatic VOCs within the vicinity of Building 76. These data were also used to evaluate the distribution of any potential COPCs and/or free phase product existing within the area. Further evaluation of this information was completed to determine whether or not a potential source, or sources, of aromatic VOCs exists on the MISS.

Transect B

Groundwater samples were collected from three Geoprobes® along Transect B located on Park Way and given sample identifiers 14A-001 through 14A-003 (**Figure 2-4**). These Geoprobes® were aligned perpendicular to the direction of groundwater flow along Transect B. Chemical analyses of groundwater samples collected from these Geoprobes® were used to evaluate the nature and extent of groundwater contamination previously detected within the monitoring well clusters B38W14 and B38W15 located hydraulically upgradient of the transect.

Transect C

Groundwater samples were collected from three Geoprobes® along Transect C located to the east of the Saddle River and given sample identifiers 15A-001 through 15A-003 (**Figure 2-4**). The number and spacing of the Geoprobes® at this location provided adequate aerial coverage to evaluate the groundwater quality at the most hydraulically downgradient area of the FMSS, as well as the furthest downstream area of Westerly Brook. Chemical analyses of groundwater samples collected from Transect C Geoprobes® were used to evaluate the overburden groundwater quality in the vicinity of the Saddle River and Westerly Brook.

Transect D

Groundwater samples were collected from four Geoprobes® along Transect D located near High Street and given sample identifiers 16A-001 through 16A-004 (**Figure 2-4**). Due to a Borough Moratorium banning road openings on High Street, Transect D Geoprobes® were drilled on vicinity side streets. Previous surface gamma survey results indicate the presence of radiological contamination in the area of the 149-151 Maywood Avenue parking lot. Therefore, FUSRAP waste may possibly be commingled with COPCs associated with subsurface drums also known to exist in the 149-151 Maywood Avenue parking lot. Transect D Geoprobes® were established perpendicular to, and in combination with, Transect G Geoprobes® to provide aerial coverage and to effectively evaluate groundwater quality hydraulically downgradient of the 149-151 Maywood Avenue parking lot.

Transect E

Subsurface soil and groundwater samples were collected from six Geoprobes® along Transect E located adjacent to the western boundary of the MISS and given sample identifiers 12B-009 through 12B-014 (**Figure 2-4**). The Transect E Geoprobes® provided appropriate aerial coverage to evaluate the groundwater quality at the most hydraulically downgradient portion of the MISS and adjacent to Westerly Brook. Chemical analyses of soil samples collected from these Geoprobes® were used to evaluate the potential presence of residual contamination in the vicinity of retention ponds formerly located in the area.

Transect F

Subsurface soil and groundwater samples were collected from five Geoprobes® along Transect F located within the 149-151 Maywood Avenue parking lot and given sample identifiers 09A-006 through 09A-010 (**Figure 2-4**). The number and spacing of the Geoprobes® at this location provided adequate aerial coverage to evaluate the soil and groundwater quality in the vicinity of the 149-151 Maywood Avenue parking lot. The Transect F Geoprobes® were used to evaluate the groundwater quality in the vicinity of buried drums located beneath the 149-151 Maywood Avenue parking lot. Soil samples were collected to evaluate the potential presence of residual contamination in the soil in this area.

Transect G

Groundwater samples were collected from four Geoprobes® along Transect G located on Midland Street and given sample identifiers 17A-001 through 17A-004 (**Figure 2-4**). The Transect G Geoprobes®, in combination with the Transect D Geoprobes®, provided effective aerial coverage to evaluate the groundwater quality hydraulically downgradient from the 149-151 Maywood Avenue parking lot.

Transects H and I

Subsurface and groundwater samples were collected from four Geoprobes® (two from each Transect) located along the north and south sides of Westerly Brook and given sample identifiers 13A-001 through 13A-004 (**Figure 2-4**). Transect H and I Geoprobes® were used to evaluate the potential presence of contamination in the vicinity of Westerly Brook.

Transect J

Subsurface soil and groundwater samples were collected from four Geoprobes® along Transect J located north of the MISS on the NYSW property and given sample identifiers 18A-001 through 18A-004 (**Figure 2-4**). The Transect J Geoprobes® provided effective aerial coverage to evaluate whether contamination from hydraulically upgradient sources (potentially 158 West Central Avenue) adversely impacted the quality of groundwater within the MISS. Potential contaminant pathways from these sources into the MISS include contaminated groundwater flowing directly into the MISS; storm water runoff; and direct groundwater discharge to Westerly Brook, which as previously noted, flows through the northern and western portions of the MISS as a culverted brook.

2.3.3 Direct Push Geoprobes® Sample Procedure

Phase I soil and groundwater samples were collected via the direct push sampling method using a truck-mounted Model 5400 or track-mounted Model 54DT Geoprobe®. Two types of direct push soil probes were used in the investigation: a single rod system (i.e., Macro-Core®) and a dual tube (or cased) system. The dual tube system consisted of two sections: an outer drive rod and an inner sampling tube. Depending on the sampling objectives, the inner sampling tube was inserted into the drive rods during driving or inserted through the entire length of the drive rods after the desired sample depth was reached. Typically, if the soil was loose or saturated, the dual tube system was used.

Soil samples were collected in 4-foot soil cores within PVC/polyethylene terephthalate (PET) liners in order to provide vertical delineation of the soil quality at each Geoprobe® location. A Mini-RAE Photoionization Detector (PID) and a collimated Eberline SPA-3 2” x 2” NaI detector (or Ludlum Model 44-10) coupled to a Ludlum Model 2221 scaler/ratemeter were used to measure soil headspace VOC content and total gamma activity, respectively, within each 4-foot long soil core. The detectors were positioned approximately 0.5 inch above the soil core, and continuous scanning of the soil core was performed at an approximate rate of 3 inches per second. Screening results were recorded on the GWRI Soil Probe Logs (Appendix I). Soil headspace VOC, radiological, and visual field screening methods were used as field indicator parameters to select soil samples from within select depth intervals for fixed base laboratory analyses. Soil core intervals exhibiting elevated VOCs, radiation, and/or unnatural staining were selected for subsequent sample analysis.

Discrete soil samples were collected within specific depth intervals, and were thoroughly homogenized in pre-decontaminated, stainless steel bowls. Samples were then placed into labeled glass sample containers and a cooler for subsequent laboratory pickup or shipping. VOC soil samples were collected undisturbed, and likewise placed into labeled glass sample containers. Soil samples were further characterized via the

Unified Soil Classification System (USCS) and the Munsell color system. Geoprobe® logs are provided in Appendix I.

Groundwater samples were collected at each Geoprobe® location subsequent to soil sample collection. Samples were collected using stainless steel Geoprobe® well-point samplers, peristaltic pumps, and dedicated polyethylene tubing. Groundwater was collected from selected 4-foot depth intervals. When possible, the narrower diameter well point sampler was advanced beyond the depth obtained during soil sampling with the Macro-Core®. This ensured that the entire 4-foot length of the well-point sampler would be within the saturated zone.

In order to facilitate the collection of groundwater samples at Geoprobe® locations where groundwater recharge was slow, a number of samples were also collected via peristaltic pumps and dedicated polyethylene tubing from within temporary PVC micro wells (less than 1-inch diameter). These micro wells were installed within a number of Geoprobe® boreholes. Additional groundwater samples were also collected from Geoprobes® along Transects A, B, C, E, H, I, and J, using either dedicated micro-bailers or dedicated tubing as a bailer, for VOC analyses.

Water quality stabilization parameters (i.e., pH, dissolved oxygen [DO], conductivity, ORP, and turbidity) were measured within the groundwater at each Geoprobe® location, prior to groundwater sample collection, using a Horiba water quality meter (**Table 2-3**). In an effort to minimize the turbidity of the Geoprobe® groundwater samples, a low pumping rate (less than 500 milliliters/minute) was used during purging and sampling activities.

All sampling equipment used to collect the groundwater and soil samples (i.e., the Geoprobe® rig, direct-push soil probe casing, and associated tools) was steam-cleaned prior to use and subsequent to the completion of each Geoprobe®. Each Geoprobe® borehole was backfilled for the full length using Benseal® bentonite and/or native materials in accordance with project requirements. Geoprobe® boreholes installed within asphalt were completed using cold patch placed at the surface.

PDI Geoprobes® Sample Procedure

Forty-six (46) individual Geoprobes® were advanced throughout the FMSS (**Table 2-3** and **Figure 2-4**), and are the same Geoprobes® identified as "environmental borings" in the PDI. These Geoprobes® are located in areas where there were soil and groundwater data gaps, and provided aerial coverage throughout the FMSS. Approximately 5% of the soil samples collected as part of the PDI was used for assessing facility disposal requirements.

The PDI Geoprobe® soil samples were submitted to the USACE-approved outside laboratories for the following analyses: Target Compound List (TCL) VOCs; semi-volatile organic compounds (SVOCs); pesticides; polychlorinated biphenyls (PCBs); Target Analyte List (TAL) metals; chromium speciation (hexavalent and trivalent); lithium and boron; total cyanide; REEs; full RCRA characteristics (ignitability, corrosivity, and reactivity); and full TCL/TAL parameters by the toxicity characteristic leaching procedure (TCLP). In addition, one soil sample from each of the PDI borings was submitted to the on-site laboratory for radiological analyses U-238, Th-232, and Ra-226.

In accordance with the Chemical Data Quality Management Plan (CDQMP), 10% of all soil samples submitted to the mobile laboratory for radiological analysis were sent to a USACE-approved outside laboratory for replicate radiological analysis (USACE 2002c). Similarly, 10% of all soil/water samples submitted to the outside laboratory were submitted to a USACE laboratory for confirmation analysis.

One soil sample was collected from each of the 46 Geoprobes® as part of the PDI Field Investigation. The soil sample was collected from the PDI target depth indicated in **Table 2-3**. If elevated VOC, radiation, and/or unnatural staining (field parameters) was detected by field instruments or observation at another depth, a discrete soil sample was instead collected from the subject interval. If the depth of refusal within a Geoprobe® was less than the PDI target depth, the soil sample was collected from either the depth interval exhibiting soils with elevated field parameters or from the depth interval immediately above the top of the water table.

A groundwater sample was also collected from 43 of the 46 Geoprobes® conducted as part of the PDI Field Investigation. Three of the sample locations were dry, and samples could not be collected. Following soil sample collection, each Geoprobe® was advanced to the water table to collect a groundwater sample. Each groundwater sample was analyzed for dissolved RCRA 8 metals (filtered), lithium, boron, radiological parameters (unfiltered), and dissolved REEs. Typically, the metal samples were field-filtered using a 0.45-micron filter prior to analysis. However, if the groundwater samples were excessively turbid (i.e., required the use of multiple filters), the samples were submitted to the laboratory as unfiltered samples for laboratory filtration prior to preservation and analyses. In addition, 5% of the Geoprobe® groundwater samples were submitted to the laboratory as unfiltered samples for total metal analyses (RCRA 8 metals, lithium, and boron) for comparison purposes.

Transect Geoprobes® Sample Procedure

Soil samples were collected from 23 of the 37 Transect Geoprobes® (i.e., Geoprobes® along transects A, E, F, H, I, and J). These 23 Geoprobes® were installed at selected locations to address groundwater and soil quality data gaps, and to provide stratigraphic control. Two soil samples were collected from each of the 23 Geoprobes® (**Table 2-3**). Groundwater and soil samples were not collected at location 09a-006 (Transect F), due to elevated lower explosive limit readings encountered during sampling. Two sampling attempts were made at this location.

Transect soil samples were analyzed for the following parameters: RCRA 8 metals (with the exception of the Transect H and I borings that were analyzed for TAL metals), lithium, boron, and REEs. TCL VOCs were obtained from 19 of the 37 transect borings A, E, H, I, and J. Two soil samples from each of these borings were analyzed for VOCs. Similarly, two soil samples from each Geoprobe® were analyzed by the on-site mobile laboratory for radiological parameters. These analyses included U-238, Th-232, and Ra-226, which are the isotopes identified as the radiological COPCs in the BRA. In accordance with the CDQMP, 10% of all soil samples submitted for on-site analysis were sent to a USACE-approved outside laboratory for confirmatory analysis. These samples were analyzed for the following radiological parameters: total uranium (U-238, U-235, and U-234), Th-232, Th-230, Th-228, Ra-226, and Ra-228.

At least 1 (and, when possible, 2) groundwater sample was collected via a peristaltic pump from each of the 37 Geoprobes® located within the Transects. The first sample was collected from the top of the overburden aquifer (water table). The second sample was collected from the bottom of the overburden aquifer, immediately above the bedrock contact. If, however, the Geoprobe® depth of refusal was observed to be relatively shallow and/or the saturated thickness of the overburden aquifer was observed to be 15 feet or less, only the shallow groundwater sample was collected.

Each groundwater sample collected was subsequently analyzed for dissolved RCRA 8 metals (with the exception of the four borings from Transects H and I that were analyzed for TAL metals), lithium, boron, and REEs (filtered) and radiological parameters (unfiltered). Thirty four (34) samples (from 25 transect borings in A, B, C, E, H, I, and J) were sampled for TCL VOCs. Typically, the metals samples were filtered in the field using a 0.45-micron filter prior to analysis. However, if the groundwater samples were excessively turbid (i.e., required the use of multiple filters), the samples were submitted to the

laboratory as unfiltered samples for laboratory filtration prior to preservation and analyses. In addition, 5% of the Geoprobe® groundwater samples were submitted to the laboratory as unfiltered samples for total metals analyses (RCRA 8 metals, lithium, and boron).

2.4 MONITORING WELL INSTALLATION

This section addresses the rationale for Phase II monitoring well location (2.4.1), and describes methods used to install overburden and bedrock monitoring wells (2.4.2 and 2.4.3), and overburden and bedrock pumping test /observation wells (2.4.4). The majority of Phase II wells were installed as part of an overburden/bedrock well cluster or bedrock well cluster. A summary of well construction details is provided in **Table 2-4**.

2.4.1 Rationale for Location of Phase II Monitoring Wells

Installation of 40 Phase II monitoring wells was proposed in the *Groundwater RI Work Plan* (USACE 2000), including proposed well locations, rationale and construction detail. Proposed wells included overburden/bedrock well clusters MW-1S/D through MW-18S/D, and three well cluster MW-19S/D/DD. Well MW-11D was never installed, and was replaced for monitoring purposes by adjacent Stepan bedrock well BRMW-6. Overburden and bedrock monitoring well clusters were located in impacted or potentially impacted areas of the FMSS to determine the horizontal and lateral extent of contamination, and obtain hydrogeologic data for characterization of the overburden/bedrock aquifers. These well locations were selected based upon historical soil and groundwater data collected during the 1992 RI (DOE 1992), Stepan RI, and Annual Environmental Monitoring Reports. The detailed rationale for location of the Phase II wells is provided in Table 8-3 of the *Groundwater RI Work Plan*.

Phase I sampling results were reported in the *Draft Phase I Groundwater Data Report* (USACE 2000), and a number of well locations were adjusted based upon evaluation of the soil and groundwater Geoprobe® data. Two additional overburden monitoring wells (MW-21S and MW-22S) were proposed/installed by the USACE in 2001 to monitor radiological groundwater exceedances detected during the Phase I Geoprobe® investigation (Response to EPA Phase I Data Report Comments, dated March 1, 2001).

Once the depth to bedrock was determined, an appropriate screen length was selected. All wells were screened across the water table, typically using a 10 foot length of screen. A shorter screen length was used if shallow bedrock was encountered. Wells were constructed using a 2-inch diameter, Schedule 40, 10-slot PVC screen and riser. Morie #0 filter sand was used in the majority of wells, except in clay formations, where Morie #00 was used instead.

Additional Phase II monitoring wells were installed in 2001 to delineate a benzene plume detected during the Phase II field program. These wells include MW-23D/DD, MW-24D/DD, MW-25S/D, and MW-26D. Six bedrock pump test/observation wells were also converted to monitoring wells for this purpose, and include PW-1D, BRPZ-2, BRPZ-3, BRPZ-4, BRPZ-5 and BRPZ-9. Overburden pump test well PW-1S and observation wells OVPZ-13 and OVPZ-17 were also retained for sampling/water level measurement within the mapped benzene plume.

An additional six bedrock monitoring wells were installed in 2002-2003 as part of the Supplemental Benzene Investigation to further delineate the benzene source area and downgradient extent of the benzene plume. These wells include MW-27D, MW-28D, MW-29D, MW-31D and MW-32D.

2.4.2 Overburden Monitoring Well Installation

Twenty-three (23) overburden monitoring wells, identified as MW-1S through MW-22S, and MW-25S were installed in the FMSS (**Figure 2-3**). The monitoring well boreholes were drilled using the wash rotary method. A 300-pound hammer was used to drive a 6-inch steel temporary casing from the ground surface to the top of bedrock. A nominal 6-inch roller bit was used to clean out the casing. Once bedrock was verified by observing the increased pressure on the roller bit, water was circulated through the roller bit to flush out the borehole. A progressing cavity pump and mud tub were used to circulate the drilling water. At the completion of drilling activities, water loss was estimated by measuring drawdown in the rig's water tank. Solids that settled into the mud tub were placed into drums and transported to the MISS for storage.

In general, continuous spilt spoon soil samples were collected in advance of the roller bit to evaluate overburden stratigraphy. Overburden monitoring well boring logs are provided in Appendix J.

Once the depth to bedrock was determined, an appropriate screen length was selected. A 10-foot section of screen was typically used; however, a shorter screen was used if shallow bedrock was encountered. Wells were constructed using a 2-inch diameter, Schedule 40, 10-slot PVC screen and riser. Morie #0 filter sand was used in the majority of wells, except in clay formations, where Morie #00 was used instead.

The screen and riser were threaded together, and lowered carefully into the borehole. The temporary steel casing was then lifted in 5-foot increments, and backfilled with filter sand. The temporary casing was pulled in steps to avoid getting stuck when backfilling was complete. The casing was wrapped and secured by a chain, and hydraulically lifted by the rig. As the casing was removed, sections of the casing were cut with an acetylene torch. The filter sand was slowly poured into the annulus while using a weighted tape to measure the depth. Generally, sand was installed 2 feet above the top of the screen. In some instances, where the depth to bedrock was 10 feet or less, only 1 foot of sand was installed above the top of screen. Due to the shallow area water table and screen interval, the top of the filter pack was typically 2.0 to 3.0 feet bgs. A thin 0.5 to 1.0 feet layer of bentonite chips and/or pellets were installed above the filter pack, followed by a Portland cement to set the outer protective casing and surface seal. Bentonite chips/pellets were used to further seal the well off from potential surface water contamination, and minimize the intrusion of the cement grout into the filter pack and well. Detailed as built diagrams of all wells can be found in Appendix J.

2.4.3 Bedrock Monitoring Well Installation

A total of 26 bedrock monitoring wells were installed on the FMSS during the Phase II investigation, with locations shown in **Figure 2-3**. Shallow and deep bedrock wells are designated with a "D" and "DD", respectively. Shallow bedrock wells were typically installed 35 feet into bedrock, with a 25-foot open borehole. Deep bedrock wells were generally installed 75 feet below the bedrock surface, and were constructed with a 25-foot open borehole or screened interval. Installed wells include MW-1D through MW-20D (except MW-11D), MW-19DD, MW-23D, MW-23DD, MW-24D, MW-24DD, MW-25D, and MW-26D. Installation of proposed monitoring well MW-11D was cancelled after the discovery of adjacent (and similarly constructed) Stepan Company bedrock well (BRMW-6). Monitoring well MW-12D could not be developed due to heavy sediment influx into the well, and was abandoned. A replacement well (MW-12D) was subsequently installed adjacent to the former well.

Bedrock monitoring wells MW-1D through MW-20D were drilled using the wash rotary method. During installation, a 300-pound hammer was used to drive an 8-inch steel temporary casing from the ground surface to the top of bedrock, and a nominal 8-inch roller bit was used to clean out the casing. The 8-inch

roller bit was subsequently drilled 10 to 15 feet into competent rock at each of the wells to set casing. At deep monitoring well MW-19DD, the 8-inch roller bit was advanced 45 feet into bedrock, to the top of the planned open borehole interval. After the 8-inch roller bit was drilled to the desired depth, a 4-inch diameter permanent steel casing was seated and grouted into bedrock. After allowing the permanent casing and grout to set for a minimum of 24 to 48 hours, a nominal 4-inch diameter roller bit was used to advance the borehole a maximum depth of 25 feet. The bedrock monitoring wells were completed as open-hole wells.

Pilot test holes were drilled at the first seven bedrock well locations (MW-2D, MW-3D, MW-4D, MW-6D, MW-9D, MW-10D, and MW-16D). At these locations, the bedrock monitoring well installation procedures were generally the same as described above. However, the 8-inch diameter roller bit was typically advanced only 1 or 2 feet into bedrock, and temporary casing was seated into the bedrock. From the base of the temporary casing to the bottom of the borehole, NQ rock cores were collected. During the rock-coring program, pressure packer tests were also completed (Section 2.2.2). Upon completion of the rock coring and pressure packer testing, the borehole was tremie-grouted to the surface and the temporary casing was removed. Permanent bedrock monitoring wells were later installed at each cluster location.

The pilot test hole program was abandoned after the first seven borings due to the much greater than expected level of effort and water loss experienced during rock coring and packer testing. USACE concluded that much of the lithologic and fracture orientation data described in the cores could be obtained using borehole geophysics at the remaining cluster locations. Borehole geophysics and packer testing were performed at all new bedrock monitoring wells after development.

Bedrock monitoring wells MW-23D, MW-23DD, MW-24D, MW-24DD, MW-25D, and MW-26D were installed with 6-inch ID boreholes, using the air rotary method. During installation, a 10-inch diameter temporary casing was initially advanced to the top of bedrock. A nominal 10-inch diameter air hammer bit was used to clean out the casing and advance the borehole 10 to 15 feet into competent bedrock. A permanent 6-inch diameter steel casing was seated and grouted into bedrock and allowed to set for a minimum of 24 hours. Monitoring wells MW-23D, MW-23DD, MW-24D, MW-25D, and MW-26D were drilled out to the desired depth using a nominal 6-inch diameter air hammer bit. Monitoring wells MW-25D and MW-26D were completed as a 6-inch diameter open hole wells, whereas wells MW-23D, MW-23DD and MW-24D were constructed with a 20-foot, 2-inch inner diameter (ID), Schedule 40, 10-slot PVC screen in the open borehole interval. The annulus of each borehole was filled 2 feet above the screen with Morie #1 filter sand, and tremie grouted to the surface. Monitoring well MW-24DD was completed as a triple cased (i.e., 10-inch, 6-inch, and 4-inch casings) well due to heavily fractured bedrock at depth. Fractures were encountered in the open borehole below the 6-inch casing, and were cased off (and grouted) using 4-inch ID steel casing. The well was completed with an open 4-inch ID borehole.

The boring logs and as-built diagrams for the bedrock monitoring wells are provided in Appendix K.

2.4.4 Aquifer Test Observation/Pumping Well Installation

Overburden and bedrock observation wells were installed to monitor water levels during the pumping test (**Figure 2-3**). In addition, one bedrock and one overburden test (pumping) well were installed. The installation procedures followed the protocol specified in the *Pump Test Work Plan* (USACE 2001a) and are described below.

Overburden Observation Wells

One overburden test well and nine overburden piezometers (PW-1S and OVPZ-9 through OVPZ-17) were installed to facilitate the implementation of the overburden aquifer test. All piezometers were installed using a direct-push drill rig. Continuous macro-core soil samples were collected to bedrock to evaluate overburden stratigraphy. A discrete interval sample tool measuring approximately 4 feet in length and attached to soil probe rods were pneumatically pushed into the ground. A PVC/PET sampler was used to collect continuous soil samples. A temporary 2-inch ID outer tube (Dual Tube Casing Method) was advanced ahead of the borehole sampler near bedrock to stabilize the hole.

After encountering bedrock, a 2-inch diameter steel casing was installed with a sacrificial tip. The 1-inch diameter PVC screen and riser were placed into the casing. The top of the riser was then tapped with a hammer to dislodge the sacrificial tip, and the steel casing was removed. The borehole annulus was filled with Morie #0 sand as the casing was being retracted. A bentonite seal and a 2-foot surface seal with a flushmount cover were used to complete each piezometer in a manner similar to the overburden monitoring wells.

The overburden pumping well (PW-1S) was installed and constructed in a manner similar to the overburden monitoring wells (wash rotary), except that the well was installed with an 8-inch diameter borehole and 4-inch diameter well screen and casing. A 20-foot section of Schedule 40, 10-slot wire wrapped PVC screen and schedule 40 PVC riser were threaded together and lowered into the borehole. Morie #0 sand was slowly poured into the annulus while using a weighted tape to measure the depth. The overburden pumping well was completed as a flush mounted road-box in concrete.

Upon completion of the aquifer pumping test, all of the overburden piezometers were abandoned, except for PW-1S, OVPZ-13, and OVPZ-17 in accordance with the approved *Well Modification and Abandonment Plan for the Bedrock and Observation Test and Piezometer Wells* (USACE 2001c). These three piezometers were retained for long-term water level monitoring.

Bedrock Observation Wells

One bedrock test well and nine piezometers (PW-1D and BRPZ-1 through BRPZ-9) were installed in an array for aquifer testing (**Figure 2-3**). Bedrock aquifer test observation wells were installed along and normal to the measured NNE bedrock and fracture strike (trend), relative to the test well, in order to measure potential aquifer anisotropy. Bedrock test and observation wells were installed with a typical 75 feet of open borehole to obtain the requisite test yield and to fully penetrate the aquifer. However, benzene contamination was detected in these wells, and the EPA, NJDEP, and USACE jointly decided to cancel the bedrock aquifer test to avoid potential aquifer (deep and shallow) cross contamination.

The bedrock piezometers were installed by initially drilling a 10-inch diameter borehole to a depth of 5 feet below ground surface (bgs) with hollow stem augers. A 10-inch diameter temporary steel casing was advanced to the top of bedrock, and the inside of the temporary casing was reamed with a nominal 10-inch diameter roller bit to remove cuttings entrained in the casing. The well was advanced into bedrock using the air rotary method. A nominal 10-inch air hammer was advanced through the temporary casing and drilled a minimum of 10 feet into competent rock. A 6-inch permanent steel casing was seated and grouted into the bedrock, and the temporary casing was removed. After the grout set for a minimum of 24 hours, a 6-inch diameter air hammer was used to drill the borehole to the desired depth. Pursuant to the Pump Test Work Plan, the test well and seven of the piezometers were installed with 75 feet of open borehole to average depths of 110 feet. Piezometers BRPZ-4 and BRPZ-9 were installed as shallow bedrock piezometers with 20 to 25 feet of open borehole.

In accordance with the approved *Well Modification and Abandonment Plan for the Bedrock and Observation Test and Piezometer Wells* (USACE 2001c), bedrock piezometers BRPZ-1, BRPZ-6, BRPZ-7, and BRPZ-8 were abandoned pursuant to NJDEP specifications. Pumping well PW-1D and piezometers BRPZ-2, BRPZ-3, and BRPZ-5 were reconstructed as shallow bedrock 2-inch ID PVC monitoring wells in accordance with the memorandum. Piezometers BRPZ-4 and BRPZ-9 were retained as monitoring wells without modification. The pumping well and bedrock piezometers were completed with a 14-inch diameter flush mounted road-box set in concrete. A well identification tag was placed within the concrete pad at each of the well locations.

2.5 MONITORING AND TEST WELL DEVELOPMENT

All newly installed monitoring wells and proposed Stepan Company sampling wells were developed prior to sampling. All newly installed overburden and bedrock aquifer test wells and piezometers were developed prior to testing, and redeveloped upon conversion (with screen and filter pack) before sampling.

2.5.1 Monitoring Well Development

Prior to development, the well headspace was field screened for VOCs with a PID. The depth to water and depth to bottom were measured with a water level indicator to calculate the volume of water in the well. A Horiba Model U-10 (or equivalent) was used to monitor pH, temperature, conductivity, and turbidity parameters during development. Development was continued until a minimum three volumes were purged from the well, stabilization of water quality parameters to within 10%, and turbidity readings of 50 NTUs or less was achieved. All data were recorded on the USACE well development logs (Appendix L).

As described in the GWRIWP, USACE requirements include recovery of five times the water lost during installation, in addition to the three well volumes normally required for development. Due to the large volumes of water lost during well installation, water recovery requirements were revised by the USACE to three times the water lost, plus three well volumes removed.

Bedrock wells were typically developed using a 2-inch submersible pump or two whale pumps in sequence to produce the required flow. A number of bedrock wells contained substantial volumes of sediment, and the drill rig was used to flush out the sediment from the bedrock wells with potable water. The water was pumped to the well bottom through drill rods, collected in a mud tub, and discharged into drums. Upon completion of this process, the wells were pumped to remove three times the water loss plus three well volumes.

Overburden wells were developed using an electric whale pump, and was also used as a surge device to suspend and pump off sediment that settled on the bottom of the well. During the initial phase of development, the wells were pumped at a relatively high rate to draw down the water level as far as possible. The pump was shut off, and the water level in the well was allowed to recover. The well was then pumped at a sustainable rate to remove the required volume.

A Horiba Model U-10 was used to monitor water quality parameters during development of bedrock and overburden wells. Pumping rate, well drawdown, discharge volume and water quality parameters were recorded on well development forms, and are included in Appendix L. Recorded water quality parameters include turbidity, DO, conductivity, temperature and pH. All wells were developed to below 50 NTU turbidity, and an effort was made during development to achieve the lowest possible turbidity measurements. The other water quality parameters were generally monitored until they achieved stability, which indicated that the well was in communication with the aquifer.

2.5.2 Test Well Development

Overburden and bedrock test well and piezometers were developed pursuant to the approved *Pump Test Work Plan* (USACE 2001a). Overburden test well PW-1S was developed using the pump and surge method (submersible pump and 3-inch surge block) to remove aquifer fines and increase well efficiency. Well PW-1S was surged and pumped in four 2-hour development cycles. At the conclusion of each pumping cycle, the well specific capacity (well efficiency) was measured and compared to former development cycle. Development continued until little or no increases were noted between cycles.

The overburden test (microwell) piezometers were developed using a peristaltic pump to ensure communication with the overburden aquifer.

Bedrock test well BRPW-1D was initially air developed over a several hour period to remove cuttings from the well and determine the "drillers" yield. The well was subsequently surged and pumped in four 2-hour cycles as previously described for the overburden well. As noted, the well specific capacity was measured at the conclusion of each pumping cycle and compared to the former development cycle. The final specific capacity data was used to calculate an estimated aquifer transmissivity for that well.

All bedrock piezometers were air developed and pumped at a constant rate to determine the well specific capacity. The specific capacity results are discussed further in Section 3.0 of this Report. As previously discussed, bedrock aquifer test wells PW-1D, BRPZ-2, BRPZ-3, and BRPZ-5 were reconstructed as monitoring wells. These wells were developed again following the procedures outlined in Section 2.5.1.

Development water was placed in drums or truck mounted tanks and brought back to the MISS. This water was batch tested for VOCs and used for dust suppression on the MISS.

2.6 MONITORING WELL INTEGRITY SURVEY

Monitoring well integrity surveys were conducted as part of the Phase I and Phase II Field Investigations (**Figure 2-3**). The integrity of 41 existing monitoring wells located throughout the FMSS was verified during Phase I. Of the 41 monitoring wells documented in the GWRIWP, only 35 were located. The six wells that were not located include: MISS-1A, MISS-6B, MISS-5A-1, B38W3B1, B38W3A, and B38W17. The integrity of 41 Stepan Company-owned monitoring wells located on the Stepan Company property and other vicinity properties was verified as part of Phase II. Of the 41 Stepan Company-owned monitoring wells documented in the GWRIWP, only 34 were located. The seven wells that were not located include: OBMW2, OBMW3, OBMW4, BRMW2, BRMW4, BRMW7, and MW-1 (monitoring well MW-1 was subsequently located). Two wells, PT-1DA and PT-1DB, were added to the integrity survey.

The monitoring well integrity survey process involved several tasks, as described below:

- The monitoring well was physically located.
- Photographs of each well were taken for documentation;
- The protective surficial casings (i.e., stickup or flushmounts) were inspected for signs of damage.
- The condition of the monitoring well locks was verified.
- The condition of the monitoring well caps was inspected.
- Water level measurements were obtained using a water level meter.

- The monitoring wells were sounded with the water level meter probe to determine the total depth of each well and if there was a buildup of silt and sediment or other obstruction(s). The depth measured was compared to the well construction information to determine how much sediment had deposited in the well.
- In-situ permeability tests (slug tests) were performed on 13 wells to determine the hydraulic connection between the monitoring wells and the formation. The results were then compared to historical results to determine if the monitoring well(s) needed to be redeveloped.

The monitoring well integrity check consisted of two parts. The first part involved a site visit to the well to take a picture of the well and observe the general condition of the well (Appendix M). The condition of the outer casing, outer cap and padlock, cement pad, and inner cap and padlock was documented on monitoring well integrity forms (Appendix M). In addition, a water level measurement was taken and the total depth of the well determined.

Selected wells were slug tested to determine if the well was in communication with the aquifer. The slug test results are discussed in Section 3.0.

2.7 MONITORING WELL SAMPLING

Two rounds of groundwater samples were collected as part of the GWRI Field Investigation. As part of the Phase I Investigation, groundwater samples were collected from 34 existing monitoring wells. The principal sampling effort (90% of samples) was conducted March 20 to April 18, 2000, with the remaining samples collected through June 2000. The Phase II Investigation included the collection of 123 groundwater samples, including 34 existing wells, 34 Stepan Company-owned wells, and 55 newly installed wells (including reconstructed aquifer test wells). The principle Phase II sampling effort (80%) was conducted from November 1, 2000 to April 19, 2001, with additional sampling conducted through December 2001.

The low flow sampling method (EPA 1998a) was used to collect the groundwater samples at overburden and bedrock wells. Most bedrock wells did not have large water bearing fractures, rather water was obtained via a number of small, uniformly distributed fractures or seams. In these wells, the sampling pump was placed in the middle of the borehole interval. In those wells with a large discrete fracture or fracture zone, the sampling pump was placed at the fracture depth.

Each well was purged at a pumping rate of approximately 300 to 350 milliliters/minute (mL/min), and groundwater samples were collected at a pumping rate of approximately 250 mL/min. A decontaminated, 2-inch diameter stainless steel submersible pump was used for purging and sample collection. A peristaltic pump was used for purging and sample collection at wells that were thought to contain sediment or less than 3 feet of water. In these instances, a dedicated Teflon bailer was used to collect the VOC fraction.

Dedicated polyethylene tubing was connected through a two-way valve to a flow through cell. Initially, the water was allowed to drain out of an out flow tube near the top of the flow through cell and into a bucket until the parameters stabilized and the water sample could be collected. A Horiba U-22 was used to measure pH, DO, temperature, conductivity, and turbidity (**Tables 2-5a/b**). An Eh/pH meter was used to measure the ORP of the sample (**Tables 2-5a/b**). Parameters were stabilized to the low flow sampling method (EPA 1998a) criteria, which requires within ±10% for DO and turbidity, ±3% for Eh, ±0.1 for pH, and ±10 mV for conductivity. Although not required, temperature was also recorded and stabilized within 0.1°C. Field equipment was calibrated each day prior to use for well development or sampling. The DO and ORP meters proved somewhat unreliable and difficult to maintain, and are considered a

potential source of error with respect to field parameter measurements. Backup DO, ORP and turbidity meters were maintained onsite, and were used regularly to verify field parameter readings. A minimum of three measurements was taken at 5-minute intervals prior to the collection of groundwater samples. A 50 NTU limit on sample turbidity was implemented early in the Phase II sampling program, and required the collection of both filtered and unfiltered radiological samples if the limit was exceeded. The 50 NTU turbidity (unfiltered) limit was recommended in the GWRI Work Plan (USACE 2000), and was immediately implemented upon approval by the EPA.

Groundwater samples were obtained by shutting off the valve to the flow through cell and opening the valve to the sample collection tube. With the exception of the sample obtained from monitoring well MW-16D during Phase II activities, all Phase I and II groundwater samples were analyzed for unfiltered radiological parameters, metals [RCRA 8 metals (Phase I), TAL metals (Phase II)], lithium, boron, and REEs. Dissolved and total radiological parameters, TAL metals and REEs were obtained from well MW-16D due to turbidity issues. All Phase II groundwater samples were analyzed for TCL VOCs (with the exception of monitoring well clusters MW-14 through MW-18, located south of Essex Street). In addition, groundwater samples collected from monitoring wells located near the aquifer test observation wells were sampled for surfactants and chlorotoluene isomers. These parameters were added to the field program as part of the benzene investigation in the vicinity of Stepan Company's former Aromatics Area and were collected in the same manner as the other parameters.

Upon collection of the sample, the flow through cell, field instruments, and pumps were decontaminated following the procedures outlined in the CDQMP (USACE 2002c).

Well sample records are provided in Appendix N.

2.8 LODI BROOK AND WESTERLY BROOK VIDEO SURVEY

A video-inspection survey was completed on the portions of the Lodi Brook and Westerly Brook that are routed through concrete pipes (**Figure 2-5**). Allstate PowerVac completed the video inspection in January 2000. The inspection was completed using a video camera mounted on a small, remote controlled, all terrain tracker. Real time images were fed back to the video control truck. The video was recorded on 12 VHS videotapes. Field observations were recorded on Sewer Video Inspection Report forms (Appendix O). Upon completion of the video inspection, the videotapes were reviewed and additional observations were made (Appendix O). Observations of the pipe conditions that were specifically of concern include:

- Offset, open, or leaking joints;
- Leaking service connections;
- Broken or cracked pipe sections;
- Deformed or deteriorated pipe sections; and/or
- Signs of infiltration/exfiltration.

The observations made during the Lodi Brook and Westerly Brook video survey are presented in Section 3.0 of this Report.

2.9 SURFACE WATER AND SEDIMENT SAMPLING

Twenty-one (21) surface water samples were collected from 4 surface water bodies within the FMSS: Saddle River, Westerly Brook, Coles Brook and Lodi Brook (**Figure 2-6**). In general, samples were

collected by immersing the appropriate sample container into the surface water bodies. In the smaller streams (Westerly Brook, Coles Brook, and Lodi Brook) surface water samples were collected with the opening of the sample bottle facing upstream, avoiding floating debris. Surface water locations were sampled in order from the most downstream to the most upstream locations to minimize the impact of sampling-related turbidity and potential cross-contamination from upstream to downstream locations. Each surface water sample was analyzed for TAL metals (unfiltered), radiological parameters, lithium, boron, and REEs. In addition, the collected surface water samples were analyzed in the field for pH, turbidity, specific conductance, temperature, and DO (**Table 2-6**). As noted in **Table 2-6**, only the sample obtained from the Saddle River, SR-4 (78 NTU) elicited a turbidity measurement in excess of 50 NTU.

Twenty-two (22) sediment samples were collected from the 4 surface water bodies within the FMSS: Saddle River, Westerly Brook, Coles Brook, and Lodi Brook (**Figure 2-6**). A total of 27 sediment samples were proposed in the GWRIWP; however, 4 samples could not be collected in culverted sections of Westerly and Lodi Brooks, and the fifth could not be obtained due to property access problems along the Saddle River. At each natural drainage location (i.e., there is no pipe present), sediment samples were obtained using a stainless steel hand-auger assembly (with stainless steel liners). Samples were collected from the sediments underlying the surface water to a depth between 0.5 and 1 foot. At each location within the drainage pipe, sediment samples were collected using stainless steel trowels or scoops. The sediment was transferred into the appropriate sample containers for submittal to the laboratory. Each sediment sample was analyzed for TAL metals, lithium and boron, radiological parameters and REEs.

2.10 SURFACE FEATURES SURVEY

A surface features survey was completed throughout the FMSS. This survey consisted of a walkover of the FMSS over the course of several site visits. The purpose of this survey was to gain additional topographic and geologic information to support the GWRI and to identify any obstacles that might impede the implementation of the GWRI. The observations made during the Surface Features Survey are described in Section 3.0 of this Report.

2.11 UTILITIES SURVEY

Prior to the initiation of all intrusive field activities (i.e., installation of Geoprobe® and monitoring wells), NAEVA Geophysics, Inc. conducted subsurface investigations on portions of the FMSS. The purpose of these investigations was to delineate the surface traces of detectable underground utilities in the vicinities of the proposed Geoprobe® and monitoring well locations.

The equipment used for this investigation included a Fisher TW-6 Pipe and Cable Locator, Radiodetection RD600 Utility Locator, 3M Dynatel 2250 Cable Locator, Metrotech 50/60 Powerline Locator, and a GSSI SIR-3 ground penetrating radar (GPR) system with a 300 MHz antenna.

The area surrounding each proposed location was first visually inspected for evidence of subsurface utilities or other buried features. The exteriors of nearby houses were examined to determine the approximate locations of their utility service lines. Whenever a gas, water, or service lateral appeared to potentially interfere with a location, a radio-frequency signal was conducted or induced onto the line using one of the utility locating transmitters. This signal was then used to trace the utility.

Each location was investigated using the TW-6, as well as the RD-600, to identify metallic objects and electrically conductive piping. These instruments are useful in identifying a variety of buried utilities. Many utilities carry electric currents and, therefore, produce electromagnetic fields that can be detected at the surface. In addition, buried metallic conduits, acting as antennas, often pick up background radar and

commercial radio signals and re-radiate them. The FMSS was investigated for evidence of these signals using the RD600 and the Metrotech 50/60 operating in a passive mode.

Each location was further investigated using the Dynatel in a split-box fashion. Two operators, one carrying the transmitter and one carrying the receiver, walked bi-directionally across the proposed location at a fixed distance to one another to detect increases in signal strength that would suggest possible subsurface utilities. Signal increases, if noted, were further investigated in an attempt to discern a signal propagating utility.

All storm drain catch basins and sanitary sewer manways in the vicinity of the proposed locations were inspected to confirm that their routing did not interfere with the proposed intrusive activities. Whenever a potential conflict was noted, the non-metallic lines were further investigated. For those lines having a diameter of approximately 1 foot or less, a steel electrician's fish-tape was inserted as far as possible into the line. Using one of the utility locating transmitters, a signal was applied to the fish-tape; this signal was used to trace the line. For larger diameter pipes, GPR was used.

GPR was used to investigate the proposed locations on the streets for the presence of non-metallic lines such as storm drains, sanitary sewers, or Transite water lines. Surface conditions permitting, bi-directional 20-foot long GPR data profiles were collected along traverses centered over the proposed locations. When hyperbolic reflections were noted in the data profiles, additional profiles were collected to determine if linear features that could possibly represent subsurface utilities caused the reflections. If a buried utility was found within 5 feet of a proposed location, a more suitable location was found and the necessary utility location procedures repeated.

2.12 SAMPLE LOCATION SURVEY

A NJ licensed surveyor surveyed each sample point (i.e., existing and newly installed monitoring wells, surface water and sediment sample locations, and Geoprobes®). The survey was tied into the benchmarks and monuments established for the FMSS, as follows:

- The benchmark elevation was based on NGVD, 1929.
- The horizontal control was based on the North American Datum, 1927.

2.13 WELL SEARCH

An NJDEP well search was completed to determine the proximity, location, and type of wells in the vicinity of the FMSS. The well search consisted of four separate database investigations:

- One 0.5-mile radius manual search centered around the MISS.
- One 0.5-mile radius manual search centered around the 111 Essex Street Property.
- One 0.5-mile radius manual search centered around the 8 Mill Street Property.
- A 5-mile radius search centered around the MISS.

The information gathered from this well search was used to supplement the comprehensive well search that was completed during the Stepan Company RI (CH_2M Hill 1994a). The results are presented in Section 6.0 and will be used during the risk assessment receptor analysis, which will be completed under separate cover.

2.14 SCOPE OF WORK & METHODOLOGY FOR THE SUPPLEMENTAL INVESTIGATION

The Supplemental Investigation was conducted pursuant to the EPA and NJDEP approved RI Addendum Work Plan, with field work commencing on June 27, 2002. A total of six bedrock wells were installed on the MISS and offsite in Rochelle Park to determine the potential source and extent of benzene detected in bedrock groundwater on the MISS. Details of the bedrock well installation are provided in Section 2.14.1. All bedrock wells were developed to less than 50 NTU turbidity, and were tested to determine the well specific capacity and aquifer hydraulic conductivity. The well development and testing scope of work and methodology is presented in Section 2.14.2. The scope of work and methodology are also provided for well abandonment (Section 2.14.3), borehole geophysics (Section 2.14.4), water level measurement (Section 2.14.5) and monitoring well survey (Section 2.14.6) tasks. A total of 38 bedrock wells were sampled for VOCs, and additional biogeochemical sampling was conducted at 7 wells during the supplemental investigation. The sampling scope of work and methodology are discussed in Section 2.14.7.

2.14.1 Monitoring Well Installation

Six bedrock monitoring wells were installed as part of the Supplemental Investigation, and included bedrock monitoring wells MW-27D, MW-28D, MW-31D, MW-32D, MW-33D, and MW-34D. Well locations are shown on **Figure 2-7**. During installation, a 10-inch diameter temporary casing was driven to the top of bedrock to prevent running sands and potential hole collapse. A nominal 10-inch air hammer was used to clean out the casing and advance the borehole 10 to 15 feet into bedrock until competent rock was encountered. At this point, all source area monitoring wells (MW-27D, MW-28D, MW-33D, and MW-34D) were left overnight to recharge (groundwater), and each well was inspected the next morning for product using a clear bailer. No product or product sheen was detected in any source area wells. A 6-inch diameter steel casing was subsequently seated and grouted into bedrock and allowed to set for a minimum of 48 hours. After curing, all boreholes were advanced an additional 25 feet into bedrock using a nominal 6-inch diameter air hammer. All wells, except MW-33D, were completed with an open borehole.

Well MW-33D encountered soft/fractured bedrock zones in the open borehole below the casing, so the well was screened to prevent borehole collapse. The well was completed with 20-foot length of 2-inch diameter (ID) PVC screen (10 slot), riser, and Morie #1 filter sand. The annular space was tremie grouted from the top of the filter pack to the surface with a bentonite-cement grout. Due to the overburden depth (>20 feet) at MISS wells, the driller could not pull the 10-inch ID temporary drive casings at wells MW-27D, MW-28D, and MW-34D, and they were left in place. Wells MW-31D and MW32D were installed in residential driveways, where drive casings were left in place to avoid potential damage to concrete. The retention of 10-inch ID drive casings has resulted in "double cased" bedrock wells, where the overburden aquifer is cased off from bedrock by both the drive casing and 6-inch ID riser pipe. This should enhance the seal between the overburden and bedrock aquifers.

MISS wells MW-27D, MW-28D, MW-33D, and MW-34D were completed as stickups, whereas offsite wells MW-31D and MW-32D were completed in the flush mount configuration. Well construction data are summarized in **Table 2-7**. Monitoring Well permits and Monitoring Well Records, the latter prepared by the Driller, B&B Drilling, Inc., Netcong, NJ, is presented in Appendix T. The boring logs and as-built well construction diagrams for the bedrock monitoring wells are provided in Appendix T.

2.14.2 Well Development and Specific Capacity Testing

All newly installed wells with the exception of MW-33D were developed by air and surge/pumping to remove sediment, and ensure well communication with the aquifer. Bedrock wells were air developed by the drill rig after completion of the hole to remove sediment from the well. The air was pumped under pressure to the well bottom through drill rods, which displaced water and sediment from the well. Development water was collected in a mud tub, and subsequently pumped off into drums. Once the wells recharged, they were developed by surging and pumping.

Prior to well pumping development, the well headspace was field screened for VOCs with a PID. The depth to water and depth to bottom were measured with a water level indicator to calculate the volume of water in the well. A YSI 650MDS and flow through cell was used to monitor pH, temperature, conductivity, DO, ORP, and turbidity parameters during development. Development was continued until a minimum three well volumes were purged and turbidity measurements of 50 NTUs or less was achieved.

Bedrock wells were pumped using either a 2-inch submersible pump or a 1.5-inch disposable submersible (whale) pump in sequence to produce the required flow. The pump was also used as a surge device to suspend and pump off sediment that settled on the bottom of the well. During the initial phase of development, the wells were pumped at a relatively high flow rate to evacuate coarse sediment at the bottom of the well, and to draw down the water level. The pump was shut off, and the water level in the well was allowed to recover. The well was then pumped at a sustainable rate to remove the required volume and to achieve a turbidity reading below 50 NTU.

Following well development, all bedrock wells were pumped at a constant rate to determine the wells specific capacity. The specific capacity results are discussed further in Section 3.7.3 "Results of the Field Investigation". Bedrock wells were pumped at rates ranging from 0.15 gpm to approximately 5 gpm. During the specific capacity test, the depth to water was typically recorded every 10 to 15 minutes. Knowing the pumping rate and associated drawdown, the transmissivity ("T") of the aquifer was determined. The Method by Razack and Huntley, 1991, as presented in Fetter (1994) was used to determine an approximate value of transmissivity. The equation cited was derived for a granular (alluvial) aquifer, and assumes homogenous and isotropic conditions, in an aquifer of infinite areal extent. The well is assumed to be fully penetrating, with minimal well loss. The tested wells are installed into the bedrock aquifer, which has principle secondary (fracture) porosity, and may not meet all assumptions of the Razack and Huntley (and Theis) equation.

A similar specific capacity testing method employed by Bradbury and Rothschild (1985) reported less than an order of magnitude difference in calculated hydraulic conductivity (K) values at pump test and specific capacity tested wells in an alluvial aquifer, and "just over an order of magnitude" in a fractured dolomite (bedrock) aquifer. Accordingly, the calculated transmissivity values should be considered estimated values. The equation used to determine "T" as presented in Fetter (Section 7.6, page 256-257, eq., 7-90b,1994) is as follows:

$$T=33.6(Q/s)^{0.67}$$

Where:
$T = ft^2/day$
$Q = ft^3/day$
$s = ft$

Transcribed Specific Capacity forms are provided in Appendix T, and the results are discussed in Section 3.7.3 "Results of the Field Investigation".

Water generated from well development and specific capacity testing was placed in drums or truck mounted tanks and brought back to the MISS. After treatment and batch testing, the water was discharged to the Publicly Owned Treatment Works (POTW).

2.14.3 Well Abandonment

Three USACE monitoring wells, including MW-1S, MW-1D and B38W06B, were abandoned during the Supplemental Investigation. Although well abandonment was not proposed in the Work Plan, the details are provided in this report (**Figure 2-7**). USACE monitoring wells MW-1S/1D were located on the Bristol Manor property and well B38W06B was located on the Stepan property. Abandonment of well MW-1S/D was approved by the EPA pursuant to a USACE and property owner request. The USACE noted that MW-1S was historically dry, and that the cluster wells were of limited further technical value to the FUSRAP RI.

Bedrock monitoring well B38W06B was damaged by a truck, and the stickup was sheared off. At this location on the Stepan site, the overburden aquifer is heavily impacted by benzene, and there was a USACE concern about cross contamination if the well riser was broken or displaced. Well B38W06B was abandoned and not reinstalled due to the close proximity of Stepan wells PT-1DA/B (60 feet) and PT-2DA/B (100 feet), which could be used for water level measurements.

All monitoring wells were abandoned by B&B Drilling in accordance with the NJDEP requirements and procedures for the decommissioning of wells in NJAC 7:9D-3 and the site-specific CDQMP (USACE 2002b). Monitoring Well Abandonment forms are included in Appendix T.

Abandonment activities included tremie grouting bentonite-cement grout into the well. Displaced water was containerized and the grout was allowed to flow to the surface in order to ensure an adequate seal. Well casing/risers were cut approximately 1.5 feet bgs and backfilled with a Quikcrete cement to approximately 6 inches bgs. The well pads were broken up and taken to the MISS for disposal. Topsoil was placed on top of the cement at all locations, and grass was planted at the Bristol Manor residence.

2.14.4 Borehole Geophysics

Geophysical Applications, Inc. performed borehole geophysical logging as part of the Supplemental Investigation. All newly installed bedrock monitoring wells were logged with the exception of MW-33D. This well was completed with 2-inch PVC and would not accommodate the borehole geophysical equipment.

The logging suite included conventional measurements (caliper, fluid temperature [FTemp], fluid resistivity [FRes], single-point resistance [SPR], spontaneous potential [SP], and natural gamma), ATV, and heat-pulse flowmeter logging. All borehole logs were referenced to depths below the top of the outer steel casing. The geophysical logging winches contain optical depth encoders that maintain depth measurements accurate within approximately ± 0.2 feet throughout each borehole.

A Mount Sopris Model 4MXB digital logging winch was used with a Mount Sopris heat-pulse flowmeter, polygamma, and caliper probes to obtain conventional geophysical logging data. The caliper probe included a fluid resistivity/fluid temperature subassembly at the probe's bottom. Caliper, fluid temperature, fluid resistivity, SP, SPR, and natural gamma data were recorded at 0.1-foot depth increments, as determined by the logging winch's digital depth encoder. The fluid logs were recorded using a relatively slow speed of 3 to 4 feet per minute to allow the thermistor to measure subtle temperature variations. The remaining conventional logs were recorded at higher logging speeds (typically 5 to 10 feet per minute).

ATV data were recorded using ALT Model ABI40 ATV probe with the Mount Sopris logging winch. This televiewer can adapt to a wide range of borehole diameters (up to 16-inch diameter) and is not hindered by suspended sediments in the water column. ATV data were recorded at 0.01-foot intervals throughout each borehole at a speed of approximately 1.3 feet per minute. The ABI40 contains a high-frequency sonic transducer aimed upwards at a rotating mirror. This mirror is tilted approximately 45 degrees from the probe's vertical axis to direct the sonic pulses at the borehole wall. The transducer divides each sweep around a borehole's circumference into 288 arc segments, and records two-way sonic travel time and reflected signal amplitude for each segment. The ABI40 chooses the largest-amplitude reflected signal within the measurement time window as representing the borehole wall.

Flowmeter data were recorded at specific depth ranges approximately 5 feet apart, above and below possible bedrock fractures indicated by the caliper and fluid temperature/resistivity logs. Flow data were recorded in ambient conditions on the downward run to measure natural groundwater flow between fracture zones encountered by each boring. Flowmeter data were subsequently repeated under low-flow (approximately 0.15 to 0.5 gallon per minute [gpm]) pumping conditions to help determine which fracture zones were providing significant recharge into the wells.

All geophysical logs were recorded on a laptop computer's hard drive and transferred to a compact disk (CD) as a backup precaution. Post-survey plot scales were adjusted to display as much detail as possible. All conventional logs from the same borehole were merged onto one log plot to aid data correlation. ATV logs are presented on a separate page for clarity. All geophysical log data are presented in this report using ALT's WellCad software package, with a special image-processing module for the ATV data.

The borehole geophysical survey report is presented in Appendix T.

2.14.5 Water Level Measurements

A synoptic round of groundwater level measurements was obtained from 54 bedrock monitoring wells on June 23 and 24, 2003. Forty-nine (49) of the water level measurements were obtained on June 23, with the remaining measurements obtained the next morning. Groundwater levels were obtained using electronic water level devices, and measurements were referenced to the inside casings of the monitoring wells, where applicable. All groundwater measurement data was converted to elevations relative to the 1929 NGVD. A bedrock groundwater isopleth map was prepared, and is discussed in Section 3.7.2.

2.14.6 Monitoring Well Survey

All newly installed wells were surveyed on June 25, 2003 by Garden State Surveyors, Inc., a licensed NJ Surveyor (NJ License 37586). Horizontal controls were based on the North American Datum (NAD), 1927. Vertical elevations were based on the NGVD, 1929. **Table 2-7** presents the Northing, Easting, Ground Surface, Top of Inner Casing, where applicable, and Top of Outer Casing for each well. Monitoring Well Certifications (NJDEP Form B) are provided in Appendix T.

2.14.7 Groundwater Sampling

As part of the Supplemental Investigation, groundwater samples were collected from 38 bedrock monitoring wells. The low flow sampling method (EPA, 1998a) was used to collect the groundwater samples at each of the wells. Each well was purged at a pumping rate varying between 200 and 500 milliliters/minute (mL/min), and groundwater samples were collected at a pumping rate of approximately 250 mL/min. A decontaminated (non-dedicated), 2-inch diameter stainless steel

submersible pump was used for purging and sample collection. Prior to reuse of the pump, the pump was decontaminated in accordance with the procedures outlined in the CDQMP (USACE 2002b).

Dedicated polyethylene tubing was connected through a two-way valve to a flow through cell. Initially, the water was allowed to drain out of an out flow tube near the top of the flow through cell and into a bucket until the parameters stabilized and the water sample could be collected. A YSI 650MDS and flow through cell was used to measure pH, DO, temperature, conductivity, ORP and turbidity (**Table 2-8**). Once the parameters stabilized, a groundwater sample was collected. Field measurements were typically recorded at 5-minute intervals.

Groundwater samples were obtained by shutting off the valve to the flow through cell and opening the valve to the sample collection tube. Sample glassware and preservative were in accordance with the analytical method. Upon collection of the sample, the flow through cell, field instruments, and pumps were decontaminated following the procedures outlined in the CDQMP (USACE 2002b). Well purging and sampling records are provided in Appendix T.

Total Volatile Organic Compound Sampling

Thirty-eight (38) bedrock groundwater samples were collected as part of the Supplemental Investigation, including samples from six newly installed wells. Sampling was conducted in conjunction with the EMP to avoid duplication of effort and reduce costs. TCL VOC data was utilized from 11 bedrock wells sampled as part of the EMP. All VOC samples were analyzed by Severn Trent Laboratory, STL Connecticut, Shelton, CT using SW-846 Method 8260B.

Biogeochemical Sampling

Biogeochemical sampling was performed to further characterize the bedrock aquifer, and provide specific information about the utilization and availability of electron acceptors, oxygen demand, nutrients and bacteria in groundwater. Oxidation-reduction potential (ORP) and DO were measured in the field during sampling using a calibrated YSI MS 650 meter and flow through cell. Monitored natural attenuation (MNA) is currently being evaluated for remediation of the benzene plume, and collection of biogeochemical samples/parameters is the first step in the evaluation process. Biogeochemical samples were collected from nine wells, including MISS wells MISS-5B, BRPZ-4, BRPZ-9, MW-26D, and offsite wells B38W17D, MW-31D, MW-32D, B38W15D, and MW-2D.

These wells were sampled for the following alternate electron acceptors and reduced species: nitrate/ammonia (NO_3^-/NH_4^+), total and dissolved manganese (Mn^{+4}/Mn^{+2}), total and dissolved iron (Fe^{+3}/Fe^{+2}), sulfate/sulfide (SO_4^{-2}/S^{-2}), and methane (CH_4). Iron (Fe^{+3}/Fe^{+2}) and manganese (Mn^{+4}/Mn^{+2}) samples were collected in field filtered (0.45 micron) and unfiltered samples, and were analyzed using the total iron/manganese (EPA) method 6010B. In the groundwater environment, stability field diagrams indicate iron and manganese exist predominantly in the oxidized (Mn^{+4}, Fe^{+3}) and reduced (Mn^{+2}, Fe^{+2}) form. Mn^{+4} and Fe^{+3} exist as insoluble oxyhydroxides in groundwater, whereas reduced Mn^{+2} and Fe^{+2} are relatively soluble and found in the dissolved fraction. Mn^{+2} and Fe^{+2} sample concentrations are approximated using the field filtered (dissolved) iron and manganese sampling results. It is noted, however, that some Mn^{+4}/Fe^{+3} may be present in fine particulate or colloidal form in groundwater (less than 0.45 micron), and would pass through the filter and be analyzed as part of the dissolved fraction. This would result in the overestimation of the Mn^{+2}/Fe^{+2} fraction in groundwater. Mn^{+4} and Fe^{+3} concentrations are likewise approximated by subtraction of the filtered manganese and iron concentrations (Mn^{+2}/Fe^{+2}) from the unfiltered manganese and iron results.

Groundwater oxygen demand was measured by sampling and analysis for BOD and COD. Sampled nutrients include nitrate/ammonia, total phosphorous, and TOC. Microbiologic samples were collected to measure bacteria concentrations in groundwater, and include analysis for total heterotrophs and BTEX degraders. All samples were analyzed by STL Connecticut with the exception of CH_4 and BTEX Degrader Heterotrophs/Total Heterotrophs. Methane analyses were performed by STLs Burlington laboratory, Burlington, Vermont. BTEX Degraders/Total Heterotroph analysis was performed by New Jersey Analytical Laboratory, Pennington, NJ. Analytical methods used during the Supplemental Investigation are summarized as follows:

- EPA's Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846) 6010B: Iron and manganese, total and dissolved.
- SW-846 8015A modified: Methane.
- EPA's Methods for Chemical Analysis (MCA) of Water and Wastes 300: Nitrate.
- MCA 300: Sulfate.
- MCA 365.2: Phosphorus (total).
- MCA 350.1: Ammonia.
- MCA 376.1: Sulfide.
- MCA 415.1: Total organic carbon.
- MCA 405.1: BOD.
- MCA 410.4: COD.
- Standard Methods (SM) for the Examination of Water and Wastewater 9215M: BTEX Degrader Heterotrophs.
- SM9215B: Total Heterotrophs.

2.14.8 Sample Management/Data Validation

Sample management includes laboratory Quality Assurance/Quality Control (QA/QC) and data package review by the project chemist. Shipped samples were logged in by laboratory staff and temperature blanks and/or the temperature of the cooler(s) were measured. The sample containers were checked for breakage/leakage, and in the case of the VOC samples, the sample containers were inverted to check for the presence of air bubbles. The laboratory then verified that the samples identified on the chain-of-custody were received and that the sample containers/methods of analysis match the information on the chain-of-custody. If there were discrepancies, they were noted on the sample login form, and Shaw was contacted if clarification was required.

A laboratory chain-of-custody was prepared which identifies the methods of analysis required for each sample aliquot. The pH of the sample was verified, if applicable, and the laboratory then recorded this information. After analysis, the data package was assembled and internally reviewed by the laboratory QA Staff. Discrepancies were addressed in the case narrative, which may include sample holding time exceedances, temperature issues, poor matrix spike/matrix spike duplicate (MS/MSD) or laboratory control standards (LCS) recoveries, etc.

Upon receipt of the data package from the laboratory, the Project Chemist reviewed all packages for completeness and the case narrative to identify major issues. All data packages were submitted to a certified validator for validation in accordance with the U.S. Army Corp Guidance CENWK-EC-EF Data Quality Evaluation Guidance (USACE 1999). The Supplemental Investigation Data Packages were

validated by Kestrel Environmental, Inc. (Kestrel) of Freeport, Maine, or Validata Chemical Services, Inc. (Validata) of Duluth, Georgia. The following components of the data packages were reviewed by the validation contractor:

- Holding times
- Laboratory blank data
- LCSs
- Surrogate recovery (organic methods)
- MS/MSD and MS/MD percent recoveries and relative percent differences
- Internal standards (primarily organic methods)
- Inductively Coupled Plasma (ICP) or atomic absorption QC (inorganic methods only)
- Calibration
- Sample reanalysis
- Secondary dilutions
- Laboratory case narrative

Data qualifiers were assigned to samples by the validator, and include the following:

- U - denotes the analyte was non-detect
- UJ - denotes that the analyte was non-detect and that the detection limits were estimated
- J - denotes that the concentration presented, was estimated
- R - denotes that the analyte was rejected

A data validation memorandum was prepared by the validation contractor for each data package. The data validation memo was reviewed by the project chemist, and entered into the project database. Copies of the laboratory data packages and data validation memoranda are presented as attachments to the Supplemental Investigation Quality Control Summary Report (QCSR), Appendix T.

As required by the NJDEP Site Remediation Program, and as identified in NJAC 7:26E or the Tech Regs, an electronic data submission is required for samples obtained as part of a Site Investigation, RI, or Remedial Action. The HazSite deliverable was formatted in an ASCII Tab Delimited format. Appendix T contains the electronic deliverable on CD. Both chemical and geochemical data obtained as part of the Supplemental Investigation is contained on the CD. As recommended by NJDEP, USACE utilized the Electronic Data Submittal Application (EDSA) routine to verify that the files would be acceptable for importing into the NJDEP database. The database files were accepted by the EDSA routine.

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3.0 PHYSICAL CHARACTERISTICS

This section describes the physical characteristics of the FMSS, and identifies the potential groundwater pathways, estimated linear seepage velocities and potential recharge/discharge areas. The information provided in this section provides a foundation for subsequent discussions of the analytical results (Section 4.0), nature and extent of contamination (Section 5.0), and fate and transport (Section 6.0).

The Physical Characteristics section is organized into the following subsections, including: Hydrology (3.1), Site Specific Geology (3.2), Regional Hydrogeology (3.3), and Site Specific Hydrogeology (3.4). Results of the Phase I and II hydrogeologic investigation is presented in Sections 3.1 through 3.6. Supplemental Investigation hydrogeologic results are presented in Section 3.7.

3.1 HYDROLOGY

3.1.1 Meteorology

The FMSS lies within the Middle Atlantic Seaboard, which is characterized by four distinct seasons (spring, summer, autumn, winter), and moderate summers and winters. The regional climate is humid. Northern New Jersey is near enough to the paths of the Great Lakes storms to receive part of its precipitation from that source (NOAA 1984). However, the heaviest rains are produced by coastal storms of tropical origin. In northeastern New Jersey, the annual average rainfall ranges between 43 and 47 inches, and measured an average 46.3 inches at Newark over a 30-year period (NOAA 2002). The 5-year precipitation average for nearby (3 miles) Teterboro, NJ is 37.7 inches and 41 inches at New Milford, NJ (5 miles). NOAA precipitation data for the Newark, Teterboro, and New Milford, NJ stations are provided in Appendix Q.

Precipitation is distributed fairly uniformly throughout the year, with approximately 120 days of precipitation annually (NOAA 1984). The average snowfall across the basin is approximately 34 inches (DOE 1992; CH_2M Hill 1994a). This is the equivalent of about 4 inches of rainfall. The Passaic River Basin is subject to moderate summer temperatures, with some hot and humid mid-summer days, and frequent electrical storms. Winter temperatures are generally moderate. The average monthly temperature ranges for Newark, Teterboro, and New Milford are presented in Appendix Q. The average monthly temperatures are similar between these three stations.

3.1.2 Surface Water Hydrology

This section describes the receiving waters of the FMSS, which locally include the Saddle River, Westerly Brook, Lodi Brook and Coles Brook. **Figure 3-1** shows the FMSS area subwatersheds.

The Saddle River receives the vast majority of FMSS runoff from the Westerly Brook and Lodi Brook subwatersheds, in addition to direct runoff from approximately 60 acres (of the FMSS) in western areas of Rochelle Park and Lodi. FMSS area subwatersheds and drainage are shown on **Figure 3-1**. The Saddle River watershed is approximately 60 square kilometers (km^2), with an average and peak flow of 100 cubic feet per second (cfs) and 400 cfs, respectively (DOE 1992).

Westerly Brook is a perennial stream that originates 3200 feet north of the MISS, where it turns west and flows another 2500 feet to the Saddle River. Westerly Brook is groundwater fed, with an estimated base flow of 4 cfs (DOE 1992). The watershed area is approximately 1 km^2, and drains an approximate 40-acre area of the FMSS in Rochelle Park and Maywood. Prior to culverting, Westerly Brook flowed across the MISS and received the bulk of runoff from the area of Former Retention Ponds A, B, C, D,

and E. Land use in the watershed is mixed residential and commercial north of the MISS, and exclusively residential downstream.

Lodi Brook originates in two marshy areas in the northeast corner of the 149-151 Maywood Avenue property, and flows approximately 1350 feet west to a culvert pipe at NJ Route 17. Lodi Brook is groundwater fed at its headwaters, and has an estimated baseflow of 2 cfs (DOE 1992). From the NJ Route 17 culvert, Lodi Brook flows 2.9 km south to the Saddle River. The Lodi Brook watershed area is 1.3 km^2, and drains approximately 140 acres of the FMSS in Maywood, Rochelle Park and Lodi. Lodi Brook drains portions of Stepan Company property, 205 Maywood Avenue, 149-151 Maywood Avenue, 23 West Howcroft Road, 29 Essex Street, 239 NJ Rt. 17 North, 200 NJ Rt. 17 South, 167 NJ Rt. 17 North, 137 NJ Rt. 17 North , 113 Essex Street, 99 Essex Street, I-80 Westbound ROW, 160/174 Essex Street, 170 Gregg Street, 100 Hancock Street, 80 Hancock Street, 80 Industrial Road, 8 Mill Street, and 88 Money Street. **Figure 1-1** shows the locations of the aforementioned properties/businesses. Land use in the Lodi Brook watershed is predominantly commercial north of Route 80, and changes to mixed residential, commercial and light industrial in Lodi.

Coles Brook is a perennial stream that originates in wetlands south of Essex Street and flows north approximately 3 miles to the Hackensack River. The Coles Brook subwatershed drains approximately 17 acres of the FMSS in areas east of Maywood Avenue in Maywood and includes the 111 Essex Street Property. Land use in the local Coles Brook watershed is mixed undeveloped, residential, and commercial.

3.2 REGIONAL GEOLOGY

3.2.1 Regional Bedrock Geology

The FMSS is located in the Piedmont Physiographic Province within the Hackensack quadrangle (**Figure 1-2**). The Piedmont Province is bordered to the west by the northeastern trending border fault known as the Ramapo fault that separates the Piedmont Province from older metamorphic rock of the Highlands Physiographic Province. Flat-lying sediments of the Coastal Plain Physiographic Province border the Piedmont Province to the east. The Piedmont Province in New Jersey is located within the Newark Basin, a northeast trending half graben that extends southwestward from the Hudson River Valley in New York to southeastern Pennsylvania (**Figure 3-2**). A stratigraphic section of the Newark Basin is shown on **Figure 3-3**.

The Newark Basin is primarily composed of a sequence of sedimentary rocks and intrusive igneous rocks, which is commonly referred to as the Brunswick Group (**Figure 3-3**). The sedimentary rocks within the Brunswick Group consist of sandstones, shales, mudstones, and conglomerates that dip between 7 and 15 degrees to the northwest and represent depositional cycles during the upper Triassic and lower Jurassic periods. During the lower Jurassic period, the sedimentary sequence was intruded by the igneous basalt sheet lava flows forming the Watchung (Orange), Preakness, and Hook Mountains, which resulted in the high topographic points within the rolling plains of the basin (Olsen 1978).

The sedimentary rocks of the Brunswick Group are divided into three formations as shown on **Figure 3-3**: a lower unit, the Stockton Formation; a middle unit, the Lockatong Formation; and an upper unit, the Passaic Formation (Olsen 1978). These sediments were deposited in fluvial and lacustrine environments and grade upward from the lower, locally conglomeratic arkose (Stockton Formation) into a reddish-brown mudstone deposit (Passaic Formation). The bedrock map of Northern New Jersey (Drake et al. 1996) shows that the FMSS is underlain by the Passaic Formation, Sandstone (JTps) Member (**Figure 3-4**). Drake describes the Sandstone Member as follows:

> "**Sandstone (JTps)** is interbedded grayish-red to brownish-red, medium to fine grained, medium to thick bedded sandstone and brownish to purplish-red, coarse-grained siltstone; unit is planar to ripple cross laminated, fissile, locally calcareous, contains desiccation cracks and root casts. Upward fining cycles are 1.8 to 4.6 meters (m) (6 to 15 feet) thick. Maximum thickness is about 1,100 m (3,610 feet) thick."

Detailed bedrock mapping of the Hackensack Quadrangle was conducted by Houghton (1975) and included measurement of bedrock strike and dip orientations. This data are also presented on **Figure 3-4**. Bedrock strike orientations at four locations ranged from N 20 E to N 35 E, with dips ranging from 7 to 12 degrees Northwest (Houghton 1975).

Unconsolidated materials consisting of glacial deposits, lacustrine deposits, fluvial deposits and fill materials generally conceal sedimentary rocks of the Newark Group. The morphology of the bedrock surface in the area developed as a result of differential erosion, which formed elongated ridges and broad valleys. In general, these ridges trend northeast southwest across the study area.

3.2.2 Regional Geology of Unconsolidated Deposits (Overburden)

Bedrock within the Hackensack quadrangle is generally overlain by unconsolidated overburden deposits consisting of recent alluvial, wetland, estuarine and stream terrace post-glacial deposits, and stratified and unstratified glacial deposits (Stanford 1994). Stratified glacial deposits are generally well sorted and include sand and gravel laid down by glacial meltwater in a river plain, and in glacial lake deltas and fans. In the study area, stratified drift consists of glaciolacustrine and glaciofluvial outwash deposits associated with glacial Lakes Hackensack and Paramus, and is comprised of well-sorted sands, gravels, silts and clays. Stratified drift generally makes a good aquifer media due to its high permeability and porosity.

Unstratified glacial deposits (e.g., till) consist of poorly sorted, non-stratified sediment containing gravel clasts and boulders deposited directly from glacial ice. Till is locally described as dense, poorly sorted, heterogeneous mixture of sand, gravel, silt and clay with occasional boulders and cobbles. Till usually makes a poor aquifer media due to its tight permeability and variable composition, and often forms an aquitard in stratified drift aquifers.

The mapped surface distribution of glacial deposits occurring within the vicinity of the FMSS, is displayed on **Figure 3-5** (Stanford 1994). The mapped surficial deposits are described as follows:

- **Glacial Lake Paramus Deltaic Deposits (Qpr) -** Sand, yellow to reddish yellow, some gravel. Qpr underlies the shallow fill on the MISS and reaches a thickness of 20 feet onsite.
- **Oradell Terrace Deposit (Qor) -** Sand, minor pebble gravel and silt, very pale brown to yellowish brown. Qor is limited to the Southern most extent of the FMSS and reaches an approximate 30 feet thickness in Lodi.
- **Stream Terrace Deposits (Qst) -** Sand, minor pebble gravel and silt, very pale brown to yellowish brown. Qst is limited to the Northwestern corner of the FMSS adjacent the Saddle River.
- **Rahway Till (Qt and Qtt)** is composed of reddish-yellow silty sand, sandy silt, and sand with some to many subrounded and subangular pebbles and cobbles and few subrounded boulders. The till can attain a thickness of 60 feet, but generally less than 30 feet thick in the Hackensack Quadrangle. Qt delineates areas where till is continuous and generally more than 10 feet thick. Qtt delineates areas where till is thinner and discontinuous. Qt and Qtt are the most prevalent mapped deposit in the FMSS. Qtt is limited to the upper portion of the northeast-southwest trending hill located west-southwest of the MISS.

- **Artificial Fill (Af) -** Artificially emplaced sand, gravel, silt, clay and rock, and man made materials such as ash, construction debris, and trash. Extent of fill is based upon 1979 air photos, and many small areas of fill are not mapped.

New Jersey Geological Survey (NJGS) borings (7) in the FMSS area show that most areas mapped with stratified drift (Qpr, Qor, Qst) and filled areas (Af) are underlain by a thin, dense layer of till (Qf). Till overlies weathered bedrock in the vast majority of NJGS logged wells.

3.3 SITE SPECIFIC GEOLOGY

3.3.1 Topography

An existing United States Geological Survey (USGS) digital elevation model of the Hackensack quadrangle was combined with ground elevation data from FMSS monitoring wells, Phase I GWRI Geoprobe®, borings, and Phase II GWRI monitoring wells to develop the FMSS topographic surface elevation contour map presented on **Figure 3-6**. The FMSS area generally slopes toward the southwest, with the exception of a prominent north-south trending ridge located along the western boundary in Rochelle Park. The FMSS reaches maximum elevations of 75 feet along the ridge and northeast site boundary, along Hunter Avenue. The lowest point (28 ft Mean Sea Level [MSL]) is located at the southwest FMSS boundary; near well cluster MW-17 in Lodi.

In the northern half of the FMSS (North of Essex Street), the land slopes southwest and east to wetlands on the 149-151 Maywood Avenue Warehouse Property. The wetlands form the headwaters for Lodi Brook, which flows southwest through the FMSS to the Saddle River in Lodi.

3.3.2 Surficial Geology

Data collected during installation of the Phase I and II GWRI Geoprobe® and monitoring wells provided information on the nature and thickness of surficial deposits in the FMSS. Analysis of boring logs generally confirms the NJGS surficial mapping and found considerable additional fill related to development. The following sections address the overburden stratigraphy and results of grain size analysis from the GWRI.

Stratigraphy

Evaluation of boring data indicates that approximately four separate stratigraphic units are present at the FMSS. The logged units are fill, sand, upper undifferentiated silty sand/clay/gravel (upper undifferentiated unit), gravel and lower undifferentiated unit. Thin, discontinuous layers of peat/meadow mat deposits were also encountered, but were not included as a stratigraphic unit due to their limited extent. FMSS overburden stratigraphy is shown in geologic cross-section **Figures 3-8a** through **3-8e**. The cross sections were developed using three-dimensional stratigraphic models generated by the Department of Defense Groundwater Modeling System (GMS). Locations of former retention ponds and burial pits within the MISS area of the FMSS are also indicated on these cross sections.

The lower undifferentiated unit overlies bedrock in most site areas, and is locally absent. The lower unit is an unsorted mixture of dense till, weathered rock fragments and gravel, sand, silt, and clay. The lower unit is distinguished from the upper undifferentiated unit by presence of dense till and/or coarse bedrock fragments and gravel. The lower undifferentiated unit reaches a maximum thickness of 12 feet near boring C-25 on cross section C-C', however, is generally less than 5 feet thick in most locations and absent in some areas.

The gravel unit overlies the lower undifferentiated unit at most locations and consists of a fine gravel and medium to coarse sand. The gravel is generally poor to moderately well sorted, and contains bedrock fragments. The gravel unit is frequently absent in borings, where the upper undifferentiated unit, or less commonly sand unit, lie directly on the lower unit or bedrock. The gravel unit reaches a maximum thickness of 12 feet around well cluster MW-16 along cross section B-B'. Thick gravel units are also observed in the vicinity of Lodi Brook along cross section E-E' (well BRMW-14) and along cross section A-A' (MISS-1B) and D-D' (MW-1D) in the vicinity of Westerly Brook.

The upper undifferentiated unit (upper unit) overlies gravel at most locations and consists of unsorted mixtures of silt, sand, clayey-sands, and clayey gravel. This unit may correlate with the Rahway till (Qt, Qtt) described in Section 3.2.2. The upper undifferentiated unit reaches a maximum 12 feet thickness along geologic cross sections B-B' (wells MW-14D and PB-29) and C-C' (boring C-13), and is locally absent. Wells screened and slug tested in this unit generally report low permeability. The sand unit is laterally extensive and overlies the undifferentiated (till) unit. The sand unit consists of fine-medium sand and gravel, and reaches a maximum thickness of 13 feet at well MW-16D (**Figure 3-8B**). Wells screened and slug tested in the sand unit generally yielded moderate permeability.

Fill overlies the sand unit in most locations on the FMSS. The fill is highly variable in composition, and consists of clay, sand, and gravel with brick fragments, black to blue-gray to white mottled "clayey" material (encountered in MISS area), concrete chips, wood chips, and other miscellaneous materials. Fill deposits are thickest in the area of former retention ponds located on the MISS as indicated on cross sections A-A' and D-D'. The shallow fill material within the Former Retention Ponds generally consists of a one to three feet thick tan to dark brown sand, which overlies a light tan silt (process sludge) and interbedded grey to black to black silt (coal ash) and sand. The fill on the MISS reaches a maximum thickness of 15 feet in Former Retention Pond B, and 10 feet in portions of Former Retention Ponds A and C (BNI 1992). The distribution and thickness of fill deposits encountered within the FMSS and MISS are displayed on **Figures 3-9a** and **3-9b**, respectively.

Overall, overburden in the FMSS reaches a maximum thickness of 36 feet at well MW-16D, which is located at the southern extent of the FMSS. Overburden deposits are shown to thin against bedrock highs located south-southeast of the MISS (see **Figure 3-8c**, Section C-C'), northeastern boundary of the MISS (see **Figure 3-8d**, Section D-D'), and southwest of the MISS (see **Figure 3-8e**, Section E-E').

Grain Size Analysis

A number of undisturbed overburden samples were collected at the FMSS during the Phase II GWRI monitoring well installation program. Samples were collected using California Tubes and were analyzed for specific gravity, moisture content, wet density, dry density, cation exchange capacity, and hydrometer analysis with mechanical grain size analysis. Geotechnical results are presented in **Tables 3-1** and **3-2**. The results of hydrometer analysis and mechanical grain size analyses are in general agreement with the field geologic sample descriptions and classifications logged at the respective sample interval.

3.3.3 Bedrock Geology

Bedrock data was collected during the GWRI and evaluated to characterize the bedrock aquifer and assist in the development of the hydrogeologic model. Bedrock data includes well and core logs, outcrop measurements and description, and borehole geophysical data. This section presents the bedrock surface elevation data, outcrop descriptions, bedrock core descriptions, and borehole geophysical results.

Bedrock Surface (elevation) Mapping

A bedrock elevation map was prepared from well data from existing and recently installed overburden and bedrock wells, soil boring and Geoprobe® data, and outcrop elevations. Data was also utilized from the DOE and Stepan Company RIs. Bedrock surface elevation data was plotted and contoured, and is shown on **Figure 3-10a**. Bedrock elevations generally decrease from the high in the Northeast corner of the FMSS to the West and South. The maximum bedrock elevation of 70 feet MSL is located along a north-south trending ridge in Lodi, which outcrops at Route 80. Another bedrock high is noted at the intersection of Essex Street and NJ Route 17 in Lodi. The lowest bedrock elevation of -5.0 feet MSL is mapped at the southern extent of the FMSS at well MW-16D in Lodi. The bedrock has a maximum relief of 75.0 feet on the FMSS, and shows maximum local relief along the trace of Westerly and Lodi Brook.

Depressions in the bedrock surface are noted at the Lodi Brook headwaters on the 149-151 Maywood Avenue property, and along the trace of Lodi Brook in Lodi. Depressions are also observed along the trace of Westerly Brook in Rochelle Park. These features, and resultant drainages, may have formed due to differential erosion of soft rock units or bedrock structures (i.e., fractures, folds). The thickest overburden deposits are mapped in these areas and are probably of fluvial origin.

Detailed mapping of the bedrock surface was performed on the MISS and Stepan Company property due to the large number of wells and borings, and ongoing investigations. The bedrock elevation map for the MISS is shown on **Figure 3-10b**. As shown, bedrock elevations decrease to the West across the Stepan Company property and MISS, and shows a maximum 20-foot relief. The MISS bedrock elevation map is also used in conjunction with the FMSS topographic map to determine depth to bedrock.

Outcrop Descriptions

The Passaic Formation is exposed in outcrops along hillsides and road and railroad track cuts in the Hackensack quadrangle. Outcrops were examined to determine the bedrock lithology, bedding plane strike and dip, and other joint/fracture orientations. Outcrop locations and bedding plane strike and dip measurements are shown on **Figure 3-4**.

Bedrock is generally described as a dark red-brown, medium to thick bedded, fine to medium grained sandstone and coarse-grained siltstone, with occasional thin shale interbeds. The large outcrop located at the rail line cut at Summit Avenue (Hackensack) features a massive (15 feet thick) coarse-grained sandstone, which was interbedded with thick to medium bedded sandstones, coarse siltstones and thin beds of siltstone and shale. At all locations, thin bedded, fine grain rocks showed prominent bedding plane partings and were heavily jointed/fractured. The density of bedding plane partings, joints and other fractures was observed to generally diminish with increased grain size and bedding thickness. Thick and massive bedded sandstone units show few bedding plane fractures or vertical joints in outcrop.

Measured bedding plane strike and dips show a consistent north-northeast (NNE) strike direction, with dip ranging from 8 to 14 degrees northwest (NW) (see **Figure 3-4**). The measured strike and dip directions are consistent with the previously mapped bedrock data and regional geologic model. Two prominent sets of steeply dipping joints, striking parallel to bedding (NNE), were observed at outcrops. One set of fractures dip to the NW, and the other set dips to the SE.

Pilot Borings

Bedrock cores were collected from pilot boring locations MW-2P, MW-3P, MW-4P, MW-6P, MW-9P, MW-10P, and MW-16P as part of the RI. Cores were collected from top of bedrock using a 2" NX core and were advanced to approximately 50 feet bgs. Core recovery ranged from 12 to 50 feet, depending on the overburden thickness. All cores were macroscopically examined and logged, and included the

description of core lithology, fracture density and orientation. The general core lithology consists of interbedded, red-brown, medium to thick-bedded sandstones and siltstones. Many sandstones showed graded bedding and included thin lenses of lithic conglomerate. The core lithologies are consistent with the Passaic Formation seen in outcrops.

The top 10 to 15 feet of cores were highly weathered and showed dense fracturing, with several fractures noted per foot of core. Weathering and fracture density decreased noticeably after that depth, with an increase in fracture spacing of up to several feet in sandstone units. Fracturing and apparent water bearing zones were most prevalent in siltstone bedrock, and least developed in thick sandstone units. The vast majority of fractures at all depths is low angle, and probably represents open bed partings. A high angle set of fractures was also noted in most cores, and appears to strike in the same direction as the primary bedding plane fractures. Pilot boring lithologic logs are shown in Appendix K.

Borehole Geophysics

Borehole geophysics was conducted at 5 existing bedrock wells as part of the Phase I program, and 25 newly installed wells as part of the Phase II program. The logging suite included caliper, SPR, SP, natural gamma, fluid temperature, fluid resistivity, ATV, and heat pulse flowmeter logging. Borehole fractures were identified using the ATV and Well CAD software, which was used to determine fracture dip angles and down-dip azimuths. Tadpole plots indicate measured fracture orientations, where the filled circles indicate dip angles (0 to 90 degrees). Each tadpole "tail" points in the measured down dip direction, which is perpendicular to the fracture strike. An example borehole geophysical log is shown on **Figures 3-11a** and **3-11b**.

It is important to clarify the difference between fractures described in outcrop and cores, and those logged during borehole geophysics and drilling. Unlike the former, borehole geophysical and drilling logs cannot definitively distinguish between open bedrock partings, joints and discrete fractures. For the purposes of describing the borehole geophysical data, all linear borehole features will be described as fractures in the text.

Open fractures were identified (visible) using both the ATV travel time and ATV amplitude plots, whereas less open fractures were only visible on the ATV amplitude plots. Water conducting fractures were identified using the heat - pulse flow meter, fluid temperature and fluid density logs. The heat pulse flow meter identified fractures that exhibited either an upward or downward flow of water within the borehole within the instrument operation range of 0.3 to 1.0 gpm (Mount Sopris Instrument 1994). Conductive fractures were also identified using the fluid temperature and fluid resistivity log (down to the minimum instrument detection level), where local inflections or changes in slope of the log(s) typically represent water movement entering or exiting a fracture. The results of the borehole geophysical study are summarized in **Table 3-3**. The borehole geophysical data is presented in Appendix E.

The orientation of all (total) fractures and water conducting fractures are plotted on separate strike orientation and dip direction Rose Diagrams, and are shown in **Figures 3-12a** and **3-12b**, respectively. Summary stereoplot diagrams for the total fracture and water conducting fractures are presented in **Figure 3-12c**. A Rose diagram is a circular plot used to represent fracture strike orientation and dip directions. The circular diagram represents points of a compass, and is divided into 15 degree sectors. Fracture orientation and dip direction data are input into the appropriate sectors, where the population of fracture data determines the sector size or magnitude. The fracture strike rose diagram describes a horizontal plane and is bimodal, whereas the dip direction or azmith is presented by quadrant (unimodal). The total fracture strike orientation and dip direction rose diagrams (**Figure 3-12a**) show that the prevalent fracture strike orientation is north-northeast (NNE) to SSW, with the dip rose plot showing a prevalent west-northwest (WNW) and northwest (NW) direction. The summary conductive (water

bearing) Rose Diagrams (**Figure 3-12b**) also shows a dominant NNE - SSW to northeast to southwest azimuths (NE-SW) strike orientation, and WNW to NW dip direction.

A stereonet plot (stereo plot) was used to represent the individual fracture dip direction and angle data on the same diagram, and is shown for total and water conducting fractures in **Figure 3-12c**. The stereo plots are equal angle (Wolf) projections, which provide a planar view of a fracture orientation plot or pole. The dip direction is determined by measuring the compass direction of a line from the fracture pole through the origin or axis of the stereo plot. The dip angle of the fracture pole is measured relative to the concentric dip angle lines plotted on the stereo plot. The origin represents zero dip angle, and increases 10 degrees at each line toward the edge of the stereo plot, which depicts 90 degrees or vertical fractures. The total fracture and water conducting fracture stereo plots in **Figure 3-12c** indicate that the majority of fractures dip between 5 and 20 degrees to the WNW. Total fracture rose dip plots and stereoplots are presented for each well in **Figure 3-13**. As shown, borehole fracture data is fairly consistent throughout the FMSS study area. An increased number of steeply dipping fractures are observed in wells MW-19D, MW-19DD, MW-8D, MW-20D, MISS-2B, MISS-3B and MISS-4B, which are located along the Northern boundary of the FMSS. The borehole geophysical data is consistent with the geologic mapping and local outcrop data.

Fracture density with depth was evaluated by counting the average number of open fractures in 24 shallow wells per 5-foot interval of depth. The greatest fracture density was measured in the upper 0 to 5 feet (2.3 fractures) and 5 to 10 feet (2.9 fractures) of open borehole. Average fracture density dropped off at depths below the casing of 10 to 15 feet (2.1 fractures), 15 to 20 feet (1.5 fractures) and 20 to 25 feet (0.7 fractures). Borehole logs from deep wells MW-19DD and former test well BRPW-1D show a further reduction in fracture density below 25 feet deep, averaging 0.53 fractures per 5-foot interval. This finding is consistent with pilot borings (cores) and well logs showing decreasing fracture density with depth from the bedrock surface.

3.4 REGIONAL HYDROGEOLOGY

3.4.1 Bedrock Hydrogeology

Bedrock Conceptual Model

Groundwater occurs under confined and unconfined conditions in a network of interconnected bedrock joints (fractures) and open bedding fractures in the Passaic Formation. The permeability and storativity within the Passaic Formation is fracture-controlled, with the exception of some sandstone aquifer units (Michalski and Britton 1997). The Passaic Formation provides a major source of groundwater in the Newark Basin and locally to a number of water districts in Bergen County. Groundwater is typically encountered at depth (greater than 200 feet) and can produce several hundred gpm from open fractured zones in bedrock.

In this report, the term shallow bedrock is used to describe the open bedrock interval investigated by shallow bedrock wells, and would typically extend 10 to 35 feet below the top of bedrock. Deep bedrock is likewise described as open bedrock interval in deep bedrock wells, and would extend from approximately 45 to 70 feet below the bedrock surface.

The bedrock aquifer is described by Carswell (1976) as layered (heterogeneous), typically consisting of a series of alternating aquifers and aquitards several tens of feet thick. The water-bearing fractures of each aquifer are more or less continuous, but hydraulic connection between individual aquifers is poor. These aquifers generally dip downward for a few hundred feet and are continuous along the strike for thousands of feet. Under pumping conditions, the Passaic Formation typically exhibits directional rather than isotropic hydraulic behavior, with maximum permeability along the bedrock strike (Vecchioli 1967).

Groundwater in the upper Passaic Formation may occur under both confined and unconfined conditions. Where the rock is overlain by permeable materials and in upland areas, the bedrock groundwater generally occurs under unconfined conditions. Where low permeability till or stratified deposits overlie the rock, bedrock groundwater may occur under confined conditions.

Several models have been developed to conceptualize groundwater flow in fractured rock at various sites in the region. A recent paper by Michalski and Britton (1997) proposed five conceptual groundwater flow models for the Passaic Formation (**Figure 3-14a**). The first conceptual model, the equivalent porous medium (EPM), views the bedrock as a single aquifer system. The second conceptual model, the two aquifer EPM, was developed to explain the common head (water level) discrepancies between "shallow" and "deep" cluster bedrock wells. In this model, the "shallow" bedrock is extensively weathered and permeable, and with depth, transitions to the "deep" less permeable aquifer.

The third model, near vertical joints, postulates that high angle joints provide primary groundwater flow pathways. The aforementioned joints strike NNE, and prevailing groundwater flow would be along strike. In the fourth conceptual model, a LMAS, open partings along bedding planes (bedding fractures) act as major discrete units of the aquifer system. The intervening sandstone units would have limited vertical permeability, thereby forming an aquitard between fracture zones. The fifth conceptual model adds a weathered "shallow" zone to the LMAS model. Below this weathered zone, the prevailing flow direction within individual aquifer units is parallel to the strike of the beds.

Conceptually, the technical literature (see Carswell and Vecchioli) and field observations predominantly support the LMAS aquifer model (with a weathered shallow zone), with a significant component of the “near vertical joints” model. Field data, including outcrop descriptions/measurements, cores, and drilling logs show that the shallow open bedrock fractures are primarily along bed partings. Shallow bedrock borehole geophysics data also shows that water bearing or conductive fractures are also primarily oriented along bedrock strike. Measured fracture density was greatest in the upper 10 feet of borehole, and decreased with depth to 25 feet, below which the fracture density remained the same.

A prominent set of high angle, NNE striking joints (fractures) were also observed in outcrop, cores and borehole geophysical logs. Well and borehole logs indicate that these fractures are the principal source of groundwater in deep monitoring wells and piezometers. This and the fracture density data suggest that the bedrock permeability and amount of groundwater flow along bedding plane fractures would diminish with depth (and degree of weathering), and that a greater proportion or component of flow is expected along the high angle fractures in the deep bedrock aquifer. The shallow and deep bedrock zones are typically hydraulically connected by a network of discontinuous, but interconnected bedding plane and high angle joint fractures, and show unconfined conditions in overburden and shallow/deep bedrock cluster wells. The conceptual bedrock hydrogeologic model for the FMSS is shown on **Figure 3-14b**.

The geologic literature and field investigations indicate that the Passaic formation is systemically fractured, and that the bedding plane fractures and principle joint fractures are regionally prevalent and are observed throughout the rock section. The bedrock aquifer is densely to moderately fractured in the FMSS, and is characterized as an equivalent porous media. A fractured aquifer may exhibit anisotropy, or varying directional permeability, depending on the orientation of the fractures. In the FMSS, principle water bearing (bedding plane and high angle joints) fractures strike NNE, and increased aquifer permeability is predicted along a NNE to SSW trending direction. The Passaic Formation is similarly fractured in most other areas of New Jersey, and as noted, has generally exhibited directional permeability (along strike) during aquifer pump testing.

3.4.2 Overburden Hydrogeology

Overburden Aquifer Conceptual Model

Saturated, laterally continuous overburden deposits were mapped in parts of the FMSS, and comprise the local overburden aquifer. The thickest overburden aquifer sediments were recorded in the Southern FMSS area, along Westerly Brook and on the MISS in the area of Former Retention Ponds A, B, and C. The overburden aquifer locally thins and pinches out against bedrock highs described in Section 3.2.3 (**Figure 3-8a**).

As described in Section 3.2.2, site overburden material typically consists of a lower undifferentiated till and gravel unit (on bedrock), which is overlain by gravel, undifferentiated till and sand, and an upper sand unit. In most site areas, the sand (unit) is covered by varying thickness of fill. The highest aquifer permeability and porosity (and groundwater yield) is typically encountered in stratified drift, and is expected in the mapped gravel and sand units. Stratified drift deposits are usually laterally extensive within a paleodrainage, and can exhibit anisotropy. The reported yield of stratified deposits in the Hackensack quadrangle ranges from 1 to several hundred gallons per minute (gpm); however, local monitoring wells are expected to yield from 0.5 to 5 gpm. The gravel and/or sand units are mapped in all overburden aquifer areas, and are expected to transmit the majority of groundwater in the overburden aquifer.

The mapped lower and upper unconsolidated (till) units are typical of unstratified glacial deposits and would characteristically display low hydraulic conductivity. Typical monitoring well yields in till are expected to range from 0.1 to 1 gpm. Although the upper and lower undifferentiated units are widely distributed in the FMSS, the till deposits are poorly sorted and may show varying permeability over a short distances. Till units may act as an aquiclude to more permeable stratified drift deposits or bedrock aquifer and result in local confined conditions.

3.5 SITE SPECIFIC HYDROGEOLOGY

Groundwater beneath the FMSS occurs in bedrock and locally in overburden deposits. The FMSS bedrock hydrogeology is addressed in Section 3.5.1, and includes a discussion of groundwater flow, packer testing, aquifer testing and the linear groundwater seepage velocity. The FMSS overburden hydrogeology is addressed in Section 3.5.2, and describes groundwater flow, permeability testing, aquifer testing, and linear groundwater seepage flow. Vertical groundwater flow between the bedrock and overburden aquifer is addressed in Section 3.5.3, and groundwater-surface water interaction is addressed in Section 3.5.4.

3.5.1 Bedrock Hydrogeology

Water Level Measurements and Groundwater Flow

A total 13 groundwater level measurement (synoptic) rounds were conducted between June 6, 1999 and December 20, 2001. Groundwater elevations were collected quarterly during this period as part of the EMP, and later more comprehensive rounds were conducted as part of the Phase I and Phase II GWRI. Groundwater synoptic data collected during these rounds is summarized in **Tables 3-4a** and **3-5b**. Hydrographs of selected existing shallow and deep bedrock monitoring wells show typical seasonal fluctuations of 1.81 to 6.60 feet during the year (Appendix F).

A comprehensive water level round was conducted on July 26, 2001, which included recently installed and existing USACE wells, and Stepan Company wells within the FMSS. Water level data was collected from all shallow and deep bedrock wells. Bedrock groundwater elevations ranged from a maximum

57.69 feet MSL at well B38W02B, to the minimum elevation of 22.45 ft MSL at well MW-17D in Lodi. The July 26, 2001 shallow bedrock potentiometric surface maps for the FMSS and MISS are shown on **Figures 3-15a** and **3-15b**. Groundwater flow at the MISS is predominantly west-southwest towards the Saddle River, whereas flow is south-southwest on the 149-151 Maywood Avenue property and in Lodi.

A second, more limited synoptic round was conducted on December 20, 2001, which incorporated 8 newly installed shallow and deep bedrock monitoring wells on the MISS. The shallow bedrock potentiometric map is shown for the FMSS and MISS on **Figures 3-16a** and **Figure 3-16b**. As shown, a deflection in the flow field was further delineated on the MISS near wells B38W25D and MW-26D. This deflection in the flow field results from a bedrock high in the vicinity of these two wells (**Figure 3-10b**).

Deep bedrock water level measurements were obtained on July 26, 2001, and again on December 20, 2001, the latter round incorporating two recently installed deep bedrock monitoring wells. The deep groundwater flow direction varies from West to Southwest, with an average gradient of 0.0027 ft/ft. Shallow/deep bedrock and overburden (see Section 3.5.2) groundwater levels are generally in close agreement within the FMSS, and indicate unconfined bedrock aquifer conditions.

Hydrographic Flow Sections

Hydrographic cross sections were prepared from the July 2001 synoptic groundwater data to graphically measure the direction of groundwater flow and gradients, and compare the bedrock and overburden heads. The locations of generalized hydrographic sections are shown on **Figure 3-17**, with the individual flow sections shown on **Figures 3-18a** through **3-18c**. The overburden and bedrock groundwater elevations (heads) are plotted above the monitoring wells. Each flow section was aligned along the groundwater flow line for both the overburden and bedrock aquifer, which are coincident at the section locations. As shown on **Figure 3-17**, sections A-A', B-B' and C-C' originate at Stepan Company well cluster OBMW-15/BRMW-15, which is the approximate high point of the bedrock and overburden aquifer on the FMSS.

Hydrographic section A-A' is approximately 2800 feet in length and is oriented west and downgradient through the Stepan Company property, MISS, and Rochelle Park to the Saddle River. The direction of shallow bedrock groundwater flow is west under an average horizontal gradient of 0.0075 ft/ft. Hydrographic cross section B-B' is approximately 1325 feet in length and is oriented south 52 degrees west (azimuth) through the Stepan Company and 149-151 Maywood Avenue Properties. The direction of shallow bedrock groundwater flow is southwest under an average horizontal gradient of 0.0109 ft/ft. Section C-C' is approximately 2090 feet in length and is oriented south 25.5 degrees west (azimuth) downgradient through the Stepan Company, 149-151 Maywood Avenue, and 99 Essex Street properties. The direction of shallow bedrock groundwater flow is southwest with an average gradient of 0.0082 ft/ft. The groundwater flow direction in the southern portion of the FMSS near well clusters MW-14, MW-15 and MW-16 is south-southwest (243 degrees), with an average gradient of 0.0169 ft/ft.

A further discussion of overburden aquifer flow sections is presented in Section 3.5.2. A comparison of bedrock and overburden groundwater heads along the flow sections is addressed in Sections 3.5.2 and 3.5.3.

Results of Packer Testing

A total of 20 bedrock wells were packer tested during the Phase II GWRI program. Results of packer testing of the Phase II GWRI bedrock monitoring wells are presented in **Table 3-5**. As discussed in Section 2.2.2, packer test data collected with the six pilot borings and cores were not included in the analysis. Two packer tests were performed per hole, with the majority of tests centered on a water conducting fracture or fractured zone located in the upper half and lower half of the borehole. Water

conductive fractures were identified during borehole geophysics using a heat-pulse flow meter, and to a lesser extent, the fluid temperature and density logs. Conductive fractures were not identified in the lower interval of wells MW-1D and MW-14D, and well MW-19DD (both intervals). These well intervals were also packer tested to measure the unfractured bedrock aquifer or aquifer matrix permeability.

The calculated hydraulic conductivity range of the upper portion of the boreholes ranged from 1.34×10^{-5} cm/s at MW-7D to 1.97×10^{-2} cm/s at well MW-12D, with a geometric mean of 4.27×10^{-4} cm/s. The lower zone of the wells ranged from 1.29×10^{-5} cm/s at well MW-7D, to 2.49×10^{-3} cm/s at well MW-20D, with a geometric mean of 3.71×10^{-4}cm/s. The upper and lower zone results are consistent, and do not show any trend with depth. Packer test results in the unfractured intervals ranged from refusal at well MW-14D to 5.79×10^{-5}cm/s at MW-19DD, with an average value of 3.55×10^{-5}cm/s. The geometric mean of all shallow wells is 6.9×10^{-4} cm/s. The calculated hydraulic conductivity for the FMSS is in agreement with values cited in the literature for similar consolidated material i.e., sandstone and shale (Freeze and Cherry 1979).

Results of Short-Term Aquifer Tests

Short-term aquifer tests were performed during development of nine bedrock test wells. As noted in Section 2.2.3, a step and long-term bedrock aquifer pumping test was not conducted on the MISS due to the detection of high concentrations of benzene in shallow bedrock, and the potential for cross contamination of the deep bedrock aquifer. Pursuant to the *Pump Test Work Plan* (USACE 2001a), the test well and piezometers were developed and pumped at a constant rate for 2 to 3 hours. Wells were pumped at an average rate of 17 gpm, with measurement of water levels and discharge during pumping. The well specific capacity and transmissivity was estimated for each well using a modification of the Theis equation (Heath 1998). The pumping duration, rate, calculated specific capacity and transmissivity are summarized in **Table 3-6**.

Transmissivity (and Hydraulic conductivity) estimates based upon these results ranged from a low of 140 gallons per day per foot (gpd/ft) (1.94×10^{-4} cm/s) in bedrock well BRPZ-9 to 8600 gpd/ft (4.56×10^{-3} cm/s) in bedrock BRPZ-7. The geometric and arithmetic mean of the transmissivity of the shallow bedrock determined within these wells via these tests are 1,300 gpd/ft (1.63×10^{-3} cm/s) and 2580 gpd/ft (1.48×10^{-3} cm/s). The 9 tested wells show a significant variance (1 order of magnitude) in transmissivity within a 150-foot area, indicating a high degree of aquifer heterogeneity.

The estimated MISS transmissivity values were also compared to the existing 1993 Stepan Company aquifer test data. Separate bedrock pumping tests were conducted on the adjacent Stepan Company and 149-151 Maywood Avenue properties to determine aquifer characteristics at each location (CH_2M Hill 1994a). A 72-hour constant discharge test was conducted at well BRTW1 (now well PT2DA/B) on the Stepan Company property at an average pumping rate of 16 gpm. Calculated aquifer transmissivity (hydraulic conductivity) was reported in the range of 1,310 to 1,528 gpd/ft (2.1×10^{-3} cm/s to 1.7×10^{-3} cm/s, estimated). A second 72-hour constant discharge test was conducted at well BRTW-2 on the 149-151 Maywood Avenue property at an average pumping rate of 10.5 gpm. The calculated range of transmissivity (hydraulic conductivity) from these wells is 1,310 to 4,075 gpd/ft (2.1×10^{-3} cm/s to 4.6×10^{-3} cm/s, estimated).

The median 1,300 gpd/ft (1.63×10^{-3} cm/s) and mean 2580 gpd/ft (1.48×10^{-3} cm/s) transmissivity (hydraulic conductivity) values estimated from short term testing (specific capacity) of MISS wells is very similar to those obtained during testing of wells on the adjacent Stepan Company and 149-151 Maywood Avenue properties.

Groundwater Seepage Velocity

A range of groundwater seepage velocities were computed for the shallow bedrock aquifer. The seepage velocity was calculated pursuant to the following formula (Freeze and Cherry 1979):

$$V_s = KI/n_e$$

Where:

V_s= Seepage Velocity, Length (L) per Time (T)
K = Hydraulic Conductivity, L/T
I = Hydraulic Gradient, L/L
n_e = Effective Porosity, L^3/L^3

The shallow bedrock seepage velocity was calculated by applying the measured shallow bedrock hydraulic gradient of 0.0109 ft/ft, the estimated effective porosity of 0.05, and range of mean hydraulic conductivity values calculated for the packer tests (6.9×10^{-4} cm/s) and short-term specific capacity aquifer tests (1.63×10^{-3} cm/s). The applied effective porosity of 0.05 is the midpoint published value for the effective porosity of a mudstone/shale (Driscoll 1986).

The shallow bedrock seepage velocity is estimated in the range of 0.43 to 1.01 ft/day. The calculated range of shallow bedrock seepage velocities is comparable to the 0.3 to 2 ft/day range reported by DOE (DOE 1992).

3.5.2 Overburden Hydrogeology

Groundwater Measurements

A total of 13 groundwater synoptic rounds were conducted between June 6, 1999 and December 20, 2001. Groundwater elevations were collected quarterly during this period as part of the EMP, and later more comprehensive rounds were conducted as part of the Phase I and Phase II GWRI. Groundwater synoptic data collected during these rounds is summarized in **Tables 3-7a** and **3-7b**. Hydrographs of selected overburden monitoring wells show typical seasonal fluctuations of 1.00 to 6.86 feet during the year (Appendix E).

A comprehensive water level round was conducted on July 26, 2001, which included all recently installed and existing USACE wells, and Stepan Company wells within the FMSS. Groundwater surface elevations ranged from a maximum of 61.25 ft MSL in Stepan Company Well 8 to a minimum of 22.32 ft MSL in well MW-17S located in Lodi.

July 2001 FMSS synoptic groundwater elevations on the FMSS are shown on **Figure 3-19a**. December 2001 groundwater elevations are shown on **Figure 3-20**. As shown, groundwater contours bend around the bedrock high in the area of Stepan Company Well 8 and MW-1, and flow varies from northwest to south. Local MISS groundwater flow varies from northwest to southwest, and is affected by a local bedrock high in the area of well B38W25S.

Distribution of the Overburden Aquifer

The distribution of the overburden aquifer was mapped by overlaying and comparing the July 2001 overburden groundwater elevation map (**Figure 3-19a**) and the bedrock surface elevation map (**Figure 3-10a**). As shown on **Figure 3-19a**, the overburden aquifer was mapped in those areas where the plotted overburden groundwater elevations exceeded the top of bedrock elevation. This map was field checked by reviewing the records of overburden wells in those areas outside the plotted extent of the

aquifer. USACE overburden wells MW-1S, MW-9S and MW-19S are located outside the mapped extent of the overburden aquifer, and are reported as dry, or seasonally dry.

Both the overburden contour map and bedrock surface map have limited control in certain FMSS areas, and that the water table elevations may vary seasonally several feet per year. Accordingly, the extent of the overburden aquifer is expected to fluctuate seasonally with water levels. Well and boring data has, however, generally supported the mapped delineation of the aquifer.

As shown on **Figure 3-19a**, **Figure 3-19b**, and **3-20**, the overburden aquifer is absent in a large area of the FMSS. The overburden aquifer underlies the MISS, 149-151 Maywood Avenue Property and parts of the adjacent Stepan Company property. The overburden aquifer is also mapped downgradient of the MISS, and extends west to the Saddle River. The overburden aquifer is mapped along the trace of Lodi Brook, and underlies the vicinity properties at Cluster Nos. 1, 2, 3, 4, 5, and 6. The overburden aquifer ranges in thickness from 0 to 32.6 feet at recently installed USACE wells, and reaches the maximum thickness at well MW-16S in Lodi. As noted, the aquifer pinches out and is seasonally absent at wells MW-9S, MW-19S, and MW-1S.

Hydrographic Flow Sections (Overburden)

The locations of generalized hydrographic sections are shown on **Figure 3-17**, with the individual flow sections shown on **Figures 3-18a** through **3-18c.** Hydrographic section A-A' is approximately 2800 feet in length and is oriented west and downgradient through the Stepan Company property, MISS, and Rochelle Park to the Saddle River. The direction of overburden groundwater flow is west under an average horizontal gradient of 0.0076 ft/ft. Hydrographic cross section B-B' is approximately 1325 feet in length and is oriented south 52 degrees west (azimuth) through the Stepan Company and 149-151 Maywood Avenue properties. The direction of overburden groundwater flow is southwest under an average horizontal gradient of 0.0111 ft/ft. Section C-C' is approximately 2090 feet in length and is oriented south 25.5 degrees west (azimuth) downgradient through the Stepan Company, 149-151 Maywood Avenue and 99 Essex Street properties. The direction of overburden groundwater flow is southwest with an average gradient of 0.0079 ft/ft. The general direction of overburden groundwater flow and gradient along Lodi Brook in Lodi (as measured at Wells MW-14S, MW-15S and MW-16S) is south-southwest (248 degrees) at an average horizontal gradient of 0.0076 ft/ft.

Each flow section shows a cross section of the generalized overburden substratum and presents overburden groundwater elevations (water table) with a dotted line. The overburden deposits below the plotted water table comprise the overburden aquifer. As shown in Sections A-A', B-B' and C-C', the overburden aquifer thickness ranges from 1 to 8 feet, and thins/pinches out in the area of well cluster OBMW-15/BRMW-15. The majority of presented bedrock and overburden groundwater elevations (heads) are similar, which indicates no net upward or downward gradient (or hydraulic connection) between aquifers at those well locations. Downward gradients (from overburden to bedrock aquifer) were observed at cluster wells MISS-5B/MISS-5A, MISS-3B/MISS-3A (Section A-A'), and well cluster B38W04B/OBMW-18 (Section B-B'). Upward gradients were noted at cluster wells B38W-15D/B38W-15 (Section A-A') and BRMW-10/Well-1 (Section C-C').

Vertical groundwater gradients are discussed further in Section 3.4.3.

Results of Aquifer Slug Testing

In-situ aquifer slug testing was conducted in 35 USACE and Stepan Company overburden monitoring wells to determine the hydraulic conductivity of the overburden aquifer. Rising and falling head tests were attempted at all wells; however, falling head tests could not be performed at 7 wells due to low water levels. Data was not collected at well MW-1S due to low water levels, and at well MW-18S due to

high water levels. A summary of the tested wells, type of test and calculated hydraulic conductivity is presented in **Table 3-8**.

The calculated hydraulic conductivity ranges from a minimum average (rising and falling head) value of 1.5×10^{-4} cm/s at well MW-5S to a maximum average value of 1.05×10^{-2} cm/s at well OBMW17. The highest average hydraulic conductivity values were obtained in wells installed in the gravel unit (1.37×10^{-3} cm/s) and lower undifferentiated unit (1.84×10^{-3} cm/s). Lower average values were observed in wells installed in fill (9.21×10^{-4} cm/s), sand unit (6.06×10^{-4} cm/s) and the upper undifferentiated unit (4.61×10^{-4} cm/s). The geometric mean hydraulic conductivity of the overburden aquifer is 8.7×10^{-4} cm/s. The range of field determined values are similar to those reported in the MISS DOE RI (DOE 1992) and the Stepan Property *Final Remedial Investigation Report* (CH_2M Hill 1994a).

The observed hydraulic conductivity values are similar to hydraulic conductivity estimates described in the literature (Freeze and Cherry 1979) for the encountered range of similar unconsolidated material, (i.e., ranging from silt clay and mixtures of sand, silt and clay to sand and gravel).

Results of Overburden Aquifer Pumping Test

A pumping test was conducted at test well OVPW-1S to further evaluate hydraulic characteristics of the overburden aquifer on the MISS. The test well (PW-1S) and overburden piezometers were installed in the mapped area of Former Retention Pond C, and were installed to refusal at approximately 26 feet bgs. The pumping well and array piezometers fully penetrated the overburden aquifer and were installed into both medium to coarse sand fill and native formation. Background water level monitoring was conducted 1 week before and during the aquifer test, and recorded a steady water level decline. Background well hydrographs are shown in Appendix H. Test well PW-1S was pumped at a constant discharge of 3.14 gpm for 72 hours, and was followed by a 72-hour monitored recovery period. During the testing periods, groundwater level measurements were obtained from 30 monitoring wells. Details of the aquifer pumping test and analysis are presented in the *Overburden Aquifer Test Report* (Appendix H). The results of the overburden aquifer pumping test are summarized in **Table 3-9**. All drawdown data was corrected for the background decline in water levels during the test. Aquifer test results are summarized as follows for the 'north-south' array (observation wells OVPZ-9, OVPZ-10, OVPZ-11, OVPZ-15, and OVPZ-17):

- Geometric mean overburden hydraulic conductivity, 6.48×10^{-3} cm/s.
- Geometric mean overburden specific yield (late time response to pumping), 2.98×10^{-2} (0.0298).
- The range of decline in groundwater levels observed in the 'north-south' array wells was approximately 0.75 to 2.0 feet.

Aquifer test results are summarized as follows for the 'east-west' array (observation wells OVPZ-12, OVPZ-13, OVPZ-14, OVPZ-16, and monitoring well B38W19S):

- Geometric mean of the hydraulic conductivity, 6.48×10^{-3} cm/s.
- Geometric mean of the specific yield (late time response to pumping), 3.98×10^{-2} (0.0398).
- The range in decline in groundwater levels observed in the 'east-west' array wells was approximately 0.5 to 2.0 feet.

Groundwater levels were also monitored in adjacent bedrock piezometers (BRPZ-4, BRPZ-6, and BRPZ-9) to evaluate the potential hydraulic connection between the overburden and bedrock aquifers. Drawdown (corrected) measured in overburden/bedrock piezometer cluster OVPZ-12/BRPZ-9 was 1.7 and 0.3 feet, respectively. These data suggests that there was limited communication between the

overburden and bedrock aquifers during the pumping test. During the pump testing period, groundwater levels in bedrock wells BRPZ-4 and BRPZ-6 declined between 0.2 and 0.3 feet (uncorrected). Although the early time data in these bedrock wells show a clear response to pumping, the overall decline is similar to that observed in background bedrock monitoring wells during the test period. These data suggests that the majority of the observed well drawdown at these wells is due to regional water level decline.

The calculated aquifer test hydraulic conductivity is consistent with the range of values expected for medium to coarse sand (fill and native formation) sediment (Freeze and Cherry 1979). These data was compared to the results of Stepan Company overburden aquifer pumping test, which was conducted on Stepan Company well OBTW-1 (CH_2M Hill 1994a). The Stepan Company test reported a transmissivity (hydraulic conductivity) value of 32 ft^2/day (1.4 x 10^{-3} cm/s).

A comparison of the aquifer test hydraulic conductivity values to the average FMSS slug test value of 8.7 x 10^{-4}cm/s show that the aquifer test data are an order of magnitude higher. This discrepancy is attributed in part to the large number of overburden monitoring wells that are installed in low permeability clay, silt and till deposits. It is also noted that most of the overburden monitoring wells (USACE and Stepan Company) do not fully penetrate the aquifer and may not be installed into the more permeable sand substratum (stratified drift).

The calculated specific yield values (0.029 to 0.039) are used to describe the storage capacity of an aquifer, and fall within the published range of 0.40 to 0.01 for an unconfined or water table aquifer (U.S. Department of the Interior 1977). The test specific yield values are relatively low, and approach semi-confined (0.01 to 0.001) aquifer conditions. These values may be attributed to the location of the test well and piezometers within the confines of Former Retention Pond C. Eight (8) to 10 feet of laminated silt - pond sediments overlie the sand aquifer at most test (and Former Retention Pond) areas, and may cause local semi-confined conditions.

Overburden Seepage Velocity

A range of overburden seepage groundwater velocities are calculated based on average gradient, range of the average slug test and aquifer test hydraulic conductivity, and total aquifer porosity. The seepage velocity was calculated pursuant to the following formula (Reference):

$$V_s = KI/n_e$$

Where:

V_s= Seepage Velocity, L/T
K = Hydraulic Conductivity, L/T
I = Hydraulic Gradient, L/L
n_e = Effective Porosity, L^3/L^3

The applied hydraulic gradient is 0.0085 ft/ft and total porosity value of 0.20 for overburden on the MISS. The applied slug test and aquifer test mean hydraulic conductivities are 8.7 x 10^{-4} cm/s and 6.0 x 10^{-3} cm/s, respectively. The calculated groundwater seepage velocities range from 0.11 ft/day to 0.72 ft/day. The range of seepage velocities estimated for FMSS are comparable to the 0.55 ft/day velocity reported by DOE (DOE 1992).

3.5.3 Vertical Groundwater Flow

Historical groundwater levels for shallow bedrock and overburden well clusters were compared to identify vertical groundwater gradients on the FMSS, including select Stepan Company wells. Historical bedrock and overburden (cluster) well data are shown in **Tables 3-10a** through **3-10c**. Vertical gradients

are measured by comparing the bedrock and overburden elevations or heads in two adjacent wells or cluster. A higher overburden head indicates a probable downward vertical gradient at that location, since groundwater will flow from higher to lower head. A higher bedrock head indicates a probable upward vertical gradient at that location.

As shown in **Tables 3-10a** through **3-10c**, a number of cluster locations show consistent vertical gradients over time. Well clusters with consistent vertical gradients are plotted on **Figure 3-21**, where clusters with upward and downward gradients are marked with a U and D, respectively. As shown, most cluster locations on the MISS have downward gradients; whereas other clusters located further downgradient in Rochelle Park and Lodi show net upward gradients. This is consistent with the concept of net groundwater recharge of the bedrock aquifer in an upland MISS and Stepan Company property setting, and net discharge (upward into the overburden aquifer) at lower elevations.

As shown on **Figure 3-21**, net downward groundwater gradients were measured on the MISS, as shown at cluster wells MISS-01, MISS-02, MISS-03, MISS-04, MISS-07, B38W19, B38W25, MW-20, MW-25 and PW-1S/BRPZ-9. Net upward gradients are measured in Rochelle Park, as shown at well clusters B38W14, B38W15, MW-4 and MW-5. A net upward gradient was also noted in Lodi well clusters MW-15, MW-16, MW-17 and MW-18.

Groundwater elevation data was also evaluated in shallow and deep bedrock monitoring well clusters PT-1DA/1DB, MW-23D/DD, MW-24D/24DD, BRPZ-4/PW-1D and MW-19D/19DD. All clusters except PT-1DA/PT-1DB show weak and/or inconsistent vertical gradients. Stepan Company well cluster PT-1DA/1DB has a consistent downward vertical gradient.

3.5.4 Groundwater - Surface Water Interaction

Westerly Brook

The upstream portion of Westerly Brook is conveyed by culvert pipe under the MISS and former Ballod properties, and opens to a channel at St. Ann Place in Rochelle Park. As described in Section 2.8, a video-inspection survey was completed in January 2000 on the portions of Lodi Brook and Westerly Brook that are routed through subsurface concrete pipes (Refer to **Figure 2-4**). The video survey found that both the north-south and east-west sections of the Westerly Brook culvert leak heavily at open and cracked joints. Invert elevations for the Westerly Brook culvert pipe show that the culvert pipe is partially below the seasonal low groundwater table and in some locations was installed on the top of bedrock. As shown on **Figures 3-22a**, the north-south culvert section on the MISS lay partially below the August 1999 groundwater table. **Figure 3-22b** shows that the same culvert segment is almost completely below the March 2000 groundwater table. **Figure 3-22c** shows that the eastern end of the east-west culvert pipe is submerged below the plotted June 2000 groundwater water table. These data suggests that groundwater from the MISS is infiltrating into Westerly Brook through open joints in the culvert pipe.

Lodi Brook

Lodi Brook originates on the 149-151 Maywood Avenue property, and flows approximately 1400 feet as an open channel through the 149-151 Maywood Avenue property to NJ Route 17. At NJ Route 17, Lodi Brook is principally routed into a culvert pipe and flows south to the Saddle River.

Lodi Brook is a continuously fed or perennial stream, with an estimated base flow of 0.06 cubic meters per second (m^3/s) (2 cfs) (DOE 1992). Lodi Brook originates in the low marshy areas on 149-151 Maywood Avenue, and is probably fed by shallow groundwater at the two headwater tributaries.

As shown on **Figure 3-15a**, the overburden groundwater water table slopes south across the 149-151 Maywood Avenue property, and does not indicate a major overburden aquifer discharge point or boundary at Lodi Brook. A comparison of the plotted July 2001 overburden groundwater elevations and the Lodi Brook base elevations are very similar, indicating neither groundwater discharge or recharge along the main segment of Lodi Brook (in July 2001). The overburden groundwater may seasonally obtain recharge from Lodi Brook during prolonged periods of precipitation, and discharge to surface water during dry periods.

The hydrologic data indicates that the headwater marshes of Lodi Brook are groundwater fed; however, the main channel does not appear to be a major groundwater discharge point. Seasonal groundwater and surface water interaction is expected during prolonged dry and wet periods.

3.6 BACKGROUND GROUNDWATER QUALITY

Background groundwater quality was evaluated by review of existing regional groundwater databases and sampling data for individual overburden wells located in the FMSS. Regional and FMSS background groundwater data are presented for both the bedrock and overburden aquifer in the following sections.

3.6.1 Regional Groundwater Quality

Regional bedrock water quality data was obtained from NJGS and USGS databases and reports. Bedrock groundwater quality data for the Newark Basin was obtained from the NJGS report titled *Ambient Ground-Water Quality of the New Jersey Part of the Newark Basin*, File DGS96-3 (Serfes, 1994). The report summarizes the natural groundwater quality data in 170 bedrock wells installed within the Newark basin (see **Figure 3-2**). A total of 150 wells in the database were installed in the Passaic Formation, and were included in the GWRI evaluation. The Newark Basin area includes the counties of Bergen, Passaic, Hudson, Union, Middlesex, and Somerset. The sample analyses and associated well information was collected as part of the 1987-88 NJGS and USGS cooperative Ambient Ground Water Quality Network and the 1985-87 USGS and NJDEP study of radionuclides in ground water. The data provided by the Newark Basin study includes metals and radiological parameters (total uranium). The discussion of metals data are limited to TAL metals that were previously identified as groundwater COPCs on the FMSS. Results of selected metal and radiological results are presented in **Tables 3-11** and **3-12**.

Regional bedrock groundwater quality data was also obtained from the USGS National Water Information System Web site (NWISWeb). Groundwater quality data was obtained for 65 bedrock wells installed into the Passaic Formation in Bergen County, NJ. Sampling parameters include metals and radiological constituents, including Ra-226, Ra-228, total uranium, Gross Alpha and Gross Beta. Metals and radiological sampling results are presented in **Table 3-11** and **Table 3-12.** For each study or database, the minimum, maximum and average concentrations, and number of samples analyzed, are presented for each parameter. The average sample concentration is determined assuming non-detects were present at their reporting limit, and may bias the background concentration high.

Regional overburden groundwater quality data was obtained in the USGS NWISWeb for 30 wells in Bergen County, NJ. All wells were installed into glacial deposits (sand and gravel) within valley fill aquifers, and are generally located in the northern half of Bergen County. Sampling parameters include metals and radiological constituents, including Ra-226, Ra-228, total uranium, Gross Alpha and Gross Beta. Metals and radiological sampling results are presented in **Table 3-11** and **Table 3-12**. The minimum, maximum and average concentrations, and number of samples analyzed, are presented for each parameter. The average sample concentration was determined, assuming non-detects were present at their reporting limit, and may bias the background concentration high.

3.6.2 FMSS Background Groundwater Quality

FMSS well overburden and bedrock well clusters B38W02D, MW-10S/D, MW-17S/D and MW-18S/D are identified as GWRI "background" wells. Wells B38W01S and B38W02D are the designated background wells in the EMP, and are located upgradient (flow) of the MISS on the NYSW property. Metals and VOC exceedances are detected in well B38W01S, and is not used as a GWRI background well. Cluster MW-10S/D was installed during Phase II GWRI activities, and is located on West Hunter Ave. This cluster is located 1200 feet east and sidegradient (flow) from the MISS, and 600 feet east and sidegradient from NRC Burial Pits 1 and 2 on the Stepan Company property (see **Figures 3-15a** and **3-19a**). Well clusters MW-17S/D and MW-18S/D were also installed during the Phase II GWRI, and are located in the southwest corner of the FMSS, in Lodi, NJ. These wells are located approximately 900 feet downgradient from vicinity properties at 100 Hancock St, Gregg Street, and 72 Sydney Ave. in Lodi. There were no metals, radionuclides or VOC exceedances detected in the corresponding upgradient vicinity property overburden and bedrock wells (MW-14S/D, MW-15S/D and MW-16S/D). This cluster is also located approximately 1800 feet southwest and sidegradient (flow) from the MISS, and should not be impacted by MISS groundwater COPCs. Well locations are shown on **Figure 2-3**.

Background metals, radiological and VOC groundwater quality data for the overburden and bedrock wells is shown in **Tables 3-11**, **3-12**, and **3-13**. Historical sampling data are available at well B38W02D, so data are presented as a minimum, maximum and average concentration. The other wells were sampled once as part of the Phase II GWRI. VOCs were not sampled in wells MW-17S/D and MW-18S/D in accordance with the GWRI Work Plan.

Background Bedrock Groundwater Quality

FMSS metals background sampling data for bedrock wells MW-10D, MW-17D and MW-18D are shown in **Table 3-11**. Well B38W02D showed elevated average concentrations of chromium (56.57 µg/L) and lithium (47.22 µg/L) in groundwater, and is probably impacted from the adjacent MISS property. While this well is not suitable for evaluation of background metals, it is retained as a radiological and VOC background well. Site background levels of arsenic (2.3 to 3.2 µg/L) and lead (2.2 to 3.56 µg/L) are comparable to those reported in the regional databases. The FMSS and regional results are biased high, however, since arsenic and lead have relatively high detection limits and the reporting of the non-detects at that (detection) limit.

Bedrock radiological sampling data for FMSS wells is shown in **Table 3-12**. The FMSS background well (B38W02D, MW-10D, MW-17D and MW18D) radiological components activity range as follows: Ra-226 (0.34 to 1.25 pCi/L), Ra-228 (0.51 to 1.08 pCi/L), total uranium (1.73 to 3.45 pCi/L), gross alpha (0.17 to 2.85 pCi/L) and gross beta (0.79 to 4.27 pCi/L). The average activity was applied for well B38W02D in the aforementioned data. FMSS background radiological data are comparable to the values reported in the regional well database. Background FMSS bedrock VOC data are available at wells B38W02D and MW10D, and is presented in **Table 3-13**. As shown, VOCs were not detected at either background well. Noting that VOCs are anthropogenic, these wells should be considered upgradient, rather than background wells. Regional background data was not provided since these parameters do not occur naturally in groundwater.

Background Overburden Groundwater Quality

FMSS overburden metals sampling data was collected from wells MW-10S, MW-17S and MW-18S, and is presented in **Table 3-11**. FMSS Site overburden background levels of arsenic (3.2U to 3.8 µg/L) and lead (2.2U µg/L) are comparable or lower to those reported in the regional databases. The site and

regional results are biased high, however, since arsenic and lead have relatively high detection limits and the reporting of the non-detects at that (detection) limit.

Overburden radiological sampling data for site wells is shown in **Table 3-12**. The site background well (MW-10S, MW-17S and MW-18S) radiological components activity range as follows: Ra-226 (0.28 to 0.37 pCi/L), Ra-228 (0.14 to 1.19 pCi/L), total uranium (1.46 to 3.05 pCi/L), gross alpha (0.61 to 2.53 pCi/L) and gross beta (0.47 to 1.96 pCi/L). Background FMSS overburden VOC data are limited to well MW-10S, and is presented in **Table 3-13**. Trace concentrations of TCE (0.3 µg/L) was detected at well MW-10S. Regional background data was not provided since these parameters do not occur naturally in groundwater.

3.7 HYDROGEOLOGICAL RESULTS OF THE SUPPLEMENTAL INVESTIGATION

Results of the Supplemental Investigation are presented in Section 3.7. Results of well logging and installation, water level monitoring, specific capacity (permeability) testing, and borehole geophysics are discussed in Sections 3.7.1, 3.7.2, 3.7.3 and 3.7.4.

3.7.1 Overburden and Bedrock Geology

Four bedrock monitoring wells were installed on the MISS as part of the source area investigation, and two were installed on Grove Avenue, in order to define the downgradient extent of the benzene plume (see Section 4.12.3). Bedrock was encountered at 18 to 20 feet depth in wells installed on the MISS, and 9 to 10 feet depth at wells MW-31D and MW-32D on Grove Avenue. Overburden deposits encountered at MISS wells MW-27D, MW-28D and MW-33D are generally described as tan to black sand from the surface to 15 to 20 feet depth, bgs. This sand unit also contains wood fragments and clumps of clay material that may have been ash, and likely represents fill and stained soils in and around Former Retention Pond A. The fill unit is underlain by native red-brown sand at well MW-28D, and is presumably present at other locations below fill. Overburden deposits at MISS well MW-34D are described as gravel, sand, and silt fill to approximately five feet bgs, and is underlain by native red-brown sand and gravel above bedrock.

Overburden deposits at wells MW-31D and MW-32D on Grove Ave are described as a thin concrete and sub-base fill at the surface, and overlies red brown sand to bedrock. The shallow (overburden) groundwater table was encountered at approximately 12 feet bgs on the MISS, and at 5 feet bgs along Grove Avenue in Rochelle Park. All bedrock wells were cased through the overburden aquifer, and casings were set and grouted a minimum of 10 feet into bedrock.

Bedrock cuttings were sampled and logged every 5 feet during drilling, and fractures were logged as encountered. Bedrock is described as a red-brown, interbedded fine to medium grained sandstone and coarse grained siltstone. Large discrete fractures were mapped in wells MW-31D and MW-32D, and readily produced water during development and testing. Several feet of soft, weathered bedrock was typically encountered at the bedrock surface, and five of six well casings were set at 10 feet (below bedrock surface) in competent rock. Shallow bedrock at well MW-33D was extensively fractured, and was described as "soft" during drilling. Casing was installed 18 feet to competent rock in order to minimize the potential for leakage/communication from the overlying overburden aquifer. Fractured and "soft" rock zones were also logged at depth, so the borehole was screened (with a 2-inch PVC screen) to avoid collapse.

3.7.2 Water Level Measurements

Water levels were obtained from 54 bedrock monitoring wells on June 23 and 24, 2003. Groundwater level measurements, well elevations (top of inner casing [TIC]), groundwater elevations and other well data are summarized in **Table 3-14**. Plotted and contoured shallow bedrock groundwater well elevations are shown on **Figure 3-23**. As depicted in this figure, the direction of groundwater flow is predominantly west-southwest, with a component of flow towards the south. The slope of the water table ranges from approximately 0.035 ft/ft on the MISS and Stepan property, to 0.01 ft/ft further west and downgradient from the site in Rochelle Park (west of Route 17). Groundwater elevations were also measured at five shallow/deep bedrock well clusters, including wells MW-19D/DD, MW-23D/DD, MW-24D/DD, BRPZ-4/BRPW-1DRE, and PT-1DA/1DB. All bedrock well clusters showed slightly higher groundwater heads in the shallow well, which indicates an overall downward vertical gradient within bedrock. It is noted that the site had received approximately 8.33 inches of rain for the month of June 2003, which significantly exceeds the 20 year monthly June average of 3.51 inches (recorded at Teterboro Airport, NJ). Overburden/bedrock cluster wells also measured during this period (as part of the EMP) also recorded higher (shallow depth to water) heads, and may reflect aquifer recharge following a period of very heavy rainfall.

3.7.3 Permeability Testing

As discussed in Section 2.14.2, specific capacity tests were conducted on all newly installed wells following completion of well development or concurrent with the last development event. During the test, groundwater discharge (Q) was stabilized at a constant rate, and well drawdown was monitored. The well specific capacity (Q/s) was computed once the discharge and water levels stabilized for three or more readings. The specific capacity tests were typically conducted over a 70-minute (MW-31D) to 130-minute (MW-33D and MW-34D) period. The method of Razack and Huntley (Fetter 1994) was used to determine the transmissivity "T" of the bedrock aquifer. The hydraulic conductivity of the bedrock aquifer was then determined by dividing the transmissivity of the aquifer by the saturated thickness of the aquifer, which was determined to be the wells "open hole" interval.

A summary of the specific capacity test parameters (Q, s), computed specific capacity, transmissivity, and hydraulic conductivity for each well is given in **Table 3-15**. The calculated well hydraulic conductivities ranged from 2.79×10^{-3} (MW-27D) to 3.01×10^{-2} cm/sec (MW-31D), with a geometric mean of 7.05×10^{-3} cm/sec. Pumping rate and water level data for each test is provided in Appendix T. The computed hydraulic conductivity is higher than the Phase II median (1.63×10^{-3} cm/s) and mean (1.48×10^{-3} cm/s) values cited in Section 3.5.1. This may be attributed to the effect of two high yielding wells (MW-31D and MW-32D) on the small (Supplemental Investigation) data set.

3.7.4 Borehole Geophysics

Borehole geophysics was conducted at five of the six newly installed bedrock wells. The logging suite included caliper, SPR, SP, natural gamma, fluid temperature, fluid resistivity, ATV, and heat pulse flowmeter logging (ambient and pumping conditions). Borehole fractures were identified using the ATV and Well CAD software, which was used to determine fracture dip angles and down-dip azimuths. Tadpole plots indicate measured fracture orientations, where the filled circles indicate dip angles (0 to 90 degrees). Each tadpole "tail" points in the measured down dip direction, which is perpendicular to the fracture strike. Borehole geophysical logs are presented in Appendix T.

Open fractures were identified (visible) using both the ATV travel time and ATV amplitude plots, whereas less open fractures were only visible on the ATV amplitude plots. Water conducting fractures were identified using the heat - pulse flow meter, fluid temperature and fluid resistivity data. The heat

pulse flow meter identified fractures that exhibited either an upward or downward flow of water within the borehole within the instrument operation range of 0.3 to 1.0 gpm. Conductive fractures were also identified using the fluid temperature and fluid resistivity log (down to the minimum instrument detection level), where local inflections or changes in slope of the log(s) typically represent water movement entering or exiting a fracture.

Well fracture orientations for each well are presented on **Figure 3-24**, using Rose diagrams and Stereonet plots. A Rose diagram is a circular plot used to represent fracture dip directions. The circular diagram represents points of a compass, and is divided into 15 degree sectors. Fracture dip data are input into the appropriate sectors, where the population of the fracture data determines the sector size or magnitude. Overall, the Rose diagrams show a dominant NW fracture dip direction, with a lesser number of fractures dipping west, southeast, and east.

A stereonet plot was used to represent the individual fracture dip direction and angle data on the same diagram. Individual fractures are displayed as a point on the stereonet. The dip direction is determined by measuring the compass direction of a line from the fracture point through the origin or axis of the stereo plot. The dip angle of the fracture point is measured relative to the concentric dip angles plotted on the stereo plot. The origin represents zero dip angle, and increases 10 degrees at each line toward the edge of the stereo plot, which depicts vertical fractures. In total, the stereo plots show a dominant NW dip azmith, with those fractures mostly dipping between 10 and 20 degrees. Water bearing fractures are labeled blue on the stereoplot, and also show a dominant NW dip direction and 10 to 20 degree dip angle. Some steeply dipping water bearing fractures were noted in MW-31D, with fractures dipping 50 degrees towards the northwest, while conductive fractures in MW-32D measured between 70 to 80 degrees towards the southeast.

A comparison of the well drilling and geophysical logs in the Phase II GWRI and Supplemental Investigation show a substantially greater number of features using borehole geophysics. Although all fractures or water bearing zones observed by the driller and/or geologist were entered into the field logs, only large fractures with significant open or soft areas, and/or water bearing zones can be identified during drilling. Borehole geophysics is considered more accurate than field logging, and for that reason, was selected to definitively characterize the fracture distribution and orientation in bedrock using multiple logs. The larger fractures and/or water bearing zones logged in the field in both the Phase II and Supplemental Investigation were also corroborated by borehole geophysics.

Borehole geophysics fracture dip azmith and angle data are similar to those reported in the Phase II investigation, and likewise correspond with the measured NNE bedrock strike and NW dip (8 to 14 degrees) in area outcrops. A summary Rose diagram and stereonet plot of water bearing fractures from the GWRI is provided for comparison in Appendix T, which also contains the Borehole Geophysics report.

4.0 ANALYTICAL RESULTS

This section provides a summary of the analytical program and includes both soil and groundwater data obtained from the Phase I and Phase II programs, and groundwater data from the Supplemental Investigation. The methods and procedures implemented to collect soil, surface water, sediment, and groundwater samples were presented in Section 2.0, as such, this section focuses solely on a presentation of the analytical results.

Data for this section will be provided both in tables and associated figures. The Phase I GWRI sampling results will be presented prior to Phase II analytical results. Overburden groundwater results obtained from the Geoprobe® sampling program and monitoring well sampling program will be discussed prior to analytical results obtained from bedrock monitoring wells. Surface water, sediment, and soil data follows the discussion of the groundwater data. Similarly, radiological results will be presented prior to chemical results. The Supplemental Investigation sampling results are presented in Section 4.12.

Groundwater data in the report is compared to the lower of the Federal/State MCLs or the New Jersey GWQC/Standards. Groundwater Quality Standards as outlined in NJ Administrative Code 7:9-6, January 7, 1993, describes the New Jersey Groundwater Classifications. Groundwater within the FMSS is classified as Class II groundwater.

Class II groundwater has a designated use of the provision of potable groundwater with conventional water supply treatment, either at their current water quality (Class II-A) or subsequent to enhancement or restoration of regional water quality so that the water will be of potable quality with conventional water supply treatment (Class II-B). Both existing and potential potable water uses are included in the designated use.

Class II-A groundwater shall consist of all groundwater of the State, except for groundwater designated in Classes I, II-B, or III. The primary designated use for Class II-A groundwater shall be potable water and conversion (through conventional water supply treatment, mixing or other similar technique) to potable water. Class II-A secondary designated uses includes agricultural water and industrial water. NJDEP GWQS for Class II A water is presented in the report.

4.1 PHASE I GEOPROBE® GROUNDWATER SAMPLING RESULTS

A total of 88 Geoprobe® groundwater samples were collected during the Phase I investigation. A summary of Geoprobe® locations, identification, and screened intervals are presented in **Table 4-1**. One (1) groundwater sample was collected from 43 of 45 Geoprobe® borings advanced as part of the PDI Field Investigation. Typically, each groundwater sample was analyzed for unfiltered radiological parameters (Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238), filtered RCRA 8 metals plus lithium, boron, and filtered REEs. Metals and REEs samples were field filtered using a 0.45-micron filter. Approximately 5% of the filtered metals samples were analyzed for total (unfiltered) metals analysis for comparison purposes. The results are discussed further in Section 4.12.

Additionally, 33 Geoprobe® borings were installed in 8 transects (A-G and J), refer to **Figure 2-4**. One (1) or 2 groundwater samples were obtained from each of the 33 Geoprobe® borings, and analyzed for the same parameters as groundwater samples from the PDI environmental borings. Geoprobe® transects H & I were delayed until phase II activities due to access restrictions. A total of 45 groundwater samples were obtained from the transect Geoprobe® borings. Additionally, VOCs were analyzed in groundwater samples obtained from Transects A, B, C, E, and J. A total of 29 VOC groundwater samples were

obtained from the Geoprobe® borings. Discrete groundwater samples obtained from differing depths within a Geoprobe® boring is denoted in **Table 4-1**.

4.1.1 Phase I Geoprobe® Groundwater Results - Radiological

Eighty-eight (88) Geoprobe® groundwater samples were analyzed for Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235 and U-238. As outlined in the GWRIWP (USACE 2000b), the Geoprobe® groundwater samples for radiological analysis were not filtered in the field. Physical parameters such as turbidity, DO, pH and conductivity were recorded prior to sample collection at 73 of 83 sample locations. Final groundwater sample (purging) parameters are presented in **Table 4-1**. Despite efforts to minimize sample turbidity, 70 of 73 samples recorded turbidity measurements exceeding 50 NTU. Forty-one (41) of the 73 samples had off scale turbidity measurements, in excess of 999 NTUs. As discussed in the following subsections, elevated levels of radiological constituents were present in a number of unfiltered radiological Geoprobe® groundwater samples. This data are suspect due to the very high sample turbidity values measured during sampling and the likelihood that the groundwater sample was contaminated by entrained sediment or other particulate matter. This data are therefore presented for screening purposes, and may not be representative of dissolved radiological constituents in the unconsolidated aquifer.

A summary of the individual radium, uranium, and thorium isotope sampling results, data validation qualifiers, measurement errors, and minimum detectable activities (MDAs) are presented in **Table 4-2, 4-3**, and **4-4**, respectively. The distribution and concentration of total radium and total uranium are shown on **Figure 4-1**, and total thorium is shown on **Figure 4-2**. Each detected parameter is addressed further in this section.

Total Radium

The results of the individual radium isotopes were summed for comparison to the Federal/State MCL of 5 pCi/L for total radium, and is included in **Table 4-2**. In determining the total radium concentration, a conservative approach was used. If the data qualifier was reported with a "U" (non-detect) or "UJ" (estimated non-detect) qualifier, the reported concentration was used in the summation. For example, if Ra-226 was reported at 0.5U and Ra-228 was reported at 1 pCi/L, the total radium concentration was conservatively reported (in tables and figures) as 1.5 pCi/L. Whereas, in the case of a negative reported concentration, a result of 0 pCi/L was added to the total for the isotope of concern. If all isotope qualifiers in a sample were qualified U or UJ, then the isotope sample was considered not present.

Total radium was detected in 84 of 88 samples with concentrations ranging from 0.25 pCi/L to 105.43 pCi/L. Two of the four samples, however, were rejected. The maximum concentration was detected in the groundwater sample obtained from Geoprobe® boring 07A001, which is located on the 111 Essex Street Property (Property No. 7a). This sample contained Ra-226 at 38.46 pCi/L and Ra-228 at 105.43 pCi/L. The distribution of the individual isotopes are presented in **Table 4-2**. Forty-two (42) Geoprobe® groundwater samples contained total radium concentrations in excess of the Federal/State MCL of 5 pCi/L. **Figure 4-1** depicts the spatial distribution of total radium concentrations in Geoprobe® groundwater samples.

As a result of sediments or colloids being entrained in groundwater samples, thorium results may be biased high. This is supported by the results of a comparison between filtered and unfiltered Geoprobe® samples collected during Phase II activities. In that evaluation, elevated total radium activity was detected in eight of 10 unfiltered samples. The Phase II sampling results and data evaluation are discussed in Section 4.4.

Total Uranium

The reported uranium isotopes are presented individually and summed for comparison to the Federal/State MCLs, which are based on total uranium (see **Table 4-3**). The total uranium MCL is 30 µg/L. The Federal Register, 10 CFR 20 identifies that if the isotopic distribution of the uranium isotopes is representative of natural uranium (U-Nat.) then the activity:mass ratio of 0.677 picocuries per microgram (pCi/µg) is appropriate to use to convert from activity to mass concentration. U-Nat assumes that the activity ratio's of U-238 to U-234 is approximately 1:1. The conversion factor of 0.677 pCi/µg is derived by multiplying the isotopes specific activity by its natural abundance in the Earth's Crust. As an example U-238 represents approximately 99.275% of the naturally occurring uranium. A review of 131 groundwater samples analyzed from the Phase II groundwater program was analyzed for U-234 and U-238. The ratio of U-234 to U238 was 1.7:1.0. As such, the specific activity of the groundwater samples are not representative of U-Nat. Therefore, when determining the mass of a specific isotope, the reported activity in pCi/L was divided by the isotopes specific activity in pCi/µg, resulting in units of µg/L. The specific activities of the isotopes are as follows: 0.334 pCi/µg - U-238, 2.16 pCi/µg - U-235, and 6366 pCi/µg - U-234. The mass (µg/L) of each of the individual uranium isotopes are presented in **Table 4-3**. Similarly, the mass of each of the isotopes were summed for comparison to the Federal/State MCL of 30 µg/L. Data validation qualifiers having either a "U" (non-detect) or "UJ" (estimated non-detect) was conservatively summed for a total uranium concentration, unless the isotope was reported at a concentration below zero. Concentrations reported below 0 pCi/L were assigned a concentration of 0 pCi/L towards the total.

Total uranium was detected in samples, with 15 of 88 samples having concentrations exceeding the MCL of 30 µg/L. The maximum concentration of 180.74 pCi/L (297.5 µg/L) was detected in the groundwater sample obtained from Geoprobe® boring 08a002, which is located at 23 West Howcroft Road, Maywood. The distribution of uranium isotopes in this sample are as follows: U-234 - 76.29 pCi/L, U-235 - 6.02 pCi/L and U-238 - 98.43 pCi/L.

As noted, most collected samples were highly turbid, and are probably biased high due to formation sediment and soil contamination. **Figure 4-1** depicts the concentration and spatial distribution of total uranium in Phase I Geoprobe® groundwater samples.

Total Thorium

Although a Federal/State MCL does not exist for individual thorium isotopes, the individual isotopes are alpha emitters, for which there is a gross alpha Federal/State MCL of 15 pCi/L. For discussion purposes, the total thorium results are compared to the gross alpha standard. It is noted that no definitive statement can be made as to whether there was an exceedance of the Gross Alpha MCL, since the three isotopes contribute towards the Gross Alpha MCL, and there are other alpha emitters in the various uranium and thorium decay chains.

Total thorium (see **Table 4-4**) was detected in 87 of 88 samples at concentrations ranging from 0.59 to 219.49 pCi/L. Fifteen samples had concentrations of total thorium in exceedance of 15 pCi/L. The maximum detected concentration was present in the groundwater sample obtained from Geoprobe® boring 08A002 (219.49 pCi/L), which was obtained from 23 West Howcroft Road, Maywood.

As discussed previously, most samples collected were highly turbid, and may be contaminated with formation sediment and soil. A comparison of Phase II unfiltered and filtered Geoprobe® samples found elevated total thorium concentrations in 9 of 10 unfiltered samples. This data are discussed further in Section 4.4. **Figure 4-2** depicts the concentration and spatial distribution for total thorium in Phase I Geoprobe® samples.

4.1.2 Phase I Geoprobe® Groundwater Results - TAL Metals and Lithium/Boron

A total of 84 Geoprobe® groundwater samples were analyzed for RCRA 8 metals and lithium/boron. As outlined in the GWRIWP (USACE 2000b), Geoprobe® groundwater samples were field filtered. Five percent (5%) of the Geoprobe® groundwater samples were submitted for unfiltered metals analyses for comparison. The RCRA 8 metals consist of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Five metals were detected at concentrations that exceed the applicable NJDEP/Federal criteria, and include arsenic, barium, chromium, lead and lithium.

For discussion purposes, the boron and lithium data was compared to the Region IX PRGs. The tap water PRG for boron and lithium are 7300 and 730 µg/L, respectively. **Table 4-5** presents a summary of the Phase I Geoprobe® sampling results, screened interval, result qualifier, and instrument detection limit (IDL) data. Metal exceedances are presented in **Tables 4-6** and **4-7**. The distribution of arsenic, barium, chromium, lead and lithium is shown on **Figure 4-3**. Similarly, refer to **Figure 2-4** for Geoprobe® transect locations. The following discussion focuses on filtered metals exceeding regulatory standards and/or criteria.

Arsenic

Arsenic was detected in 41 of 84 Geoprobe® groundwater samples with concentrations ranging from 3 to 4850 µg/L. The maximum concentration was detected at boring 12b015, which is located adjacent to the eastern boundary of Former Retention Pond A on the MISS, Property No. 12b. Twenty-six (26) groundwater samples exceeded the NJDEP Practical Quantitation Limit (PQL) of 8 µg/L. The NJ PQL is believed by NJDEP to be an attainable groundwater standard. The NJ GWQC for arsenic is set at 0.02 µg/L. This concentration is 400 times lower than the NJ PQL. In comparison, 25 samples exceeded the Federal/State MCL of 10 µg/L.

Barium

Barium was detected in 83 of 84 filtered Geoprobe® groundwater samples at concentrations ranging from 4.3 to 4040 µg/L. The maximum concentration was detected in Geoprobe® sample 09a007, which is located on the 149-151 Maywood Avenue property. Only sample 09a007 exceeded the Federal/State MCL of 2000 µg/L.

Chromium (Total)

Total chromium was detected in 56 of 84 filtered Geoprobe® groundwater samples, with concentrations ranging from 0.72 to 602 µg/L. The maximum groundwater concentration was detected in Geoprobe® boring 12b006, which is located in the eastern portion of the MISS. Two groundwater samples were present at a concentration exceeding the Federal/State MCL and NJDEP GWQC of 100 µg/L. Additionally, the sample obtained from Geoprobe® boring 12b001, which contained 114 µg/L exceeded the stated criteria. This boring was advanced adjacent to Former Retention Pond A on the MISS. Although, Geoprobe® groundwater samples were not analyzed specifically for hexavalent chromium, the more mobile of the species, pH and Eh conditions measured dictate that chromium would be present in the trivalent form. (Groundwater samples obtained from the Phase II sampling program verified this statement, in that 2 of 55 groundwater samples contained detectable concentrations of hexavalent chromium.)

Lead

Lead was detected in 12 of 84 filtered Geoprobe® groundwater samples, at concentrations ranging from 3.1 to 25.6 µg/L. The maximum concentration was present in the groundwater sample obtained from boring 09a009, which is located along Transect F, on the 149-151 Maywood Avenue property (Property No. 9a). Three samples contained dissolved lead at a concentration exceeding the NJDEP PQL of 10 µg/L. The additional exceedances were present in groundwater samples obtained from borings 12b019 (17.2 µg/L) and 12b016 (13.1 µg/L). These groundwater samples were advanced along Transect A, located in close proximity to Former Retention Pond A on the MISS.

Lithium

Lithium was detected in 75 of 84 filtered Geoprobe® groundwater samples, at concentrations ranging from 2.8 to 12,800 µg/L. The maximum detectable concentration was detected in Geoprobe® groundwater sample 12b017 advanced along Transect A on the MISS. Of the 75 detectable concentrations of lithium, 26 samples contained dissolved lithium at a concentration exceeding the Region IX PRG of 730 µg/L. Twenty of the 26 samples were obtained from the MISS and were advanced within close proximity to Former Retention Ponds A, B, and C on the MISS. Samples obtained from 18a003 (4,620 µg/L) and 18a004 (1,670 µg/L) were collected along Transect J located just north of the MISS on the NYSW property. These samples contained dissolved lithium at a concentration exceeding the Region IX PRG. Other groundwater samples containing dissolved lithium in exceedance of the PRG were present in groundwater samples obtained from borings 02a002, 04a001, 05c001, and 06C002.

4.1.3 Phase I Geoprobe® Groundwater Results - REEs

Eighty-four (84) filtered Geoprobe® groundwater samples were analyzed for REEs, which include cerium, dysprosium, lanthanum, neodymium, and yttrium. As outlined in the GWRIWP, the Geoprobe® groundwater samples were filtered in the field. As noted, there is no Federal/State standard for the REEs, with the exception of dysprosium, for which there is a Region IX PRG of 7300 µg/L. Accordingly, only the minimum and maximum detected concentrations will be presented for the four other REEs, and dysprosium will be compared to the Region IX PRG. REE sampling results are presented in **Table 4-8**. **Figure 4-4** depicts the spatial distribution and concentration of REEs in Phase I Geoprobe® groundwater samples. Individual REE sampling results are described in the following sections.

Cerium

Cerium was detected in 2 of 84 filtered Geoprobe® groundwater samples at concentrations of 56.3 and 79.6 µg/L. The maximum detected concentration was present in the sample obtained from Geoprobe® boring 12b011, which was advanced within Former Retention Pond C, located on the MISS. The other detectable cerium concentration was detected in the groundwater sample obtained from Geoprobe® boring 12b018, also advanced on the MISS.

Dysprosium

Dysprosium was detected in 16 of 84 filtered Geoprobe® groundwater samples at concentrations ranging from 3.1 to 12.9 µg/L. The maximum detected concentration was present in the sample obtained from Geoprobe® boring 09a004, which is located in close proximity to Former Retention Pond F located on the 149-151 Maywood Avenue property and were below the Region IX PRG of 7300 µg/L. All groundwater samples with detectable dysprosium concentrations were obtained from borings located on the 149-151 Maywood Avenue property, Stepan Company property, or the MISS.

Lanthanum

Lanthanum was detected in 2 of 84 filtered Geoprobe® groundwater samples at concentrations of 49.5 and 85.2 µg/L. The maximum concentration was detected in Geoprobe® boring 12b017, which is located in proximity to Former Retention Pond A on the MISS. The other detectable lanthanum concentration was detected in boring 05a001, which is located on the 99 Essex Street property (Property No. 5a), Maywood.

Neodymium

Neodymium was detected in 28 of 84 filtered Geoprobe® groundwater samples at concentrations ranging from 13.5 to 53.9 µg/L. The maximum detected concentration was present in the groundwater sample obtained from Geoprobe® boring 12b017, which is located in proximity to Former Retention Pond A on the MISS.

Yttrium

Yttrium was detected in 13 of 84 filtered Geoprobe® groundwater samples at concentrations ranging from 1.9 to 5.5 µg/L. The maximum detected concentration was present in the groundwater sample obtained from Geoprobe® boring 12b009, which is located in proximity to Former Retention Ponds B and C on the MISS.

4.1.4 Phase I Geoprobe® Groundwater Results - TCL VOCs

Twenty-nine (29) Geoprobe® groundwater samples were collected from 21 borings advanced along Transects A, B, C, E, and J (see **Figure 2-4**). TCL VOC analyses were performed during Phase I Geoprobe® activities. The distribution of samples by transect is summarized as follows:

Distribution of Samples by Transect

Transect	No. of Borings	No. of Samples
A	5	8
B	3	3
C	3	4
E	6	9
J	4	5

As presented in **Table 4-9**, 10 VOCs were detected in the 29 Geoprobe® groundwater samples. The detected VOCs included both aromatic and chlorinated VOCs. Aromatic VOCs included benzene, toluene, and xylene. Chlorinated VOCs included 1,1,1-trichloroethane (1,1,1-TCA), 1,1-DCE, 1,2-DCE, methylene chloride, PCE, and TCE. Additionally, carbon disulfide was detected.

VOC exceedances include 1,1-DCE, 1,2-DCE, methylene chloride, PCE, TCE, and benzene. VOC sampling results and exceedances are presented in **Table 4-10**. The distribution of aromatic (BTEX) and chlorinated VOC concentrations are presented on **Figures 4-5a** and **4-5b**, respectively. Methylene chloride was detected in trip blanks, and may be attributed to laboratory contamination. However, the data was validated in accordance with procedures outlined in the CDQMP, as such, this VOC will be discussed. The following subsections describe the VOC sampling results.

Benzene

Benzene was detected in 4 of 29 Geoprobe® groundwater samples at concentrations ranging from 4 to 71 µg/L. All detected concentrations exceeded the NJDEP PQL and State MCL of 1 µg/L. The maximum concentration was detected in the groundwater sample obtained from boring 12b016, which is located east of Former Retention Pond A on the MISS.

1,1-Dichloroethene (1,1-DCE)

1,1-DCE was detected in 1 of 29 Geoprobe® groundwater samples at a concentration equal to the State MCL/NJDEP GWQC of 2 µg/L. The groundwater sample was obtained from boring 14a002, located along Transect B in Rochelle Park.

1,2-Dichloroethene (1,2-DCE)

1,2-DCE was detected in 2 of 29 Geoprobe® groundwater samples at 6 and 28 µg/L. The maximum detected concentration exceeded the NJDEP GWQC of 10 µg/L, which is for cis-1,2-DCE. The exceedance was detected in boring 14a002, which is located along Transect B in Rochelle Park.

Methylene Chloride

Methylene chloride was detected in 1 of 29 Geoprobe® groundwater samples at a concentration of 2 µg/L, which is the NJDEP GWQC standard of 2 µg/L. The groundwater sample was obtained from boring 12b010, which is located along Transect E (advanced in Former Retention Pond C) on the MISS.

Tetrachloroethene (PCE)

PCE was detected in 7 of 29 Geoprobe® groundwater samples at concentrations ranging from 3 to 55 µg/L. All detected concentrations exceeded the NJ PQL/State MCL of 1 µg/L. The maximum concentration was detected in boring 14a002, which is located along Transect B in Rochelle Park. One PCE exceedance was detected in boring 12b015, which is located near Former Retention Pond A on the MISS.

Trichloroethene (TCE)

TCE was detected in 2 of 29 groundwater samples. TCE was detected in Geoprobe® groundwater samples 14a001 (6 µg/L) and 14a002 (21 µg/L), both samples were advanced along Transect B in Rochelle Park. These samples contained TCE above the NJDEP GWQC/State MCL of 1 µg/L.

4.2 PHASE I OVERBURDEN GROUNDWATER RESULTS

Groundwater samples were collected from 14 overburden wells and analyzed for unfiltered Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238, RCRA 8 metals plus lithium/boron, and REEs. Overburden wells were sampled in accordance with the EPA Region II Low Flow Sampling protocol (EPA 1998a) and the site-specific CDQMP (USACE 2002c). Four of 14 wells reported sample turbidity measurements exceeding 50 NTUs, and include wells MISS-3A (86 NTU), MISS-5A (65 NTU), B38W12A (70 NTU), and B38W19S (87 NTU). These wells may have sample results biased high as a result of elevated turbidity. Results of the overburden groundwater radiological, metals, and REEs are discussed in the following sections.

4.2.1 Phase I Overburden Groundwater Results - Radiological

Groundwater samples were obtained from 14 overburden monitoring wells and analyzed for Ra-226, Ra-228, isotopic thorium and isotopic uranium. Individual radium, uranium and thorium isotope values, data validation qualifiers, measurement errors and MDAs are shown in **Tables 4-11**, **4-12**, and **4-13**, respectively. **Figure 4-6** depicts the concentration and spatial distribution of total radium and total uranium, and **Figure 4-7** depicts the concentration and spatial distribution of total thorium in Phase I overburden groundwater samples. Radiological results are addressed in the following sections. As discussed previously, a conservative approach was taken when summing isotopes for discussion and presentation in figures and tables. If an isotope was reported as a non-detect by the laboratory or validator, the isotope was still considered present at the reported concentration. However, if all isotopes were reported as non-detect (U) or estimated non-detect (UJ) by the laboratory or validator, it was not considered present when discussing the frequency of detection.

Total Radium

Fourteen (14) overburden monitoring well groundwater samples were analyzed for Ra-226 and Ra-228. **Table 4-11** presents the individual radium isotope value, data validation qualifier, measurement errors and MDAs. Total radium was detected in 13 of 14 samples with concentrations ranging from 0.25 to 3.4 pCi/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W19S, which is located on the MISS within Former Retention Pond C. This sample contained approximately 1.77 pCi/L Ra-226 and 1.63 pCi/L Ra-228. None of the results exceeded the Federal/State MCL of 5 pCi/L.

Total Uranium

Fourteen monitoring well groundwater samples were analyzed for U-234, U-235, and U-238 during Phase I GWRI activities. Individual uranium isotope values, data validation qualifier, measurement errors and MDAs are presented in **Table 4-12**. Total uranium was detected in 13 of 14 unfiltered overburden groundwater samples, with concentrations ranging from 0.73 to 82.23 pCi/L. Two groundwater samples contained total uranium above the Federal/State MCL of 30 µg/L.

It should be noted that at the time of the collection of the Phase I samples, there was not a promulgated MCL for total uranium. Rather, results were compared to the NJDEP Interim Standard of 30 pCi/L. The maximum concentration was present in the sample obtained from monitoring well MISS-5A, which is located adjacent to Former Retention Pond C on the MISS. This sample contained principally U-238 and U-234 and had a total uranium concentration of 126.23 µg/L (82.23 pCi/L). The other exceedance was present in the groundwater sample obtained from monitoring well B38W12A (31.08 pCi/L/46.68 µg/L), which is located on the 23 West Howcroft Road property (Property No. 8a). During sampling, both wells reported final turbidity levels above 50 NTUs (**Table 2-5a**).

Total Thorium

Fourteen (14) overburden monitoring well groundwater samples were analyzed for Th-228, Th-230, and Th-232. The results of the individual thorium isotopes are reported in **Table 4-13**, and include data validation qualifiers, measurement errors, and MDAs. For discussion purposes, the total thorium results were summed for comparison to the gross alpha standard of 15 pCi/L, since the thorium isotopes are alpha emitters. Total thorium was detected in each of the 14 groundwater samples with concentrations ranging from 0.49 to 7.91 pCi/L.

4.2.2 Phase I Overburden Groundwater Results - RCRA 8 Metals and Lithium/Boron Sampling Results

Fourteen (14) overburden monitoring well groundwater samples were analyzed for RCRA 8 metals and lithium/boron. Of the 10 metals analyzed, only arsenic exceeded the lower of the Federal/State MCL or the NJDEP GWQC. Lithium concentrations exceeded the Region IX Tap Water PRG of 730 µg/L. Other detected metals include barium, boron, cadmium, chromium, lead, and mercury. **Table 4-14** presents the metals detected in the Phase I overburden groundwater samples and screened interval, result qualifier, and IDL data. **Table 4-15** summarizes those metals that were present in the groundwater samples exceeding groundwater standards. **Figure 4-8** depicts the spatial distribution of arsenic and lithium in Phase I overburden monitoring wells. Arsenic and lithium exceedances are addressed in the following sections.

Arsenic

Arsenic was detected in six of 14 groundwater samples at concentrations varying from 4 to 4,770 µg/L. The maximum concentration was detected in the groundwater sample obtained from MISS-2A, which is located in proximity to Former Retention Pond A. Four of the six samples contained arsenic at a concentration exceeding the NJ PQL of 8 µg/L and two samples exceeded the Federal/State MCL of 10 µg/L.

Lithium

Lithium was detected in 14 groundwater samples at concentrations varying from 9.8 to 7810 µg/L. Four samples contained lithium at a concentration exceeding the Region IX PRG. The maximum detectable concentration was present in the groundwater sample obtained from monitoring well MISS-2A, which is located adjacent to Former Retention Pond A on the MISS. Additionally, groundwater samples obtained from monitoring wells B38W19S, MISS-6A, and B38W15S contained concentrations of lithium in exceedance of the Region IX PRG of 730 µg/L.

4.2.3 Phase I Overburden Groundwater Results - REEs

Fourteen overburden wells were analyzed for REEs. As noted, there is no Federal/State standard for REEs; however, there is a Region IX PRG for dysprosium. As such, dysprosium results will be compared to the Region IX PRG and the other REEs will be discussed with respect to the minimum and maximum detected concentrations. REE sampling results are presented in **Table 4-16**, with the distribution of REEs shown on **Figure 4-9**. REE compounds were detected in groundwater samples obtained from 6 of 14 wells sampled. Cerium and lanthanum were not detected in the analyzed overburden groundwater samples. Detected REEs are discussed in the following section.

Dysprosium

Dysprosium was detected in 2 of 14 groundwater samples, with concentrations of 8.1 and 11.9 µg/L. The maximum concentration was detected in a groundwater sample obtained from overburden well MISS-4A, which is located on the Stepan Company property. This concentration was below the Region IX PRG of 7300 µg/L.

Neodymium

Neodymium was detected in 4 of 14 groundwater samples with concentrations ranging from 14.9 to 40.5 µg/L. The maximum concentration was detected in a groundwater sample obtained from overburden well B38W12A, which is located on the 23 West Howcroft Road property (Property No. 8a).

Yttrium

Yttrium was detected in 3 of 14 groundwater samples with concentrations ranging from 2 to 11.4 µg/L. The maximum concentration was detected in a groundwater sample obtained from well MISS-4A, which is located on the Stepan Company property (Property No. 10a).

4.3 PHASE I BEDROCK GROUNDWATER RESULTS

Unfiltered groundwater samples were collected from 20 bedrock monitoring wells and analyzed for Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238, RCRA 8 metals plus lithium/boron, and REEs. Bedrock wells were sampled in accordance with the EPA Region II Low Flow Sampling protocol (EPA 1998a) and the site-specific CDQMP (USACE 2002c). Two of 20 samples collected on the MISS had turbidity measurements exceeding 50 NTU, including well B38W18D (160 NTU) and MISS-1B (315 NTU). Sampling results at these wells may be biased high as a result of elevated turbidity (**Table 2-5b**). Results of the Phase I bedrock groundwater radiological, metals, and REEs are discussed in the following sections.

4.3.1 Phase I Bedrock Groundwater Results - Radiological

Twenty bedrock groundwater samples were analyzed for Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, and U-238. Radiological samples were not field filtered. Radium, uranium and thorium isotope values, data validation qualifiers, measurement errors, and MDAs are presented in **Tables 4-17**, **4-18**, and **4-19**, respectively. **Figure 4-10** depicts the concentration and spatial distribution of total radium, and total uranium in Phase I bedrock groundwater samples. **Figure 4-11** depicts the concentration and spatial distribution of total thorium in Phase I bedrock groundwater samples. Radium, uranium, and thorium sampling results is addressed in the following sections.

Total Radium

As part of Phase I GWRI activities, 20 bedrock monitoring well groundwater samples were analyzed for Ra-226 and Ra-228. As presented in **Table 4-17**, the laboratory provided individual radium isotope results, which were summed for comparison to Federal/State MCLs. Total radium was detected in 19 of 20 bedrock wells, with concentrations ranging from 0.18 to 38.38 pCi/L. The maximum concentration was detected in the sample obtained from monitoring well B38W18D, which is located downgradient of the former thorium processing/cerium manufacturing buildings on the MISS. This was the only sample that contained total radium greater than the Federal/State MCL of 5 pCi/L. The sample contained 15.57 pCi/L Ra-226 and 22.81 pCi/L Ra-228. During sampling, high turbidity values (160 NTUs) were measured at well B38W18D (**Table 2-5b**), and may account for the elevated total radium values at that location. **Figure 4-10** depicts the spatial distribution and concentration of total radium in Phase I bedrock wells.

Total Uranium

Twenty (20) bedrock monitoring well groundwater samples were analyzed for U-234, U-235, and U-238 during Phase I GWRI activities. Individual uranium isotope concentrations are reported in **Table 4-18**. The results of the isotopes were summed for comparison to the Federal/State MCLs of 30 µg/L. However, as previously mentioned at the time these samples were obtained, a promulgated MCL for total uranium was not in affect. Total uranium concentrations were compared to the NJDEP interim standard of 30 pCi/L. The individual uranium isotope value, data validation qualifier, measurement errors, and MDAs are presented in **Table 4-18**.

Total uranium was detected in 18 of 20 bedrock groundwater samples with concentrations ranging from 0.27 to 9.17 pCi/L (8.54 µg/L). The maximum concentration was detected in well B38W15D, which is located on Grove Street downgradient of the Former Retention Pond E. None of the sample concentrations exceeded the current Federal/State MCL of 30 µg/L. **Figure 4-10** depicts the spatial distribution and concentration of total uranium in Phase I bedrock wells.

Total Thorium

Twenty bedrock monitoring well groundwater samples were analyzed for Th-228, Th-230, and Th-232. Individual thorium isotope concentrations are presented in **Table 4-19**. Although a Federal/State MCL does not exist for individual thorium isotopes, the thorium isotopes were summed for comparison to the gross alpha Federal/State MCL of 15 pCi/L. Total thorium was detected in 18 of 20 bedrock groundwater samples, with concentrations ranging from 0.81 to 61.18 pCi/L. The maximum concentration was present in the sample obtained from well B38W18D, which is located downgradient of the former thorium processing/cerium manufacturing buildings on the MISS. This was the only sample that had total thorium above the surrogate Gross Alpha MCL of 15 pCi/L, and contained 29.02-pCi/L Th-232, 5.08 pCi/L Th-230, and 27.08 pCi/L Th-228. As previously discussed, high turbidity levels (160 NTU) were measured during sampling at B38W18D (**Table 2-5b**), and may account for the elevated total thorium results. **Figure 4-11** depicts the distribution and concentration of total thorium in Phase I bedrock wells.

4.3.2 Phase I Bedrock Groundwater Results - RCRA 8 Metals and Lithium/Boron

Twenty (20) bedrock monitoring well groundwater samples were analyzed for RCRA 8 metals and lithium/boron. Sampling results, screened intervals, result qualifier, IDL, and date of collection are presented in **Table 4-20**. Barium, cadmium, and silver were detected but were present at a concentration lower than the most restrictive groundwater criteria. Similarly, the RCRA 8 metal selenium was not detected. Arsenic, chromium, lithium, and lead exceeded groundwater criteria, and are presented in **Table 4-21** and depicted spatially on **Figure 4-12**. Metal exceedances are addressed further below.

Arsenic

Arsenic was detected in 8 of 20 bedrock groundwater samples, with concentrations ranging from 3.2 to 64.8 µg/L. The maximum concentration of arsenic was detected in monitoring well MISS-7B, which is located adjacent to Former Retention Pond C on the MISS. Six samples contained arsenic at a concentration exceeding the NJDEP PQL of 8 µg/L.

Chromium

Chromium (total) was detected in 16 of 20 bedrock groundwater samples at a concentration ranging from 1.4 to 163 µg/L. The maximum concentration of chromium was present in a groundwater sample obtained from well B38W18D, which is located near the former thorium processing/cerium manufacturing building on the MISS. This was the only sample that contained chromium at a concentration exceeding the Federal/State MCL and NJDEP GWQC of 100 µg/L.

Lead

Lead was detected in 4 of 20 bedrock groundwater samples at concentrations ranging from 2.6 to 21.3 µg/L. Two samples contained lead at a concentration exceeding the NJDEP PQL. The maximum concentration of lead was present in a groundwater sample obtained from well B38W14D, which is located downgradient of the remediated Former Retention Pond E. Although Former Retention Ponds D and E were remediated for radiological constituents residual levels of chemical constituents above

screening levels may exist, and may be contributing to groundwater contamination. Additionally, the groundwater sample obtained from well B38W18D (15.8 µg/L) contained lead at a concentration exceeding the NJ PQL of 10 µg/L.

Lithium

Lithium was detected in 19 of 20 bedrock groundwater samples, at concentrations ranging from 8.8 to 14,900 µg/L. The maximum concentration of lithium was present in a groundwater sample obtained from well MISS-2B, which is located adjacent to Former Retention Pond A on the MISS. Additionally, nine other groundwater samples contained lithium at a concentration exceeding the Region IX Tap Water PRG of 730 µg/L.

4.3.3 Phase I Bedrock Groundwater Results - REEs

Twenty (20) bedrock monitoring well groundwater samples were analyzed for REEs. As noted, there are no Federal/State MCLs or NJDEP GWQC for the REEs; however, dysprosium results were compared to the Region IX dysprosium PRG of 7300 µg/L. **Table 4-22** summarizes the detectable REEs in bedrock groundwater samples. **Figure 4-13** presents the spatial distribution of REEs in bedrock groundwater. The maximum concentration of the five individual REEs was present in monitoring well B38W18D. The REEs detected and their associated concentrations are addressed in the following section.

Cerium

Cerium was detected in 2 of 20 bedrock groundwater samples at concentrations of 35.1 and 702 µg/L. The maximum concentration of cerium was present in the groundwater sample obtained from well B38W18D, which is located downgradient of the former thorium and cerium manufacturing building on the MISS.

Dysprosium

Dysprosium was detected in 7 of 20 bedrock well samples, with concentrations ranging from 4.4 to 21.2 µg/L. The maximum concentration of dysprosium was present in a groundwater sample obtained from well B38W18D.

Lanthanum

Lanthanum was detected in a groundwater sample obtained from well B38W18D, at a concentration of 483 µg/L.

Neodymium

Neodymium was detected in 8 of 20 groundwater samples with concentrations ranging from 15 to 309 µg/L. The maximum concentration of lanthanum was present in a groundwater sample obtained from well B38W18D.

Yttrium

Yttrium was detected in 5 of 20 bedrock groundwater samples, with concentrations ranging from 2.7 to 66 µg/L. The maximum concentration of lanthanum was present in a groundwater sample obtained from well B38W18D.

4.4 PHASE II GEOPROBE® GROUNDWATER RESULTS

Thirteen (13) Geoprobe® groundwater samples were collected as part of the Phase II GWRI activities and analyzed for radiological and chemical parameters. The locations of the 13 Geoprobe® borings are presented on **Figure 4-14**. A single groundwater sample was obtained from each of the 13 Geoprobe® borings. Both filtered and unfiltered radiological samples were collected to determine the relative concentration of dissolved and particulate species. Chemical analysis included filtered TAL metals, lithium, boron, and REEs. TCL VOC analysis was added to 5 samples obtained from the former Ballod property, and 5 samples obtained from the MISS. The following table summarizes the number of Geoprobe® samples by property submitted for radiological/chemical analysis.

Summary Geoprobe® Samples Submitted for Radiological/Chemical Analysis

Property	Number of Geoprobe® Samples and Parameters			
	Radiological	VOCs	TAL Metals, Li/B	REE
02B - 80 Hancock Street, Lodi	2	---	2	2
07A - 111 Essex Street	2	---	---	---
12B- MISS	2	5	2	2
Ballod	4	5	4	4

Analytical results are presented in tabular rather than graphical format due to the few samples collected as part of the Phase II Geoprobe® program. However, the data will be presented as part of the VOC discussion in Section 5.0.

4.4.1 Phase II Geoprobe® Groundwater Results - Radiological

Thirteen (13) Geoprobe® groundwater samples were collected as part of the Phase II GWRI activities and analyzed for radiological parameters. Filtered and unfiltered radiological samples were collected to determine the relative concentration of dissolved and particulate species. Individual radium, uranium, and thorium isotope values, data validation qualifiers, measurement errors, and MDAs are shown in **Tables 4-23**, **4-24** and **4-25**, respectively. **Figure 4-14** depicts the locations of the Phase II Geoprobe® borings. Analytical results for radium, uranium, and thorium sampling is addressed in the following sections.

Total Radium

Ten (10) filtered and 10 unfiltered Geoprobe® groundwater samples were analyzed for Ra-226 and Ra-228. **Table 4-23** presents the filtered and unfiltered total radium results. The results of the individual isotopes were summed for comparison to the Federal/State MCL of 5 pCi/L, which is based on total radium. A "U" (non-detect) or "UJ" (estimated non-detect) data validation qualifier was treated as contributing its reported concentration to the total radium concentration.

Total radium was detected in 9 of 10 unfiltered groundwater samples. The radium results obtained from boring 02b002, 80 Hancock Street, Lodi, were rejected. Unfiltered concentrations ranged from 0.85 to 11.88 pCi/L, with two samples exceeding the 5 pCi/L groundwater standard. The maximum total radium concentration (11.88 pCi/L) was detected in boring 02b001, which is located at 80 Hancock Street, Lodi (Property No. 2b). The second total radium exceedance was present in the sample obtained from boring 07a002 (7.4 pCi/L), which is located at 111 Essex Street, Maywood (Property No. 7a).

Total radium was detected in 10 filtered Geoprobe® groundwater samples, with concentrations ranging from 0.87 to 5.46 pCi/L. The maximum filtered total radium concentration was detected at boring 07a002, which exceeded the groundwater standard of 5.0 pCi/L. **Figure 4-14** depicts the locations of the Phase II Geoprobe® borings.

A comparison of the unfiltered and filtered total radium data show higher measured activity in 8 of 10 unfiltered samples. The average unfiltered total radium measurement was 4.65 pCi/L, whereas the average filtered total radium data was 2.16 pCi/L. These data appears to indicate that a substantial fraction of total radium activity is associated with suspended solids in the unfiltered water sample. A normalized absolute difference (NAD) calculation was performed to determine if the differences in activities were attributable to measurement error. The NAD calculated for each of the isotopes is presented in **Table 4-23**. Four (4) of 10 sample pairs had a NAD value greater than 1.69, an agreed upon USACE threshold for determining if differences are associated with measurement error. The NAD analysis indicates that 4 of 10 unfiltered/filtered sample pairs show increased total radium concentrations that is not statistically attributed to measurement error. The elevated activity in these four samples may be caused by the high sediment concentrations in the unfiltered samples.

Total Uranium

During Phase II GWRI activities, 10 Geoprobe® groundwater samples were analyzed for U-234, U-235, and U-238. **Table 4-24** presents the filtered/unfiltered results for total uranium. The results of the isotopes were summed for comparison to Federal /State MCL, which is based on a total uranium concentration of 30 µg/L. A "U" (non-detect) or "UJ" (estimated non-detect) data validation qualifier was treated as contributing its reported concentration towards the total uranium concentration unless the isotope was reported with a negative concentration.

Total uranium was detected in each of the 10 unfiltered Geoprobe® groundwater samples submitted for analysis. Total uranium concentrations ranged from 0.69 to 10.43 pCi/L (12.47 µg/L). The maximum detected total uranium concentration was present in the sample obtained from boring 07a003, located on the 111 Essex Street property, Maywood, Property No. 7a. All total uranium concentrations were below the Federal/State MCL of 30 µg/L.

Total uranium was present in 8 of 10 filtered groundwater samples, with concentrations ranging from 0.05 pCi/L to 12.53 pCi/L (14.05 µg/L). The maximum total filtered uranium concentration was detected in the groundwater sample obtained from boring 07a003, which is located on Property No. 7a. All dissolved total uranium concentrations were below the Federal/State MCL of 30 µg/L. **Figure 4-14** depicts the locations of the Phase II Geoprobe® borings.

A comparison of the unfiltered and filtered total uranium data shows higher measured activity at 5 of the 10 unfiltered groundwater samples. The average unfiltered total uranium measurement was 3.23 pCi/L, whereas the filtered data measurement was 3.05 pCi/L. These data does not show a significant difference in detected total uranium activity between unfiltered and filtered groundwater samples. Additionally, the NAD was evaluated, and the data are included in **Table 4-24**. Based on the NAD calculation, it appears that one (from boring 13a004) unfiltered/filtered sample pair shows increased total uranium activity that is not statistically attributed to measurement error. The elevated activity in this sample may be caused by the high sediment concentrations in the unfiltered samples.

Total Thorium

Ten (10) Geoprobe® groundwater samples were analyzed for Th-228, Th-230, and Th-232. **Table 4-25** presents the filtered/unfiltered results for individual isotopes and for total thorium. Although, a

Federal/State MCL does not exist for individual thorium isotopes, total thorium results (sum of the individual isotopes) are compared to the gross alpha Federal /State MCL of 15 pCi/L since the thorium isotopes are alpha emitters. A "U" (non-detect) or "UJ" (estimated non-detect) data validation qualifier was treated as contributing its reported concentration towards the total thorium concentration.

Total thorium was present in 9 of 10 unfiltered groundwater samples, and ranged in concentration from 0.50 to 3.90 pCi/L. The maximum concentration was present in boring 02b001, which was collected from 80 Hancock Street, Lodi. All unfiltered total thorium concentrations were below the Gross Alpha Federal/State MCL of 15 pCi/L.

Total thorium was present in 8 of 10 filtered groundwater samples with concentrations ranging from 0.40 to 1.96 pCi/L. The maximum detected concentration was present in boring 13a004, which was advanced on the 96 Park Way property, Rochelle Park. All filtered total thorium concentrations were below the gross alpha Federal/State MCL of 15 pCi/L. **Figure 4-14** depicts the locations of the Phase II Geoprobe® borings.

A comparison of the unfiltered and filtered total thorium data shows higher measured activity at 9 of the 10 unfiltered groundwater samples. The average unfiltered total thorium measurement was 2.11 pCi/L, whereas the filtered data measurement was 0.91 pCi/L. The NAD calculated for each of the isotope sample pairs is presented in **Table 4-25**. These data indicates that the increased activity detected in three unfiltered/filtered sample pairs is not attributed to measurement error. The elevated activity in these three samples may be caused by the high sediment concentrations in the unfiltered samples.

4.4.2 Phase II Geoprobe® Groundwater Results - TAL Metals and Lithium/Boron

Eight filtered Geoprobe® groundwater samples were analyzed for TAL metals and lithium/boron. Arsenic, lithium, and thallium exceedances were detected in Geoprobe® samples. Boron and lithium data was compared to the Region IX Tap Water PRG of 7300 and 730 µg/L, respectively. **Table 4-26a** presents a summary of the metals detected in Phase II Geoprobe® borings, and **Table 4-26b** summarizes those metals that exceeded groundwater standards. **Figure 4-14** shows the locations of the Phase II Geoprobe® borings. This section focuses on a discussion of the metals exceeding regulatory standards and/or applicable criteria (i.e., lithium).

Arsenic

Arsenic was detected in three of eight Geoprobe® groundwater samples, with concentrations ranging from 5.7 to 81.8 µg/L. Two groundwater samples contained arsenic at a concentration exceeding the NJ PQL of 8 µg/L, and one sample exceeded the Federal/State MCL of 10 µg/L. The maximum concentration of arsenic was detected in the groundwater sample obtained from boring 02b002, which is located on the 80 Hancock Street property, Lodi (Property No. 2b).

Lithium

Lithium was detected in eight Geoprobe® groundwater samples with concentrations ranging from 6.8 to 1540 µg/L. Three groundwater samples contained lithium at concentrations exceeding the Region IX Tap Water PRG of 730 µg/L. The maximum concentration of lithium was detected at boring 13a002, which is located along Transect I on the 96 Park Way property, Rochelle Park (see **Figure 2-4**). Other lithium exceedances were detected in groundwater samples obtained from borings 12b020 and 12b026, which are located near Former Retention Pond B on the MISS.

Thallium

Thallium was detected in one of eight Geoprobe® groundwater samples, at a concentration of 4.5 µg/L. Thallium was detected in a groundwater sample obtained from boring 13a003, which is located along Transect H on the 96 Park Way property, Rochelle Park. This sample contained thallium in exceedance of the Federal/State MCL of 2 µg/L.

4.4.3 Phase II Geoprobe® Groundwater Results - REEs

Eight Geoprobe® groundwater samples were analyzed for REEs. **Table 4-27** presents the location and concentrations of REEs in groundwater. Four of five REEs were detected in the Phase II Geoprobe® groundwater samples. Cerium was not detected. **Figure 4-14** depicts the locations of the Phase II Geoprobe® borings. As noted, Federal/State MCLs or NJ GWQC do not exist for the REEs; however a Region IX PRG of 7300 µg/L does exist for dysprosium and will be used for comparison purposes.

Dysprosium

Dysprosium was present in three of eight Geoprobe® groundwater samples at concentrations ranging from 4.7 µg/L to 7.8 µg/L. The maximum concentration was detected at boring 13a002, which is located on the 96 Park Way property, Rochelle Park. No samples contained dysprosium above the Region IX PRG of 7300 µg/L.

Lanthanum

Lanthanum was detected in one of eight Geoprobe® groundwater samples obtained from boring 12b026 (47.4 µg/L) located near Former Retention Pond A on the MISS.

Neodymium

Neodymium was detected in two of eight groundwater samples obtained from Geoprobe® borings 12b020 (19.6 µg/L) and 12b026 (23.7 µg/L) located adjacent Former Retention Pond B.

Yttrium

Yttrium was detected in one of 8 groundwater samples obtained from Geoprobe® boring 02b001 (4.5 µg/L) located at the 80 Hancock Street property, Lodi.

4.4.4 Phase II Geoprobe® Groundwater Results - TCL VOCs

Fifteen VOC compounds were detected in Geoprobe® groundwater samples collected during Phase II activities. Detected non-chlorinated VOCs include benzene, toluene, ethylbenzene, xylene, 2-butanone, acetone, and carbon disulfide. Detected chlorinated VOCs include 1,1,1-TCA, 1,1-DCA, 1,1-DCE, 1,2-DCE, methylene chloride, chloroform, PCE, and TCE.

VOC exceedances of Phase II Geoprobe® groundwater samples include benzene, 1,2-DCE (total), methylene chloride, PCE and TCE. **Table 4-28** presents the VOC sampling results, with exceedances shown in **Table 4-29**. **Figure 4-14** shows the locations of the Phase II Geoprobe® borings. VOC exceedances are addressed in the following section.

Benzene

Benzene was detected in 3 of 10 Geoprobe® groundwater samples at concentrations ranging from 0.7 to 9 µg/L. Of these samples, 2 were detected at concentrations above the NJ PQL and State MCL of 1 µg/L. The maximum concentration was detected in boring 12b020. A second exceedance was detected in the sample obtained from boring 12b028. Both Geoprobe® borings are located on the northern portion of the MISS in proximity to Westerly Brook and Former Retention Pond A.

1,2-Dichloroethene (Total) (1,2-DCE)

1,2-DCE (total) was detected in 7 of 10 groundwater samples at concentrations ranging from 0.5 to 140 µg/L. The maximum concentration was detected in Geoprobe® boring 13a003, which is located on the 96 Park Way property, Rochelle Park. Four samples contained 1,2-DCE in exceedance of the NJDEP GWQC of 10 µg/L for cis 1,2-DCE.

Methylene Chloride

Methylene chloride was detected in 4 of 10 Geoprobe® groundwater samples at concentrations ranging from 1 to 3 µg/L. The maximum concentration of methylene chloride was detected in Geoprobe® boring 12b026, located adjacent to Former Retention Pond B on the MISS. Three groundwater samples contained methylene chloride at a concentration exceeding the NJDEP GWQC of 2 µg/L. Although methylene chloride may be laboratory derived, the data was validated in accordance with procedures outlined in the CDQMP and determined to be valid.

Tetrachloroethene (PCE)

PCE was detected in 3 of 10 Geoprobe® groundwater samples at concentrations ranging from 160 to 360 µg/L. All PCE concentrations exceeded the NJDEP PQL/State MCL of 1 µg/L. The maximum concentration was detected in a groundwater sample obtained from Geoprobe® boring 13a003, which is located on the 96 Park Way property, Rochelle Park. The other PCE sample exceedances were also detected in groundwater samples obtained from the 96 Park Way property, Rochelle Park.

Trichloroethene (TCE)

TCE was detected in 4 of 10 Geoprobe® groundwater samples with concentrations ranging from 0.1 to 160 µg/L. Three of the four samples contained TCE at a concentration exceeding the NJDEP GWQC/State MCL of 1 µg/L. The maximum detected concentration was present in the sample obtained from Geoprobe® boring 13a003. Groundwater samples obtained from boring 13a001 contained TCE at 35 and 38 µg/L, respectively.

4.5 PHASE II OVERBURDEN GROUNDWATER RESULTS

Overburden groundwater samples were obtained from 55 DOE/USACE monitoring wells, Stepan monitoring wells and newly installed monitoring wells. Samples were analyzed for Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238, TAL metals plus lithium/boron, and REEs. As presented in the GWRIWP, monitoring wells located south of Essex Street (MW-14S through MW-18S) were not analyzed for VOCs. Additional samples were collected at five wells during the Phase II program. Monitoring well PW-1S was resampled for TCL VOCs during the step and constant rate pump tests. Monitoring wells MISS-3A, MISS-7A, and OVPZ-17 were resampled for radiological, TAL metals and TCL VOCs; and MISS-3A was also resampled for REEs. Although not specified in the GWRIWP, gross alpha and gross beta were added to the Phase II sampling program. These parameters were obtained from

43 overburden monitoring wells. The following table summarizes the number of samples analyzed for a specific chemical/radiological parameter.

Parameters Obtained from Overburden Monitoring Wells

Samples Obtained				
Full Radiological[1]	**Gross Alpha / Gross Beta**	**VOCs**	**TAL Metals, Li/B**	**REE**
58	45	55	58	56

Note:
(1) Full radiological consisted of Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238

As presented in **Table 2-5a**, five samples recorded field turbidity measurements exceeding 50 NTUs. The sampling results from these wells may be biased high as a result of elevated turbidity. Samples with elevated turbidity include B38W01S (424 NTU), B38W12A (209.8 NTU), B38W15S (1315 NTU), MISS-5A (74.5 NTU) and MW-20S (397 NTU). All samples (except MW-20S) were obtained at the onset of the Phase II sampling program. The Phase II sampling procedures were subsequently revised to include lower purge and sampling rates, and set a maximum 50 NTU value for unfiltered samples. The 50 NTU level could not be achieved at MW-20S, and an additional filtered sample was obtained and analyzed for radiological constituents.

4.5.1 Phase II Overburden Groundwater Results - Radiological

Fifty-eight (58) overburden groundwater samples were collected from 55 monitoring wells as part of the Phase II GWRI activities and analyzed for full radiological parameters, excluding gross alpha and gross beta parameters. Filtered radiological samples were also collected if well turbidity exceeded 50 NTU during purging. Individual radium, uranium and thorium isotope values, data validation qualifiers, measurement errors, and MDAs are presented in **Tables 4-30**, **4-31,** and **4-32**, respectively. Gross alpha and gross beta samples were collected from 43 overburden monitoring wells. Results for these parameters are presented in **Tables 4-33** and **4-34**, respectively. **Figure 4-15** depicts the concentration and spatial distribution of total radium and total uranium. The distribution of total thorium/gross alpha and gross beta activity in groundwater is presented on **Figures 4-16a** and **4-16b**, respectively. The results of radium, uranium, thorium/gross alpha, and gross beta sampling is addressed in the following sections.

Total Radium

Fifty-eight (58) overburden monitoring well groundwater samples were obtained from 55 monitoring wells and analyzed for Ra-226 and Ra-228. As presented in **Table 4-30**, total radium, the sum of Ra-226 and Ra-228, was detected in 53 of 58 samples with concentrations ranging from 0.37 to 17.5 pCi/L. Two samples exceeded the groundwater standard of 5 pCi/L. One sample, the maximum concentration was detected in well OBMW10 (17.5 pCi/L), located on the 149-151 Maywood Avenue property. A second exceedance (6.58 pCi/L) was present in the groundwater sample obtained from monitoring well MW-9S, which is located on the NYSW property, adjacent to Maywood Avenue. Neither of the samples had elevated turbidity measurements. In the case of sample OBMW10, the principal constituent was Ra-226 (11.78 pCi/L), whereas in the case of MW-9S, the principal constituent was Ra-228 (6.2 pCi/L).

Total Uranium

Fifty-eight (58) overburden monitoring well groundwater samples were analyzed for U-234, U-235 and U-238. The results of the individual isotopes were summed for comparison to the Federal /State MCL of 30 µg/L. Total uranium was detected in 48 of 58 samples, with concentrations ranging from 0.04 to

73.48 pCi/L (110.2 µg/L). Two (2) of the 58 samples were rejected as part of the data validation process. Two samples contained total uranium in exceedance of the Federal/State MCL of 30 µg/L. The maximum concentration was present in MISS-5A, which is located adjacent to Former Retention Pond C. U-238 and U-234 concentrations in that sample were 36.50 and 35.02 pCi/L, respectively. Elevated turbidity values (74.4 NTU) were measured during sampling at well MISS-5A, and may have biased the sampling results. The second exceedance was detected at Well 5 (30.02 pCi/L or 41.46 µg/L), which is located adjacent to NRC Burial Pit 1 on the Stepan Company property. Total uranium concentrations decreased at well B38W12A from a Phase I exceedance (46.68 µg/L) to Phase II (12.42 µg/L), although turbidity increased (70 to 209.8 NTU) in the Phase II sample (**Table 4-12**). **Table 4-31** presents the individual uranium isotope value, data validation qualifier, measurement errors and MDAs.

Total Thorium

Fifty-eight (58) overburden monitoring well groundwater samples were analyzed for Th-228, Th-230, and Th-232. As presented in **Table 4-32**, total thorium, was detected in 48 of 58 groundwater samples, with concentrations ranging from 0.36 to 5.19 pCi/L. The maximum total thorium concentration was present in the groundwater sample obtained from MISS-5A, which is located adjacent to Former Retention Pond C on the MISS. This sample contained 2.45 pCi/L of Th-230 and 2.38 pCi/L of Th-228. As previously discussed, elevated turbidity values were measured at well MISS-5A during sampling, and the sample may be biased. **Figure 4-16a** presents the concentration and spatial distribution for total thorium and gross alpha.

Gross Alpha

Forty-five (45) samples were collected from 43 overburden monitoring well groundwater samples and were analyzed for gross alpha parameters. Gross alpha was detected in 45 samples at concentrations ranging from 0.05 to 288.99 pCi/L. The gross alpha results, data validation qualifiers, measurement errors, and MDAs are presented in **Table 4-33**. The Federal/State MCL for gross alpha is 15 pCi/L, which excludes uranium and radon activity. Radon was not analyzed in groundwater samples, so its effect on the gross alpha value is unknown.

Gross alpha values were adjusted for total uranium activity, which is presented in **Table 4-33**. If total uranium values exceed the gross alpha value, the error reported for the Gross Alpha result was conservatively applied to the result in order to present a positive value. Those situations for which the error was applied are noted in the table. The only gross alpha exceedance (289.71 pCi/L) was detected at well OBMW10, which is located at 149-151 West Hunter Avenue, Maywood (Property No. 9a). A large measurement error was associated with this sample due to the small sample volume analyzed and high total dissolved solids present in the sample. **Figure 4-16a** depicts the concentration and spatial distribution for adjusted gross alpha. Adjusted gross alpha results exceeding MCLs are denoted on **Figure 4-16a** and bolded in **Table 4-33**.

Gross Beta

Adjusted Gross Beta activity was detected in 34 of the 45 samples with concentrations ranging from 0.03 to 32.88 pCi/L. One of the samples was rejected pursuant to data validation requirements. The Federal/NJDEP gross beta screening value is 50 pCi/L, and the risk based Federal/State MCL is 4 millirems per year (mrem/yr). The Federal/NJDEP screening value is a trigger to indicate possible exceedance of the risk-based standard. The Federal MCL does not consider gross beta associated with naturally occurring K-40 when developing the standard (40 CFR 141.66).

The gross beta activity was adjusted for the detected potassium in each sample. K-40 activity (pCi/L) was estimated by multiplying the potassium sample concentration (milligram per liter [mg/L]) by 0.73. As indicated in 40 CFR 141.66, K-40 is estimated by multiplying elemental potassium by 0.82. However, K-40 decays by beta emission (88.9%), K-capture (11%) and positron emission (0.1%). Therefore, a conservative estimate of gross beta attributable to potassium is to multiply the potassium results by 0.73 (0.82 x 88.9%). In those situations where the adjusted gross beta was reported at a concentration below the estimated K-40 concentration, the error associated with the reported gross beta concentration was added to the result in order to have a positively reported gross beta concentration. The maximum concentration was present in the groundwater sample obtained from monitoring well MW-21S, which is located on the 111 Essex Street property, Maywood. None of the adjusted gross beta results exceeded the screening criteria of 50 pCi/L. The unadjusted/adjusted gross beta results, potassium results, and gross beta attributable to K-40 is presented in **Table 4-34** and depicted spatially on **Figure 4-16b**. A review of the potassium data for the overburden aquifer indicated that based on 8 samples the average beta emission attributable to K-40 was 14.11 pCi/L within the MISS. Whereas, outside of the MISS, the average beta emission attributable to K-40 was 14.99 pCi/L.

4.5.2 Phase II Overburden Groundwater Results - TAL Metals and Lithium/Boron

Fifty-five (55) overburden monitoring wells were sampled and analyzed for TAL metals and lithium/boron. Arsenic, barium, cadmium, chromium, lead, lithium, and thallium were present in groundwater samples at concentrations exceeding the Federal/State MCL or NJDEP GWQS. Lithium data was compared to the Region IX Tap Water PRG of 730 µg/L. **Table 4-35a** presents a summary of the metals detected. **Table 4-35b** summarizes those metals that exceed groundwater standards. The distribution of arsenic, chromium, lead and lithium is shown on **Figure 4-17**, and barium, cadmium, and thallium are presented on **Figure 4-18**. This section focuses on a discussion of the metals exceeding regulatory standards and/or applicable criteria (i.e., lithium).

Arsenic

Arsenic was detected in 24 of 58 overburden groundwater samples, with concentrations ranging from 2.4 to 2600 µg/L. Fourteen (14) samples had concentrations that exceeded the NJDEP PQL of 8 µg/L and the Federal/State MCL of 10 µg/L. The maximum concentration of arsenic was present in the sample obtained from MISS-2A, which is located adjacent to Former Retention Pond A.

Barium

Barium was detected in 53 of 58 overburden groundwater samples, with concentrations ranging from 3.7 to 2310 µg/L. One sample contained barium at a concentration exceeding the MCL/NJDEP GWQC of 2000 µg/L. The maximum barium concentration was present in the groundwater sample obtained from well MW-13S, which is located on the 99 Essex Street property, Maywood.

Cadmium

Cadmium was detected in 14 of 58 overburden groundwater samples, with concentrations ranging from 0.3 to 16 µg/L. One sample contained cadmium at a concentration exceeding the NJDEP GWQC of 4 µg/L. The maximum concentration of cadmium was present in a groundwater sample obtained from monitoring well OBMW13 located on the 149-151 Maywood Avenue property.

Chromium (Total)

Chromium was detected in 29 of 58 overburden groundwater samples, with concentrations ranging from 0.76 to 200 µg/L. Two samples contained total chromium at a concentration exceeding the Federal/State MCL/NJDEP GWQC of 100 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W14S located west of Former Remediated Retention Ponds D and E. The other chromium exceedance was present in the groundwater sample obtained from monitoring well OBMW15 located on the Stepan Company property in proximity to NRC Burial Pit 2.

Chromium (Hexavalent)

Hexavalent chromium was detected in 1 of 55 overburden groundwater samples collected. Hexavalent chromium was detected in monitoring well B38W12A at 240 µg/L. This result was rejected since there was a large disparity between the total chromium result of 58.9 µg/L and the hexavalent chromium result of 240 µg/L. The sample was obtained from B38W12A, which is located on the 23 West Howcroft Road, Maywood property (Property 08a)In comparison, a groundwater sample obtained from this well collected as part of Phase I activities, March 2000 contained 5.7 µg/L total chromium. Analysis for hexavalent chromium was not performed in accordance with the GWRI Work Plan.

Lead

Lead was detected in 15 of 58 overburden groundwater samples, with concentrations ranging from 2.2 to 27.7 µg/L. One sample contained lead at a concentration that exceeded the NJDEP PQL of 10 µg/L. The maximum concentration of lead was present in the sample obtained from well MW-20S, which is located north of Former Retention Pond A on the NYSW property.

Lithium

Lithium was detected in 54 of 58 overburden groundwater samples, with concentrations ranging from 0.82 to 14,400 µg/L. Fifteen (15) samples contained lithium at concentrations exceeding the Region IX Tap Water PRG of 730 µg/L. The maximum concentration of lithium was present in the groundwater sample obtained from Well 8 located adjacent to NRC Burial Pit 2 on the Stepan Company property. Lithium concentrations decreased substantially at monitoring well MISS-6A from 2,170 µg/L (exceedance) in Phase I to 705 µg/L in Phase II.

Thallium

Thallium was detected in 1 of 58 groundwater samples at a concentration of 3.9 µg/L. This concentration was present in the groundwater sample obtained from monitoring well MW-3S, which is located north of Former Retention Pond A on the NYSW property. The detected thallium concentration exceeds the Federal/State MCL of 2 µg/L.

4.5.3 Phase II Overburden Groundwater Results - REEs

Fifty-six (56) overburden groundwater samples were analyzed for REEs. **Table 4-36** presents the location and concentrations of REEs. A plot of the analytical data are presented on **Figure 4-19**. As noted, Federal/State MCLs or NJ GWQC do not exist for the REEs; however a Region IX PRG of 7300 µg/L does exist for dysprosium and will be used for comparison purposes. For this discussion, the minimum and maximum detectable concentrations for the REEs are presented. The five REEs were detected during Phase II groundwater sampling activities, and are presented in the following sections.

Cerium

Cerium was detected in 1 of 56 groundwater samples. Cerium was present in the groundwater sample obtained from well MW-21S (36.8 µg/L) located on the 111 Essex Street property (Property No. 7a), Maywood.

Dysprosium

Dysprosium was detected in 15 of 56 groundwater samples at concentrations ranging from 3.4 to 25.2 µg/L. The maximum dysprosium concentration was present in the groundwater sample obtained from monitoring well OBMW12 located on the 29 Essex Street property (Property No. 6e), Maywood. This concentration is below the Region IX PRG of 7300 µg/L.

Lanthanum

Lanthanum was detected in 2 of 56 groundwater samples at concentrations of 38.3 and 60.8 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W25S, which is located on the MISS.

Neodymium

Neodymium was detected in 13 of 56 groundwater samples at concentrations ranging from 14.7 to 57.4 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well OBMW10 located south of NRC Disposal Pit 3 on the Stepan Company property.

Yttrium

Yttrium was detected in 9 of 56 groundwater samples at concentrations ranging from 2 to 5.3 µg/L. The maximum concentration was present in the groundwater sample obtained from well OBMW12 located on the 29 Essex Street property (Property No. 6e), Maywood.

4.5.4 Phase II Overburden Groundwater Results - TCL VOCs

Groundwater samples were obtained from 55 overburden monitoring wells located within the FMSS. Twenty (20) VOC compounds were detected during Phase II activities. VOC exceedances were detected on the FMSS including 1,1,2-TCA, 1,2-DCE, benzene, chloroform, PCE, total xylene, TCE, and VC. VOC sampling results are summarized in **Tables 4-37** and **4-38**. The distribution of aromatic VOC concentrations are presented on **Figure 4-20**. Chlorinated VOC concentrations are shown on **Figures 4-21** and **4-22**. The VOC exceedances are discussed in the following sections.

Benzene

Benzene was detected in 9 of 55 overburden groundwater samples at concentrations ranging from 0.1 to 2500 µg/L. Two samples contained benzene at a concentration exceeding the NJ MCL/NJ GWQC PQL of 1 µg/L. The maximum concentration was detected in the groundwater sample obtained from well PT-2S located on the Stepan Company property. This area is presently undergoing groundwater remediation by Stepan Company. The other benzene exceedance was present in the groundwater sample obtained from monitoring well OBMW3, which is located on the 239 NJ Route 17 North property (Property No. 6d), Maywood. Benzene sample concentrations and distribution are presented on **Figure 4-20**.

Total Xylene

Total xylene was detected in 23 of 55 groundwater samples at concentrations ranging from 0.1 to 4900 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well OBMW18 located on the Stepan Company property. Three samples contained total xylene at a concentration exceeding the NJDEP GWQC of 40 µg/L. The two other exceedances were detected in groundwater samples obtained from wells PT-2S and MW-1 located on the Stepan Company property. Xylene sample concentrations and distribution are presented on **Figure 4-20**.

Tetrachloroethene (PCE)

PCE was detected in 11 of 55 monitoring well samples at concentrations ranging between 0.2 and 200 µg/L. The maximum concentration of PCE was present in the groundwater sample obtained from monitoring well MW-7S located on the 141 West Central property (Westerly Brook Drainage Basin), Rochelle Park. Five samples contained PCE at a concentration that exceeded the NJ PQL/State MCL of 1 µg/L. PCE exceedances and well locations are shown on **Figure 4-21**.

Trichloroethene (TCE)

TCE was detected in 12 of 55 monitoring well samples at concentrations ranging between 0.1 and 65 µg/L. The maximum concentration of TCE was present in the groundwater sample obtained from monitoring well MW-7S located on the 141 West Central property, Rochelle Park. Five samples contained TCE at a concentration exceeding the NJDEP GWQC/State MCL of 1 µg/L. TCE sample concentrations and distribution are presented on **Figure 4-21**.

1,1,2-Trichloroethane

1,1,2-TCA was detected in 1 of 55 samples at a concentration of 3 µg/L. This concentration is equal to the NJDEP GWQC and State MCL. This compound was present in the groundwater sample obtained from monitoring well OBMW3 located on the 239 NJ Route 17 property (**Figure 4-21**), Maywood.

1,2-Dichloroethene (1,2-DCE)

1,2-DCE (total) was detected in 15 of 55 overburden groundwater samples at concentrations ranging from 0.3 to 28 µg/L. The maximum concentration was present in the groundwater sample obtained from overburden monitoring well MW-7S located on the 141 West Central property, Rochelle Park. Two samples contained 1,2-DCE at a concentration exceeding the NJDEP GWQC of 10 µg/L (**Figure 4-22**).

Chloroform

Chloroform was detected in 14 of 55 samples at concentrations ranging from 0.1 to 6 µg/L. The maximum concentration was present in the groundwater sample obtained from well B38W14S located downgradient of the 96 Park Way property, Rochelle Park. This sample contained chloroform at a concentration equal to the NJDEP GWQC of 6 µg/L.

Vinyl Chloride (VC)

VC was detected in 8 of 55 groundwater samples at concentrations ranging from 0.1 to 2 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well PT-2S located on the Stepan Company property. This area is presently undergoing remediation by Stepan Company. This sample contained VC equal to the Federal/State MCL of 2 µg/L (**Figure 4-22**).

4.6 PHASE II BEDROCK GROUNDWATER RESULTS

During Phase II GWRI activities, bedrock groundwater samples were obtained from 70 DOE/USACE monitoring wells, existing Stepan Company monitoring wells, and newly installed monitoring wells. As addressed in the GWRIWP, VOC samples were only obtained from monitoring wells located north of Essex Street in the FMSS as this was believed to be the extent of any VOC constituent commingled with FUSRAP waste emanating from the MISS. VOC samples were not obtained from wells MW-14D through MW-18D. Although not specified in the GWRIWP, gross alpha and gross beta parameters were added to the Phase II sampling program and were collected from 53 and 54 bedrock monitoring wells, respectively. The following table summarizes the number of samples, including resamples and 3 packer zone samples.

Parameters Obtained from Bedrock Monitoring Wells

Samples Obtained				
Full Radiological (1)	**Gross Alpha / Gross Beta**	**VOCs**	**TAL Metals, Li/B**	**REE**
73	53/54	71	73/72(2)	70

Note: (1) Full radiological consisted of Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235, U-238
(2) Hexavalent Chromium was analyzed for in 72 samples

Packer samples were obtained from bedrock pump test piezometer BRPZ-5 using a discrete interval sampler. Groundwater samples were obtained from fractured bedrock at depths of 45'-55', 69'-79', and 102'-112' and analyzed for TCL VOCs'. The well was subsequently reconstructed as a bedrock monitoring well with a screened interval of 42'-62' bgs. Monitoring wells B38W03B, B38W04B, and MISS-3B were resampled, and the samples were analyzed for radiological, TAL metals including lithium/boron, and TCL VOCs.

Fourteen Phase II samples reported turbidity measurements exceeding 50 NTUs, and may have biased high the sampling results. Elevated field turbidity was reported at monitoring wells B38W02D (1584.8 NTU), B38W07B (125.1 NTU), B38W15D (76.4 NTU), B38W17B (150.1 NTU), B38W19D (1587.4 NTU), B38W24D (1604.9 NTU), MISS-1B (108.5 NTU), MIS-3B (70.9 NTU), MISS-5B (1587 NTU), MISS-7B (555 NTU), MW-14D (110 NTU), MW-16D (67.1 NTU), MW-19D (76.1 NTU), and BRPZ-5 (45'-55' packer zone sample) (163 NTU). Ten of fourteen wells (except MW-14D, MW-16D, MW-19D, and BRPZ-5 (45'-55') packer sample), were sampled at the on-set of the Phase II sampling program. The Phase II sampling procedures were subsequently revised to include lower purge and sampling rates, and set a maximum 50 NTU value for unfiltered samples. The 50 NTU value could not be achieved at wells MW-14D, MW-16D, and MW-19D, and an additional filtered sample was obtained and analyzed for radiological constituents. The 50 NTU value was also not met at well BRPZ-5 (45'-55'); however, a filtered sample was not collected since analysis was limited to VOCs.

4.6.1 Phase II Bedrock Groundwater Results - Radiological

Seventy-three (73) bedrock groundwater samples were collected as part of the Phase II GWRI activities and analyzed for full radiological parameters. A subset of the wells was analyzed for gross alpha (53 samples) and gross beta (54 samples) parameters. Filtered radiological samples were also collected if well turbidity exceeded 50 NTU during purging. Individual radium, uranium, and thorium isotope results, data validation qualifiers, measurement errors and MDAs are presented in **Tables 4-39**, **4-40**, and **4-41**, respectively. Gross alpha and gross beta sampling results are presented in **Tables 4-42** and **4-43**. **Figure 4-23** depicts the concentration and spatial distribution of total radium and total uranium in Phase II Bedrock groundwater samples. The distribution of total thorium/gross alpha and gross beta

activity is presented on **Figures 4-24a** and **4-24b**. The results of radium, uranium, thorium, gross alpha, and gross beta sampling are addressed in the following sections.

Total Radium

Seventy-three (73) bedrock monitoring well groundwater samples were analyzed for Ra-226 and Ra-228. **Table 4-39** presents the individual radium isotope value, data validation qualifier, measurement errors and MDAs. Total radium was detected in 67 of 73 bedrock groundwater samples, with concentrations ranging from 0.12 to 19.4 pCi/L. One total radium exceedance of the Federal/State MCL (5 pCi/L) was detected at well B38W18D (19.4 pCi/L). This well is located downgradient from the former Thorium/Cerium processing area on the MISS. The sample was mainly composed of the Ra-228 isotope (16.53 pCi/L).

Total Uranium

Seventy-three (73) bedrock groundwater samples were analyzed for U-234, U-235, and U-238 during Phase II GWRI activities. As presented in **Table 4-40**, total uranium was detected in 67 of 73 samples, with concentrations ranging from 0.46 to 15.81 pCi/L (25.73 µg/L). No samples exceeded the Federal/State MCL of 20 pCi/L (30 µg/L) for total uranium. The maximum detected concentration was present in the groundwater sample obtained from monitoring well BRMW14 located downgradient of the MISS on the 149-151 Maywood Avenue property (Property No. 9a), Maywood. This sample was principally composed of U-234 (10.76 pCi/L) and U-238 (4.99 pCi/L). Data obtained from well B38W02D, located hydraulically upgradient of the MISS contained 0.99 pCi/L (1.83 µg/L) total uranium.

Total Thorium

Seventy-three (73) bedrock monitoring well groundwater samples were analyzed for Th-228, Th-230, and Th-232. Total thorium was detected in 64 of 73 samples and ranged in concentration from 0.43 to 16.14 pCi/L. The maximum concentration of total thorium was present in the groundwater sample obtained from well B38W18D, which is located on the MISS. This sample was principally composed of Th-232 (7.53 pCi/L) and Th-228 (6.89 pCi/L).

Gross Alpha

Fifty-three (53) bedrock monitoring well groundwater samples were analyzed for gross alpha parameters. Gross alpha was detected in 31 samples, with adjusted gross alpha activity ranging from 0 to 57.47 pCi/L. Gross Alpha values were adjusted for total uranium activity, which is presented in **Table 4-42**. If total uranium values exceed the gross alpha value, then the error associated with the gross alpha result was added to the reportable concentration in order to depict a positive result. In some situations the total uranium concentration, which did not factor in isotope errors, still exceeded the Gross Alpha plus sample error concentration. If this occurred, the adjusted Gross Alpha result was reported as non-detect (ND) in figures and tables. The unadjusted (reported) and adjusted gross alpha sampling results, data validation qualifiers, measurement errors, and MDAs are presented in **Table 4-42**. The Federal/State MCL for gross alpha is 15 pCi/L, which excludes uranium and radon activity. Radon was not analyzed, so its effect on the gross alpha value is unknown. As previously discussed, a conservative approach was taken in that all U or UJ qualified results were considered present at the reported concentrations.

Three gross alpha exceedances were detected in bedrock groundwater samples. The maximum detected gross alpha result was present in the groundwater sample obtained from monitoring well BRPZ-5 (57.47 pCi/L), which is located in Former Retention Pond C on the MISS. Exceedances were also detected at wells BRPZ-2 (27 pCi/L) and MW-3D (18.42 pCi/L). Although the sample from B38W18D

was not analyzed for Gross Alpha, the detection of 16.14 pCi/L total thorium indicates an exceedance of the Gross Alpha MCL at that location. Gross alpha results from Annual EMP reported exceedances (27.02 pCi/L and 82.76 pCi/L) at well B38W18D in 2002 and 2003, respectively.

Gross Beta

Adjusted gross beta activity was detected in 44 of the 54 samples with concentrations ranging from 0.81 to 168.02 pCi/L. The Federal/NJDEP gross beta screening value is 50 pCi/L, and the risk based Federal/State MCL is 4 mrem/yr. The Federal/NJDEP screening value is a trigger to indicate a possible exceedance of the risk-based standard. The Federal MCL does not consider gross beta that occurs naturally as part of K-40 in developing the screening standard.

The gross beta activity was adjusted for the detected potassium in each sample. K-40 activity (pCi/L) was estimated by multiplying the potassium concentration (mg/L) by 0.73. If the activity associated with the estimated K-40 concentration exceeded the reported gross beta concentration, then the measurement error was added to provide a positive result. Applied measurement errors are shown in **Table 4-43**. The maximum concentration was detected in bedrock well BRPZ-2RE, located within Former Retention Pond C on the MISS. Four samples contained adjusted Gross Beta at a concentration exceeding the screening standard, including MISS wells BRPZ-2RE (168.02 pCi/L), BRPZ-5 (53.41 pCi/L), MW-26D (117.51 pCi/L), and offsite well MW-13D (68.98 pCi/L), which is located on the 99 Essex Street Property, Maywood (Property No. 5a). The unadjusted/adjusted Gross Beta results, potassium results, and Gross Beta attributable to K-40 are summarized in **Table 4-43**. The distribution and concentration of adjusted Gross Beta activity is depicted on **Figure 4-24b**. A review of the potassium data for 24 Phase II bedrock samples indicates that the average beta emission attributable to K-40 was 147.22 pCi/L on the MISS, and 12.71 pCi/L for offsite samples.

4.6.2 Phase II Bedrock Groundwater Results - TAL Metals and Lithium/Boron

Seventy-three (73) bedrock monitoring well groundwater samples were analyzed for TAL metals and lithium/boron. Eight metal exceedances were detected, including arsenic, barium, beryllium, boron, chromium, lead, lithium, nickel, and thallium. Lithium data was compared to the Region IX Tap Water PRG of 730 µg/L. **Table 4-44** presents a summary of the metals detected in bedrock groundwater samples, and **Table 4-45** summarizes samples containing metals that exceed groundwater standards. Naturally occurring metals such as aluminum, iron, manganese and sodium are presented in the tables but are not elaborated upon. The distribution of arsenic, chromium, and lithium are presented on **Figure 4-25**, whereas barium, beryllium, and thallium data are presented on **Figure 4-26**. The distribution of lead and nickel is presented on **Figure 4-26A**. This section focuses on a discussion of the metals exceeding regulatory standards and/or applicable criteria (i.e., lithium).

Arsenic

Arsenic was detected in 19 of 73 bedrock groundwater samples, with concentrations ranging from 2.5 to 89.1 µg/L. The maximum concentration was present in the groundwater sample obtained from well B38W19D, which is located in Former Retention Pond C on the MISS. Four samples had arsenic concentrations exceeding the NJDEP PQL and Federal/State MCL of 8 and 10 µg/L, respectively. Arsenic concentrations decreased from Phase I levels (exceedances) at wells MISS-1B (9.1 µg/L) and MISS-5B (8 µg/L) to non detect in Phase II , and may be attributed in part to the lower turbidity measured during Phase II sampling at well MISS-1B (315 to 18 NTU, respectively).

Barium

Barium was detected in 70 of 73 bedrock groundwater samples, with concentrations ranging from 2.5 to 9750 µg/L. The maximum concentration of barium was detected in the groundwater sample obtained from well MISS-5B, which is located within Former Retention Pond C on the MISS. One sample contained barium at a concentration exceeding the NJDEP GWQC and Federal/State MCL of 2000 µg/L.

Beryllium

Beryllium was detected in 25 of 73 bedrock groundwater samples collected, with concentrations ranging from 0.1 to 5.3 µg/L. The maximum concentration of beryllium was present in the groundwater sample obtained from well BRPZ-5, which is located within Former Retention Pond C on the MISS. This sample contained beryllium at a concentration exceeding the Federal/State MCL of 4 µg/L.

Chromium (Total)

Total Chromium was detected in 54 of 73 bedrock groundwater samples, with concentrations ranging from 1.1 to 689 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well BRMW6, which is located on the 149-151 Maywood Avenue property. Five samples contained total chromium at concentrations exceeding the NJDEP GWQC and Federal/State MCL of 100 µg/L. Other exceedances occurred on the 29 Essex Street (Property No. 6e), 23 West Howcroft Road (Property No. 8a), and Stepan Company (Property No. 10a) properties, all located in Maywood.

Chromium (Hexavalent)

Hexavalent chromium was detected in 1 of 72 groundwater samples at a concentration of 38 µg/L. This sample was obtained from monitoring well MISS-5B, and is located on the MISS. The sample obtained from well MW-26D located on the MISS contained 200 µg/L. However, since there was a large disparity between the total chromium result, 6.4 µg/L, and the hexavalent chromium result, the results for total and hexavalent chromium were rejected. No detectable hexavalent chromium results exceeded NJDEP GWQC or the Federal/State MCL of 100 µg/L.

Lead

Lead was detected in 8 of 73 bedrock groundwater samples, with concentrations ranging from 3.1 to 33.9 µg/L. The maximum detectable concentration of lead was present in the groundwater sample obtained from monitoring well MW-3D, which is located north of the MISS on the NYSW property. This was the only sample that contained lead at a concentration exceeding the NJDEP PQL of 10 µg/L. Lead concentrations dropped from Phase I values (exceedances) at wells B38W14D (21.3 µg/L) and B38W18D (15.8 µg/L) to non detect and 2.7 µg/L during the Phase II GWRI, respectively (**Table 4-21**). This may be attributed in part to reduced sample turbidity.

Lithium

Lithium was detected in 71 of 73 bedrock groundwater samples, with concentrations ranging from 1.5 to 16,100 µg/L. The maximum concentration of lithium was present in the groundwater sample obtained from well MISS-2B, which is located in Former Retention Pond A. Thirty-two (32) samples contained lithium in exceedance of the Region IX Tap Water PRG of 730 µg/L. Twenty (20) of the 32 exceedances were present in samples collected from the MISS. Lithium concentrations decreased from Phase I (exceedance) at well B38W02D (1650 µg/L) to Phase II (13.7 µg/L).

Nickel

Nickel was detected in 58 of 73 bedrock groundwater samples, with concentrations ranging from 1.1 to 160 µg/L. The maximum concentration of nickel was present in the groundwater sample obtained from monitoring well B38W12B, which is located on the 23 West Howcroft Road property (Property No. 8a), Maywood. This was the only sample that contained nickel in exceedance of the NJDEP GWQC of 100 µg/L.

Thallium

Thallium was detected in three of 73 bedrock groundwater samples, with concentrations ranging from 3.1 to 4.4 µg/L. The maximum concentration of thallium was present in the groundwater sample obtained from monitoring well BRPZ-5, which is located in Former Retention Pond C on the MISS. All three samples contained thallium at a concentration exceeding the Federal/State MCL of 2 µg/L.

4.6.3 Phase II Bedrock Groundwater Results - REEs

Seventy (70) bedrock groundwater samples were analyzed for REEs. REE sampling results are presented in **Table 4-46**. All five of the REEs were detected during Phase II bedrock groundwater sampling. The distribution of REE compounds in bedrock wells is presented on **Figure 4-27**. Federal and State MCLs or NJDEP GWQC do not exist for REEs. However, a Region IX PRG for dysprosium does exist and will be used for comparison purposes. For discussion purposes, the minimum and maximum detectable concentrations for the other REEs are presented.

Cerium

Cerium was detected in 2 of 70 groundwater samples with concentrations of 45.4 and 312 µg/L. The maximum detectable concentration was present in the sample obtained from monitoring well B38W18D, which is located downgradient of the former thorium/cerium manufacturing building on the MISS.

Dysprosium

Dysprosium was detected in 9 of 70 samples with concentrations ranging from 3.2 to 14.5 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well MISS-5B located adjacent to Former Retention Pond C on the MISS. This concentration is below the Region IX PRG of 7300 µg/L.

Lanthanum

Lanthanum was detected in 2 of 70 samples with concentrations of 39.2 and 231 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W18D, which is located adjacent to the former thorium/cerium manufacturing building on the MISS.

Neodymium

Neodymium was detected in 12 of 70 samples at concentrations ranging from 13.9 to 133.9 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W18D.

Yttrium

Yttrium was detected in 6 of 70 samples at concentrations ranging from 1.8 to 41.6 µg/L. The maximum concentration was present in the groundwater sample obtained from well B38W18D.

4.6.4 Phase II Bedrock Groundwater Results - Volatile Organic Compounds

Seventy-one (71) groundwater samples were analyzed for TCL VOCs. As presented in **Table 4-47**, 24 VOC compounds were detected, with 9 VOC exceedances of the NJDEP/Federal standards. VOC exceedances include PCE, TCE, 1,2-DCE (total), 1,1-DCA, VC and methylene chloride. Petroleum constituents exceeding groundwater standards included benzene, toluene, and total xylene. Groundwater VOC exceedances are summarized in **Table 4-48**. The distribution of benzene, toluene, and xylene in bedrock wells is presented on **Figure 4-28**, and chlorinated VOCs are presented on **Figures 4-29** and **4-30**. The following section addresses VOC compounds that exceed regulatory standards.

Benzene

Benzene was detected in 31 of 71 bedrock groundwater samples, with concentrations ranging from 0.1 to 5000 µg/L. Benzene exceedances were detected in 17 wells at concentrations exceeding the NJ PQL and State MCL of 1 µg/L. The maximum concentration was detected in the sample obtained from monitoring well BRPZ-5, located within Former Retention Pond C on the MISS.

Toluene

Toluene was detected in 30 of 71 bedrock groundwater samples, with concentrations ranging from 0.1 to 1400 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well BRPZ-5, which is located in Former Retention Pond C. This was the only sample that exceeded the NJDEP GWQC and Federal/State MCL of 1000 µg/L.

Total Xylene

Total xylene was detected in 33 of 71 bedrock groundwater samples, with concentrations ranging from 0.2 to 460 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well B38W04D, which is located on the Stepan Company property. This was the only sample that contained total xylene at a concentration exceeding the NJDEP GWQC of 40 µg/L.

Tetrachloroethene (PCE)

PCE was detected in 30 of 71 samples at concentrations ranging from 0.1 to 1200 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well MW-7D, which is located on the 141 West Central Avenue property, Rochelle Park. Eighteen (18) samples contained concentrations of PCE at or exceeding the NJDEP PQL/State MCL of 1 µg/L.

Trichloroethene (TCE)

TCE was detected in 27 of 71 samples at concentrations ranging from 0.2 to 380 µg/L. The maximum concentration was present in the groundwater sample obtained from monitoring well MW-7D, which is located on the 141 West Central Avenue property, Rochelle Park. Nineteen (19) samples had concentrations of TCE at or exceeding the NJDEP GWQC/State MCL of 1 µg/L.

1,1-Dichloroethene (1,1-DCE)

1,1-DCE was detected in 10 of 71 bedrock well samples, with concentrations ranging from 0.2 to 4 µg/L. The maximum concentration was present in the groundwater sample obtained from well B38W14D, which is located to the west of the 96 Park Way property, Rochelle Park. Three samples contained 1,1-DCE at a concentration exceeding the NJ PQL/State MCL of 2 µg/L.

1,2-Dichloroethene (1,2-DCE)

1,2-DCE (total) was detected in 39 of 71 bedrock monitoring well samples at concentrations ranging between 0.1 and 270 µg/L. The maximum concentration was present in the groundwater sample obtained from well MW-8D, which is located at 146 West Central Avenue property, Rochelle Park. Six samples contained 1,2-DCE at a concentration exceeding the NJDEP GWQC of 10 µg/L for cis 1,2-DCE.

Methylene Chloride

Methylene chloride was detected in 7 of 71 bedrock monitoring well samples at concentrations ranging between 0.6 and 360 µg/L. The maximum concentration was present in the groundwater sample obtained from well BRPZ-3RE, which is located in Former Retention Pond C on the MISS. Five samples contained methylene chloride at or exceeding the NJDEP GWQC of 2 µg/L.

Vinyl Chloride (VC)

VC was detected in 18 of 71 samples at concentrations ranging from 0.1 to 200 µg/L. Four samples contained VC at a concentration equal to or exceeding the Federal/State MCL of 2 µg/L. The maximum concentration was detected in the groundwater sample obtained from well BRMW1, which is located on the 149-151 Maywood Avenue property.

4.7 SURFACE WATER RESULTS

As part of the GWRI, a total of 21 surface water samples were obtained from Westerly Brook, Lodi Brook, Coles Brook and the Saddle River. Surface water samples were analyzed for Ra-226, Ra-228, isotopic thorium, isotopic uranium, TAL metals, lithium/boron, and REEs. In some situations, results are reported for total uranium and not isotopic uranium.

Five surface water samples were obtained from Westerly Brook and the Saddle River, seven samples were obtained from Lodi Brook, and four samples were obtained from Coles Brook. Surface water results were compared to the New Jersey SWQC and the Federal Freshwater Ambient Water Quality Criteria (AWQC). The New Jersey SWQC is human health based, whereas the AWQC (both chronic and acute effects) are ecological based standards. There are no surface water radiologic criteria, so Federal/State drinking water standards were used for comparison. There are also no lithium or boron Federal/State surface water standards, so results were compared to the Region IX tap water PRG of 730 µg/L and 7300 µg/L, respectively.

New Jersey sets forth Surface Water Quality Standards (SWQS) in NJAC 7:9B. This statute designates uses, use classifications, and water quality criteria for the State's waters based upon such uses, and the Department's policies concerning these uses, classifications and criteria. The Saddle River, which is a discharge area for groundwater, is classified as FW2. "FW2" means the general surface water classification applied to those fresh waters not designated as FW1 (exceptional recreational and/or water supply significance, or exceptional fisheries resource) or Pinelands Waters.

4.7.1 Westerly Brook Surface Water Results

Five surface water samples were obtained from Westerly Brook. Samples were obtained principally from the non-culverted portions of the brook with the exception of WB-3, which was obtained from the culverted section of the brook on the 96 Park Way property, Rochelle Park. Samples WB-4 and WB-5 were obtained north and upstream of the MISS. The following sections present the radiological and chemical results for Westerly Brook surface water samples.

4.7.1.1 Westerly Brook Surface Water Results - Radiological

Five surface water samples were collected from Westerly Brook and analyzed for Ra-226, Ra-228, isotopic thorium, and isotopic uranium. **Table 4-49** presents the radiological results for the surface water samples obtained from Westerly Brook. All samples qualified with a non-detect (U) or estimated non-detect (UJ) were conservatively considered present at the reported concentration. The spatial distribution of total radium, total uranium and total thorium in surface water is presented on **Figure 4-31**. The following is a discussion of the radiological results for Westerly Brook surface water.

Total Radium

Total radium was detected in each of the five surface water samples collected, with concentrations ranging from 0.81 to 5.58 pCi/L. Two surface water samples contained total radium at a concentration exceeding the Federal/State MCL for total radium of 5 pCi/L. The maximum detectable concentration was present in the surface water sample obtained from location WB-2, which was obtained approximately 650 feet east of the confluence of Westerly Brook with the Saddle River. Although Westerly Brook is not used as a source of drinking water, surface water data was conservatively compared to the Federal/State MCL.

Sample WB-2 principally contained Ra-228 (4.8 pCi/L). Sample WB-1 contained 5.1 pCi/L total radium, and is mainly composed of Ra-228 (4.75 pCi/L). The upstream samples collected north of the FMSS contained total radium at 0.67 pCi/L (WB-5) and 4.02 pCi/L (WB-4), respectively. The upstream samples were collected between the MISS and West Central Avenue. Concentrations detected in samples WB-1 and WB-2, obtained west of the MISS and Former Retention Ponds D and E, were not significantly greater than concentrations detected in upstream sample WB-4.

Total Uranium

Total uranium was detected in five surface water samples obtained from Westerly Brook, with concentrations ranging from 1.2 to 2.41 pCi/L (2.32 µg/L). The maximum concentration was present in the sample obtained from surface water location WB-1, which was obtained upstream of the confluence with the Saddle River. This sample contained U-234 (1.4 pCi/L) and U-238 (0.73 pCi/L). None of the samples contained total uranium at a concentration exceeding the Federal/State MCL of 30 µg/L.

Total Thorium

Total thorium was detected in five surface water samples, with concentrations ranging from 0.74 to 1.41 pCi/L. The maximum detected concentration was present in sample WB-1, which was obtained east of the confluence of the Saddle River. Although there is not a Federal/State MCL for total thorium or individual thorium isotopes, the concentrations were significantly below the gross alpha MCL of 15 pCi/L.

4.7.1.2 Westerly Brook Surface Water Results - TAL Metals and Lithium/Boron

Five surface water metals samples were collected from Westerly Brook and analyzed for TAL metals and lithium/boron. **Table 4-50** presents a summary of the metals detected in surface water, and **Table 4-51** summarizes those metals that exceeded the lower of the NJ SWQC or the Federal Freshwater AWQC for priority and non-priority pollutants. Metals exceeding the most stringent criteria (of either chronic or acute effects) consisted of aluminum, arsenic, copper, iron, lead, thallium and zinc. The spatial distribution of these metals are depicted on **Figures 4-32** and **4-33**. This section focuses on a discussion of those metals exceeding SWQC.

Aluminum

Aluminum was detected in 4 of 5 surface water samples at concentrations ranging from 22.7 µg/L to 255 µg/L. The maximum concentration was detected in sample WB-3. This sample was obtained west of Former Remediated Retention Ponds D and E. This sample contained aluminum at a concentration exceeding the Federal Freshwater AWQC Chronic Criteria for non-priority pollutants of 87 µg/L. There is no NJDEP SWQC for aluminum.

Arsenic

Arsenic was present in 4 of 5 surface water samples obtained from Westerly Brook with concentrations ranging from 3.8 µg/L to 48.7 µg/L. The maximum concentration was present in the sample obtained from location WB-3, which was obtained from the culverted section of Westerly Brook.

All four samples (WB-1 through WB-4) exceeded the NJDEP SWQC of 0.017 µg/L. None of the samples were present at a concentration exceeding the Federal Freshwater AWQC Chronic Criteria of 150 µg/L. Surface water concentrations were also compared to groundwater standards, since compounds were probably derived from groundwater leakage into the Westerly Brook culvert pipe. Exceedances of the 8 µg/L standard were detected in surface water samples collected west (downstream) of the Former Remediated Retention Ponds D and E. There was no exceedance at WB-4, which is located upstream of the MISS.

Iron

Iron was present in all 5 surface water samples obtained from Westerly Brook with concentrations ranging from 543 µg/L to 3460 µg/L. The maximum concentration was present in the sample obtained from location WB-3, which was obtained from the culverted section of Westerly Brook. Surface water samples obtained from locations WB-2, WB-3 and upgradient location WB-4 contained iron at concentrations exceeding the Federal Freshwater AWQC Acute Criteria for Non-Priority Pollutants of 1000 µg/L. There is no NJDEP SWQC for iron.

Lead

Lead was detected in 2 of 5 surface water samples at concentrations of 4 µg/L (WB-4) and 5.4 µg/L (WB-3). Lead was present at concentrations exceeding the Federal Freshwater AWQC Chronic Criteria of 2.5 µg/L. Similarly, the sample obtained from WB-3 exceeded the NJDEP SWQC of 5 µg/L. The sample obtained from WB-4 was obtained upstream of the MISS, and sample WB-3 was obtained west of the Former Remediated Retention Ponds D and E.

Thallium

Thallium was present in surface water sample, WB-1, at a concentration of 6.1 µg/L. This sample was obtained upstream of the confluence with the Saddle River. Thallium was present in sample WB-1 at a concentration exceeding the NJ SWQC of 1.7 µg/L. There is no Federal AWQC for Thallium.

Zinc

Zinc was present in all five surface water samples obtained from Westerly Brook. Concentrations ranged from 14.8 µg/L to 186 µg/L. The maximum concentration was present in the sample obtained from WB-3. This sample was present at a concentration exceeding the Federal Freshwater AWQC Chronic/Acute criteria of 120 µg/L. There is no NJDEP SWQC for Zinc.

4.7.1.3 Westerly Brook Surface Water Results - REEs

Five surface water samples were collected at Westerly Brook and were analyzed for REEs (**Table 4-52**). Lanthanum was the only REE detected in a surface water sample obtained from Westerly Brook. Lanthanum was detected in WB-4, which was obtained upstream of the MISS, at 35.3 µg/L, which is slightly above the IDL of 33.8 µg/L. There is no NJDEP SWQC, Federal AWQC, or applicable EPA Region IX drinking water PRG for Lanthanum.

4.7.2 Lodi Brook Surface Water Results

Seven surface water samples were obtained from Lodi Brook. Surface water samples LB-2 and LB-3 were obtained from an open channel of Lodi Brook north of Essex Street. Lodi Brook becomes culverted beneath NJ Route 17 and is again exposed south of Essex Street in the vicinity of 113 Essex Street, Maywood (Property No. 4a). Sample LB-4 was obtained from the open channel within the 160/174 Essex Street property in Lodi. Sample LB-5 was collected from an open channel in the vicinity of Redstone Lane in Lodi. A surface water sample could not be obtained from the eastern branch of Lodi Brook on the 149-151 Maywood Avenue, Maywood, due to a lack of water.

4.7.2.1 Lodi Brook Surface Water Results - Radiological

Seven surface water samples were collected from Lodi Brook and analyzed for Ra-226, Ra-228, isotopic thorium, and isotopic uranium. **Table 4-53** presents the radiological results for the water samples obtained from Lodi Brook. The spatial distribution of total radium, total uranium, and total thorium in surface water is presented on **Figure 4-31**. The following sections provide the radiological results for Lodi Brook surface water samples.

Total Radium

Total radium was detected in each of the seven surface water samples collected at Lodi Brook, at concentrations ranging from 2.87 to 9.25 pCi/L. The maximum concentration was present in sample LB-5, which was collected from an exposed section of Lodi Brook in proximity to Redstone Lane in Lodi. This sample was principally composed of Ra-228 (8.23 pCi/L). Although Lodi Brook is not used as a source of drinking water, the data was compared to the Federal/State MCL of 5 pCi/L.

Samples LB-3 and LB-7 contained total radium at concentrations exceeding the Federal/State MCL of 5 pCi/L. Sample LB-3 (5.48 pCi/L) was collected from Property No. 6c, 167 NJ Route 17; and sample LB-7 (6.07 pCi/L) was obtained adjacent to the Property No. 2d, 8 Mill Street, Lodi. Both samples were comprised principally of Ra-228.

Total Uranium

Total uranium was detected in seven surface water samples, with concentrations ranging from 0.75 to 3.299 pCi/L (1.81 µg/L). The maximum detected concentration was present in sample LB-4, which was collected from the 160/174 Essex Street property (Property No. 4a), Lodi, and was collected from an exposed section of Lodi Brook. None of the sample results exceeded the Federal/State MCL of 30 µg/L.

Total Thorium

Total thorium was detected in seven surface water samples, with concentrations ranging from 0.54 to 2.58 pCi/L. The maximum concentration was obtained from sample LB-2, which was collected from the 149-151 Maywood Avenue property (Property No. 9a), Maywood. This sample was collected at the headwaters of Lodi Brook along the western tributary. Although there is not an MCL for total thorium, none of the concentrations approached the gross alpha MCL of 15 pCi/L. This standard is used for comparison since the principal thorium isotope Th-232 is an alpha emitter, as are the other isotopes of thorium.

4.7.2.2 Lodi Brook Surface Water Results - TAL Metals and Lithium/Boron

Seven surface water samples were collected from Lodi Brook and analyzed for TAL metals and lithium/boron. Four metals were detected at concentrations exceeding SWQC. Detected TAL metals and lithium/boron are summarized in **Table 4-54**. Surface water metal exceedances are presented in **Table 4-55**, and include aluminum, arsenic, copper, iron, lead and, thallium. The spatial distribution of these metals in surface water is presented on **Figures 4-32** and **4-33**. Exceedances of these metals are addressed below.

Aluminum

Aluminum was detected in seven surface water samples at concentrations ranging from 65.9 µg/L to 97.3 µg/L. The maximum concentration was present in sample LB-2, which was collected from the western tributary of Lodi Brook on the 149-151 Maywood Avenue property, property 09a. Four of the samples, LB-2, LB-3, LB-5 and LB-8 contained aluminum at or exceeding the Federal Freshwater AWQC Chronic Criteria for non-priority pollutants of 87 µg/L. With the exception of sample LB-8 the other three locations were obtained from an exposed section of Lodi Brook. There is no NJDEP SWQC or Federal AWQC for aluminum.

Arsenic

Arsenic was detected in 6 of 7 surface water samples at concentrations ranging from 3.6 µg/L to 9.7 µg/L. All six samples had concentrations exceeding the NJDEP SWQC of 0.017 µg/L. However, all concentrations were detected below the Federal Freshwater AWQC Chronic Criteria of 150 µg/L. As a point of comparison, only the sample collected from sample location LB-2 (the maximum detected concentration) would exceed the NJDEP Groundwater GWQS of 8 µg/L.

Copper

Copper was detected in seven surface water samples at concentrations ranging from 3.5 µg/L to 23.8 µg/L. The maximum concentration was obtained from LB-4, which is located in an exposed portion of Lodi Brook at 160/174 Essex Street, Lodi, Cluster 04a. Six of the seven samples contained copper at a concentration exceeding the NJDEP SWQC and Federal AWQC Chronic Criteria of 7.9 µg/L and 9 µg/L, respectively.

Iron

Iron was detected in seven surface water samples at concentrations ranging from 320 µg/L to 1160 µg/L. The maximum concentration was detected at LB-2, which is located along the western branch of Lodi Brook on the 149-151 Maywood Avenue property. This sample exceeded the Federal AWQC Acute Criteria of 1000 µg/L for non-priority pollutants. There is no NJDEP SWQC for iron.

Lead

Lead was detected in four surface water samples at concentrations ranging from 2.6 µg/L to 7.7 µg/L. The maximum detectable concentration was obtained from location LB-2, along the western branch of Lodi Brook on the 149-151 Maywood Avenue property. All four samples contained lead at a concentration exceeding the Federal Freshwater AWQC Chronic Criteria of 2.5 µg/L. The sample collected from LB-2 exceeded the NJDEP SWQC of 5 µg/L.

Thallium

Thallium was detected in 1 of 7 samples at a concentration of 4.3 µg/L. Sample LB-5 was obtained from an exposed section of Lodi Brook adjacent to Redstone Lane in Lodi, and exceeded the thallium NJDEP SWQC of 1.7 µg/L. There is no Federal AWQC for thallium.

4.7.2.3 Lodi Brook Surface Water Results - REEs

Seven surface water samples were collected from Lodi Brook and analyzed for REEs (**Table 4-52**). Lanthanum was detected in the sample obtained from location LB-3 (38.4 µg/L), which is located north of NJ Route 17 on Property No. 6c, 167 NJ Rt. 17 North. This concentration is slightly above the IDL of 33.8 µg/L. There are no NJDEP SWQC and Federal AWQC for Lanthanum.

4.7.3 Coles Brook Surface Water Results

A total of four surface water samples were obtained from Coles Brook. Samples CB-1 and CB-2 were obtained from Coles Brook adjacent to the 111 Essex Street property. Samples CB-4 and CB-5 were obtained downstream and north of the aforementioned property. All samples were obtained from the exposed channel that flows north into the Hackensack River.

4.7.3.1 Coles Brook Surface Water Results- Radiological

Four surface water samples were collected at Coles Brook and analyzed for Ra-226, Ra-228, isotopic thorium, and isotopic uranium. **Table 4-56** presents the radiological results for the surface water samples obtained from Coles Brook. The spatial distribution of total radium, total uranium and total thorium in surface water is presented on **Figure 4-31**. Radiological parameters are addressed in the following sections.

Total Radium

Total radium was detected in each of the four surface water samples collected from Coles Brook, with concentrations ranging from 0.38 to 1.32 pCi/L. The maximum detected concentration was present in CB-2, which is located adjacent to the 111 Essex Street property, Maywood. Although Coles Brook is not used as a source of drinking water, the data are compared to the Federal/State MCL of 5 pCi/L for total radium. None of the samples contained total radium at a concentration exceeding the Federal/State MCL.

Total Uranium

Total uranium was detected in four surface water samples, with concentrations ranging from 0.54 to 6.56 pCi/L (9.68 µg/L). The maximum concentration was present in sample CB-1, which is located adjacent to the 111 Essex Street property. None of the samples contained total uranium at a concentration exceeding the Federal/State MCL of 30 µg/L.

Total Thorium

Total thorium was detected in four surface water samples with concentrations ranging from 0.77 to 1.39 pCi/L. The maximum concentration was detected in sample CB-4, which is located approximately 700 feet north of the 111 Essex Street Property, Maywood. Although there is not an MCL for total thorium, none of the concentrations approached the gross alpha MCL of 15 pCi/L. This standard is used for comparison since the thorium isotopes are alpha emitters.

4.7.3.2 Coles Brook Surface Water Results - TAL Metals and Lithium/Boron Results

Four surface water samples were collected from Coles Brook and analyzed for TAL metals and lithium/boron. There were no exceedances of NJDEP SWQC or Federal Freshwater AWQC Acute/Chronic criteria for the TAL metals, lithium, or boron in the samples collected. TAL metals and lithium/boron results are summarized in **Table 4-57**.

4.7.3.3 Coles Brook Surface Water Results - REEs

Four surface water samples were collected from Coles Brook and analyzed for REEs. Dysprosium was the only REE detected, and was detected in samples CB-4 (5 µg/L) and CB-5 (4.8 µg/L) as presented in **Table 4-52**. These samples were collected downstream (north) of the 111 Essex Street Property (Property No. 7a), Maywood. There is no NJDEP SWQC or Federal AWQC for Dysprosium. Dysprosium concentrations were compared to the Region IX Dysprosium tap water PRG. All samples fell below the Dysprosium tap water PRG of 7300 µg/L.

4.7.4 Saddle River Surface Water Results

Five surface water samples were obtained from the Saddle River. Sample SR-2 was obtained directly downstream of the confluence with Westerly Brook and sample SR-7 was obtained directly downstream of the confluence with Lodi Brook. Surface water samples were not obtained from locations SR-1 and SR-5 due to access restrictions.

4.7.4.1 Saddle River Surface Water Results - Radiological

Five surface water samples were collected from the Saddle River and analyzed for Ra-226, Ra-228, isotopic thorium and isotopic uranium. There were no surface water radiological exceedances. **Table 4-59** presents the radiological results for the water samples obtained from the Saddle River. The spatial distribution of total radium, total uranium, and total thorium in surface water is presented on **Figure 4-31**. The following sections provide the radiological results for the Saddle River.

Total Radium

Total radium was detected in each of the five surface water samples collected from the Saddle River, with concentrations ranging from 0.62 to 2.26 pCi/L. The maximum concentration was present in sample SR-7, which was obtained downstream of the confluence with Lodi Brook. None of the samples collected contained total radium at a concentration exceeding the Federal/State MCL of 5 pCi/L.

Total Uranium

Total uranium was detected in five surface water samples with concentrations ranging from 0.41 to 0.84 pCi/L (1.23 µg/L). The maximum concentration was present in sample SR-3, which was obtained approximately 700 feet downstream of the confluence of Westerly Brook along the Saddle River. None of the samples contained total uranium at a concentration exceeding the Federal/State MCL of 30 µg/L.

Total Thorium

Total thorium was detected in five surface water samples, with concentrations ranging from 0.40 to 1.69 pCi/L. The maximum concentration was present in sample SR-3, which was obtained approximately 700 feet downstream of the confluence of Westerly Brook along the Saddle River. No samples contained total thorium at a concentration approaching the gross alpha MCL of 15 pCi/L. This standard is used for comparison since the thorium isotopes are alpha emitters.

4.7.4.2 Saddle River Surface Water Results - TAL Metals and Lithium/Boron

Five surface water samples were collected from the Saddle River and analyzed for TAL metals and lithium/boron. Three metals were present at concentrations exceeding SWQC. Metals present above SWQC included arsenic, copper and lead. Detected TAL metals and lithium/boron results are summarized in **Table 4-60**. Concentrations of metals exceeding the NJDEP SWQC are presented in **Table 4-61**. The spatial distribution of these metals in surface water is presented on **Figures 4-32** and **4-33**. The Saddle River surface water metal exceedances are addressed below.

Arsenic

Arsenic was present in one of five surface water samples (SR-3) at a maximum concentration of 8.8 µg/L. Sample SR-3 is located downstream of the confluence of Westerly Brook along the Saddle River. Arsenic exceeded the NJDEP SWQC of 0.017 µg/L, but was below the Federal Freshwater AWQC Chronic Criteria of 150 µg/L. The sample also exceeded the NJDEP GWQS for arsenic of 8.0 µg/L.

Copper

Copper was present in all five surface water samples with concentrations ranging from 1.7 to 11.3 µg/L. The maximum concentration was present in samples obtained from SR-6 and SR-7. Both samples were obtained south of the confluence of Lodi Brook with the Saddle River. Four of the samples contained copper at a concentration exceeding the NJDEP SWQC of 7.9 µg/L and the Federal AWQC Chronic Criteria of 9 µg/L.

Lead

Lead was detected in 1 of 5 surface water samples from the Saddle River. Lead was detected at SR-2 (10.8 µg/L), which is located immediately downstream of the confluence of Westerly Brook and the Saddle River. This sample exceeds the Federal AWQC Chronic Criteria and NJDEP SWQC of 2.5 and 5 µg/L, respectively.

4.7.4.3 Saddle River Surface Water Results - REEs

REEs were not detected in any of the five surface water samples obtained from the Saddle River.

4.8 SEDIMENT SAMPLING RESULTS

A total of 22 sediment samples were obtained from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. Five sediment samples were obtained from both Coles Brook and the Saddle River. Six sediment samples were obtained from both Westerly Brook/Drainage Ditch and Lodi Brook. Sediment samples were analyzed for radiological parameters, TAL metals including lithium/boron, and REEs. Sediment samples were also analyzed for geotechnical parameters including organic carbon content. The geotechnical data are presented in Section 3.0 of this report.

4.8.1 Westerly Brook Sediment Results

Six sediment samples were obtained from Westerly Brook and the unnamed drainage ditch located north of the MISS. A sediment sample could not be obtained from the pre-designated location, WB-3, due to the lack of sediment accumulation within the culverted section of Westerly Brook.

4.8.1.1 Westerly Brook Sediment Results - Radiological

Six sediment samples were analyzed for Ra-226, isotopic thorium, and isotopic uranium. The proposed site radiological soil cleanup levels are being used for comparison purposes. These levels are a combined Ra-226 and Th-232 (Ra-226 + Th-232) of 5 pCi/g, and a U-238 concentration of 50 pCi/g. Ra-226 + Th-232 and U-238 sampling results are presented in **Table 4-62**. There were no radiological exceedances detected in sediment samples obtained from Westerly Brook. The spatial distribution of Ra-226 + Th-232 and U-238 is shown on **Figure 4-34**. The radiological results are further addressed in the following sections.

Ra-226 + Th-232

Concentrations of combined Ra-226 + Th-232 were detected in each of the six sediment samples obtained from Westerly Brook and the associated drainage ditch, with concentrations ranging from 1.25 to 3.30 pCi/g. The maximum concentration was detected in sediment sample WB-2, which was obtained west of 96 Park Way, Rochelle Park, as presented in **Table 4-62** and depicted graphically on **Figure 4-34**. None of the detectable concentrations exceeded the proposed soil cleanup level of 5 pCi/g for Ra-226 + Th-232.

U-238

U-238 was detected in each of the six sediment samples obtained from Westerly Brook (and associated drainage ditch), with concentrations ranging from 0.73 to 1.41 pCi/g. The maximum concentration was detected in the upstream sediment sample WB-4. U-238 sampling data are summarized in **Table 4-62**. U-238 results did not exceeded the proposed soil cleanup criterion of 50 pCi/g. **Figure 4-34** depicts the spatial distribution of U-238 in sediment samples obtained from FMSS watercourses.

4.8.1.2 Westerly Brook Sediment Results - TAL Metals and Lithium/Boron

Six sediment samples were analyzed for TAL Metals including lithium and boron. A summary of the metals detected in each of the sediment samples is presented in **Table 4-63**. Metals exceeding applicable cleanup criteria are presented in **Table 4-64**. Sediment data are compared to the most stringent of either the NJDEP Lowest Observed Effects Level (LOEL) (Persaud et al. 1993) or the EPA Recommended Consensus Based TEC for Freshwater Systems (TEC) (MacDonald et al. 2000). The metals that exceed the most stringent of the sediment criteria consisted of cadmium, chromium, copper, lead, nickel, and

zinc. The metal exceedances are depicted spatially on **Figure 4-35**, and addressed in the following sections.

Cadmium

Cadmium was detected in six sediment samples submitted for analysis, with concentrations ranging from 0.36 mg/kg to 1.7 mg/kg. The maximum concentration was detected in sample UD-7, which was collected from a drainage ditch upstream of the MISS. Two of the samples (UD-6 and UD-7) contained cadmium at concentrations exceeding the NJDEP LOEL (0.6 mg/kg) and the EPA Consensus Based TEC (0.99 mg/kg).

Chromium

Chromium was detected in six sediment samples submitted for analysis, with concentrations ranging from 9.6 mg/kg to 60.8 mg/kg. The maximum concentration was detected in sample UD-7, which was collected from a drainage ditch upstream of the MISS. Two of the samples (UD-6 and UD-7) contained chromium at concentrations exceeding the NJDEP LOEL (26 mg/kg), whereas, only the sample obtained from UD-7 contained chromium at a concentration exceeding the EPA Consensus Based TEC (43.4 mg/kg).

Copper

Copper was detected in three of the six sediment samples obtained from either Westerly Brook or the drainage ditch, at concentrations ranging from 31.7 to 96.8 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch just north of the MISS. Samples obtained from locations WB-1, WB-2, and WB-4 were rejected during the data validation process. All detected concentrations (WB-5, UD-6, and UD-7) contained copper at concentrations exceeding both the NJDEP LOEL (16 mg/kg) and the EPA Consensus Based TEC (31.6 mg/kg).

Lead

Lead was detected in each of the six sediment samples obtained from either Westerly Brook or the drainage ditch, at concentrations ranging from 50.9 to 276 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch just north of the MISS. All samples contained lead at concentrations exceeding both the NJDEP LOEL (31 mg/kg) and the EPA Consensus Based TEC (35.8 mg/kg).

Nickel

Nickel was detected in each of the six sediment samples obtained from either Westerly Brook or the drainage ditch, at concentrations ranging from 11.1 to 48.6 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch just north of the MISS. Three samples contained nickel at concentrations exceeding the NJDEP LOEL (16 mg/kg), whereas only two samples contained nickel at concentrations exceeding the EPA Consensus Based TEC (22.7 mg/kg).

Zinc

Zinc was detected in each of the six sediment samples obtained from either Westerly Brook or the drainage ditch, at concentrations ranging from 154 to 452 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch just north of the MISS. All samples contained zinc at concentrations exceeding the NJDEP LOEL (120 mg/kg) and the EPA Consensus Based TEC (121 mg/kg).

4.8.1.3 Westerly Brook Sediment Results - REEs

Six sediment samples were collected from Westerly Brook and the upstream drainage ditch and were analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium, and yttrium were detected in sediments. Sampling results are presented in **Table 4-65**, and the distribution of REEs in sediment is shown on **Figure 4-36**. Sediment quality criteria do not exist for the REEs; however, a Region IX PRG for dysprosium in soil (residential scenario) is used for comparison purposes. The Region IX PRG for dysprosium is 16,000 mg/kg. The detected REE compounds are addressed below.

Cerium

Cerium was detected in each of the six sediment samples obtained from Westerly Brook and the drainage ditch, with concentrations ranging from 6.3 to 15.1 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch. Cerium was also present in upstream sediment samples WB-4 and WB-5 at concentrations comparable to downstream sediment samples WB-1 and WB-2.

Dysprosium

Dysprosium was detected in each of the six sediment samples obtained from either Westerly Brook or the drainage ditch, with concentrations ranging from 0.51 to 1.1 mg/kg. The maximum concentration was detected in sediment sample UD-6, which was obtained from the drainage ditch. Dysprosium was detected at similar concentrations in both upstream (WB-4 and WB-5) and downstream (WB-1 and WB-2) sample locations. Dysprosium was detected at a concentration significantly below the Region IX Soil PRG of 16,000 mg/kg.

Lanthanum

Lanthanum was detected in four of the six sediment samples obtained from Westerly Brook and the drainage ditch, with concentrations ranging from 4 to 4.9 mg/kg. The maximum concentration was detected in sediment sample WB-2. Lanthanum was detected at comparable concentrations at both upstream and downstream locations.

Neodymium

Neodymium was detected in six sediment samples obtained from Westerly Brook and the drainage ditch, with concentrations ranging from 3.5 to 8.4 mg/kg. The maximum concentration was present in sediment sample UD-7, which was obtained from the upstream drainage ditch. Neodymium was detected at comparable concentrations at both upstream and downstream locations.

Yttrium

Yttrium was detected in six sediment samples obtained from Westerly Brook and the drainage ditch, with concentrations ranging from 2.6 to 6.4 mg/kg. The maximum concentration was detected in sediment sample UD-7, which was collected from the drainage ditch. Concentrations of Yttrium in the upstream sediment samples WB-4 and WB-5 were comparable to those detected at downstream sediment samples WB-1 and WB-2.

4.8.2 Lodi Brook Sediment Results

Six sediment samples were obtained from Lodi Brook. Sediment samples were not obtained from locations LB-2 and LB-5 due to the lack of sediments present in the drainage channel.

4.8.2.1 Lodi Brook Sediment Results - Radiological

Six sediment samples were analyzed for Ra-226, isotopic thorium, and isotopic uranium. The proposed site radiological soil cleanup levels are being used for comparison purposes. These levels are a combined Ra-226 and Th-232 of 5 pCi/g, and a U-238 concentration of 50 pCi/g. Sediment results summarizing Ra-226 + Th-232 are presented in **Table 4-62** as are the U-238 results. The spatial distribution of Ra-226 + Th-232, and U-238 is presented on **Figure 4-34**. The radiological results are addressed below.

Ra-226 + Th-232

Ra-226 + Th-232 was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 2.05 to 31.89 pCi/g. The maximum concentration was detected in sediment sample LB-1, which was obtained from the eastern tributary of Lodi Brook on the 149-151 Maywood Avenue property, Maywood. Sediment sample LB-1 was the only sample that contained Ra-226 + Th-232 at a concentration exceeding the soil cleanup criteria of 5 pCi/g. In this sample, Th-232 was present at a concentration nearly twice that of Ra-226 (21.48 pCi/g vs. 10.41 pCi/g).

U-238

U-238 was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 0.34 to 5.76 pCi/g. The maximum U-238 concentration was present in the sample obtained from sediment sample LB-1. None of the sediment samples had a U-238 concentrations that exceeded the soil cleanup criterion of 50 pCi/g.

4.8.2.2 Lodi Brook Sediment Results - TAL Metals and Lithium/Boron

Six sediment samples were analyzed for TAL Metals including lithium and boron. A summary of the metals detected in each of the sediment samples is presented in **Table 4-66**. Samples with metal concentrations exceeding applicable cleanup criteria are presented in **Table 4-67**. Sediment data are compared to the most stringent of either the NJDEP LOEL or the EPA Consensus Based TEC. Metals exceeding the most stringent of the sediment criteria consisted of arsenic, cadmium, chromium, copper, lead, nickel, and zinc. The concentration and distribution of these metals are presented spatially on **Figure 4-35**, and are discussed in the following sections.

Arsenic

Arsenic was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 1 to 30.5 mg/kg. The maximum concentration was present in sediment sample LB-1, which is located in the eastern tributary to Lodi Brook on the 149-151 Maywood Avenue property. Arsenic concentrations detected at LB-1 (30.5 mg/kg) exceed the NJ LOEL (6 mg/kg) or EPA Consensus Based TEC (9.79 mg/kg).

Chromium

Chromium was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 18.2 to 191 mg/kg. The maximum chromium concentration was detected in sediment sample LB-1, which is located in the eastern tributary of Lodi Brook on the 149-151 Maywood Avenue property. Four of the samples contained chromium at a concentration exceeding the NJ LOEL (26 mg/kg), whereas, only two samples contained chromium at a concentration exceeding the EPA Consensus Based TEC of 43.4 mg/kg.

Copper

Copper was detected in sample LB-1 at a concentration of 96 mg/kg. This sample was obtained from the eastern tributary of Lodi Brook on the 149-151 Maywood Avenue property. The other samples were rejected during the data validation process. This sample contained copper at a concentration exceeding both the NJDEP LOEL (16 mg/kg) and the EPA Consensus Based TEC (31.6 mg/kg).

Lead

Lead was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 33.8 to 427 mg/kg. The maximum lead concentration was detected in sediment sample LB-7 collected from the culverted section of Lodi Brook adjacent to Property No. 2d, 8 Mill Street, Lodi. All samples contained lead at a concentration exceeding the NJDEP LOEL (31 mg/kg), and five samples (excluding LB-3) exceeded the EPA Consensus Based TEC (35.8 mg/kg).

Nickel

Nickel was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 11.4 to 61 mg/kg. The maximum lead concentration was detected in sediment sample LB-7 collected from the culverted section of Lodi Brook adjacent to Property No. 2d, 8 Mill Street, Lodi. Three samples contained nickel at concentration exceeding the NJDEP LOEL (16 mg/kg) and the EPA Consensus Based TEC (22.7 mg/kg).

Zinc

Zinc was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 108 to 1020 mg/kg. The maximum zinc concentration was detected in sediment sample LB-7 collected from the culverted section of Lodi Brook adjacent to Property No. 2d, 8 Mill Street, Lodi. All samples except LB-3 contained zinc at a concentration exceeding the NJ LOEL (120 mg/kg) and the EPA Consensus Based TEC (121 mg/kg).

4.8.2.3 Lodi Brook Sediment Results - REEs

Six sediment samples were collected from Lodi Brook and analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium and yttrium were detected in Lodi Brook sediments. Sampling results are presented in **Table 4-68**, and the distribution of REEs in sediment is shown on **Figure 4-36**. There are no sediment quality criteria for the REEs; however, a Region IX PRG for dysprosium in soil (residential scenario) is used for comparison purposes. The Region IX PRG for dysprosium is 16,000 mg/kg. The detected REE compounds are addressed below.

Cerium

Cerium was detected in each of the six sediment samples obtained from Lodi Brook with concentrations ranging from 7.3 to 758 mg/kg. The maximum concentration was present in sediment sample LB-1, which was obtained from the 149-151 Maywood Avenue property, Maywood. Cerium concentrations dropped significantly between sample LB-1 and the next downstream sample LB-3.

Dysprosium

Dysprosium was detected in each of the six sediment samples obtained from Lodi Brook, with concentrations ranging from 0.77 to 3.9 mg/kg. The maximum Dysprosium concentration was detected in sediment sample LB-1, and falls well below the Region IX PRG of 16,000 mg/kg.

Lanthanum

Lanthanum was detected in each of the six sediment samples obtained from Lodi Brook with concentrations ranging from 5.9 to 355 mg/kg. The maximum concentration was present in sediment sample LB-1. Lanthanum concentrations dropped an order of magnitude in downstream sediment samples.

Neodymium

Neodymium was detected in each of the six sediment samples with concentrations ranging from 5.1 to 301 mg/kg. The maximum concentration was present in sample LB-1. Neodymium concentrations dropped by at least one order of magnitude in downstream sediment samples.

Yttrium

Yttrium was detected in each of the six sediment samples at concentrations ranging from 3.5 to 11 mg/kg. The maximum concentration was present in sediment sample LB-1. Yttrium concentrations in downstream sediment samples had similar concentrations.

4.8.3 Saddle River Sediment Results

Five sediment samples were obtained from the Saddle River. Sediment samples were not obtained from locations SR-1, the upstream (background sample) and SR-5, a downstream location due to access limitations.

4.8.3.1 Saddle River Sediment Results- Radiological

Five sediment samples were analyzed for Ra-226, isotopic thorium and isotopic uranium. The proposed site radiological soil cleanup levels are being used for comparison purposes. This includes a combined Ra-226 and Th-232 criteria of 5 pCi/g and a 50 pCi/g criterion for U-238. Ra-226 + Th-232, and U-238 sampling results are presented in **Table 4-62**. There were no radiological exceedances in the Saddle River samples. The spatial distribution of Ra-226 + Th-232, and U-238 is presented on **Figure 4-34**. The following section summarizes the radiological results for Saddle River sediments.

Ra-226 + Th-232 Results

Ra-226 + Th-232 was detected in each of the five sediment samples obtained from the Saddle River, with concentrations ranging from 1.23 to 2.85 pCi/g. The maximum concentration was present in sample SR-3, which was obtained approximately 700 feet downstream of the confluence with Westerly Brook. None of the samples contained Ra-226 + Th-232 concentrations in exceedance of the soil cleanup criteria of 5 pCi/g.

U-238 Results

U-238 was detected in each of the five sediment samples obtained from the Saddle River at concentrations ranging from 0.87 to 1.19 pCi/g. The maximum concentration of U-238 was detected in sediment sample SR-2, which was obtained immediately downgradient of the confluence with Westerly Brook. None of the samples had concentrations that exceeded the proposed soil cleanup criterion of 50 pCi/g.

4.8.3.2 Saddle River Sediment Results - TAL Metals and Lithium/Boron

Five sediment samples were analyzed for TAL Metals including lithium and boron. A summary of the metals detected in each of the sediment samples is presented in **Table 4-69**. Metals results exceeding applicable cleanup criteria are presented in **Table 4-70**. Sediment data are compared to the most stringent of either the NJDEP LOEL or EPA Consensus Based TEC. The metals exceeding sediment criteria consisted of arsenic, copper, lead and zinc. The concentration and distribution of these metals is depicted spatially on **Figure 4-35** and discussed in the following paragraphs.

Arsenic

Arsenic was detected in each of the five sediment samples obtained from the Saddle River, at concentrations ranging from 0.52 to 8.3 mg/kg. The maximum concentration was present in sediment sample SR-3. This sample was obtained approximately 700 feet downstream of the confluence with Westerly Brook. This sample contained arsenic at a concentration exceeding the NJDEP LOEL (6 mg/kg), but does not exceed the EPA Consensus Based TEC (9.79 mg/kg).

Copper

Copper was detected in five sediment samples at concentrations ranging from 5.7 to 26.6 mg/kg. The maximum concentration was present in sediment sample SR-3. This sample was obtained approximately 700 feet downstream of the confluence with Westerly Brook. These samples contained copper at concentrations exceeding the NJDEP LOEL (16 mg/kg), but does not exceed the EPA Consensus Based TEC (31.6 mg/kg).

Lead

Lead was detected in each of the five sediment samples obtained from the Saddle River, with lead concentrations ranging from 7.2 to 47.5 mg/kg. The maximum concentration was present in sediment sample SR-3. Two of the samples contained lead at concentrations exceeding the NJDEP LOEL (31 mg/kg) and the sample collected from SR-3 exceeded the EPA Consensus Based TEC (35.8 mg/kg).

Zinc

Zinc was detected in each of the five sediment samples obtained from the Saddle River, with zinc concentrations ranging from 26.9 to 176 mg/kg. The maximum concentration was present in sediment sample SR-3, which exceeds both the NJDEP LOEL (120 mg/kg) and the EPA Consensus Based TEC (121 mg/kg).

4.8.3.3 Saddle River Sediment Results - REEs

Five sediment samples were collected from the Saddle River and analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium and yttrium were detected in Saddle River sediments. Sampling results are presented in **Table 4-68** and the distribution of REEs in sediment is presented on **Figure 4-36**. There are no sediment quality criteria for REEs; however, a Region IX PRG for dysprosium in soil (residential scenario) is used for comparison purposes. The Region IX PRG for dysprosium is 16,000 mg/kg. The detected REE compounds are addressed below.

Cerium

Cerium was detected in four of five sediment samples at concentrations ranging from 9.3 to 12.7 mg/kg. The maximum concentration was present in sediment sample SR-3. Downstream samples had comparable concentration of cerium.

Dysprosium

Dysprosium was detected in four of five sediment samples at concentrations ranging from 0.49 to 1.2 mg/kg. The maximum concentration was present in sediment sample SR-3 but its concentration was below the Region IX PRG for soil of 16,000 mg/kg. Downstream samples had comparable concentrations of dysprosium. Dysprosium was not detected at SR-2, which is located immediately downstream of the confluence of Westerly Brook.

Lanthanum

Lanthanum was detected in four of five sediment samples at concentrations ranging from 5.5 to 6.7 mg/kg. The maximum concentration was present in sediment sample SR-7, which was obtained immediately downstream from where Lodi Brook discharges into the Saddle River. Other sediment samples had comparable concentrations. Lanthanum was not detected in sediment sample SR-2.

Neodymium

Neodymium was detected in four of five sediment samples at concentrations ranging from 3.2 to 6.2 mg/kg. The maximum concentration was present in sediment sample SR-7. Other sediment samples had comparable concentrations. Neodymium was not detected in sediment sample SR-2.

Yttrium

Yttrium was detected in each of the five sediment samples obtained from the Saddle River, with concentrations ranging from 1.1 to 6.6 mg/kg. The maximum detectable concentration was present in sample SR-3. Downstream samples had comparable concentrations. Sediment sample SR-2 contained the lowest concentration of yttrium.

4.8.4 Coles Brook Sediment Results

Five sediment samples were obtained from Coles Brook. Coles Brook flows northerly and drains into the Hackensack River. Sediment samples CB-1 and CB-2 were obtained adjacent to the 111 Essex Street property (Property No. 7a), Maywood, whereas samples CB-3, CB-4 and CB-5 were obtained downgradient of the property.

4.8.4.1 Coles Brook Sediment Results - Radiological

Five sediment samples were analyzed for Ra-226, isotopic thorium and isotopic uranium. The proposed site radiological soil cleanup levels are being used for comparison purposes. These standards are a combined Ra-226 and Th-232 standard of 5 pCi/g, and a U-238 standard of 50 pCi/g. Ra-226 + Th-232, and U-238 sampling results are presented in **Table 4-62**. There were no radiological exceedances in Coles Brook samples. The spatial distribution of Ra-226 + Th-232, and U-238 is presented on **Figure 4-34**. The following sections provide the radiological results for Coles Brook sediments.

Ra-226 + Th-232

Concentrations of Ra-226 + Th-232 were detected in each of the five sediment samples, at concentrations ranging from 1.44 to 3.21 pCi/g. The maximum concentration was present in sediment sample CB-3, which was obtained downstream of Property No. 7a, 111 Essex Street, Maywood. None of the samples contained Ra-226 + Th-232 at a concentration exceeding the soil cleanup criteria of 5 pCi/g. Sample CB-3 was principally comprised of Th-232 (1.8 pCi/g).

U-238

U-238 was detected in each of the five sediment samples obtained from Coles Brook, with concentrations ranging from 0.52 to 1.34 pCi/g. The maximum concentration of U-238 was present in sediment sample CB-3. None of the samples contained U-238 at a concentration exceeding the soil cleanup standard of 50 pCi/g.

4.8.4.2 Coles Brook Sediment Results - TAL Metals and Lithium/Boron

Five sediment samples were analyzed for TAL Metals including lithium and boron. A summary of the metals detected in each of the sediment samples is presented in **Table 4-72**. Metals exceeding applicable criteria are presented in **Table 4-73**. Sediment results were compared to the most stringent of either the NJDEP LOEL or EPA Consensus Based TEC. Metals exceeding sediment criteria consisted of arsenic, cadmium, chromium, copper, lead, nickel and zinc. These metals are depicted spatially on **Figure 4-35**, and discussed in the following sections.

Arsenic

Arsenic was detected in each of the five sediment samples obtained from Coles Brook, at concentrations ranging from 1 to 6.7 mg/kg. The maximum concentration was detected in sediment sample CB-3. Downstream sediment samples were similar in concentrations to sediment samples collected proximate to the 111 Essex Street property (CB-1 and CB-2), Maywood. The sample collected from CB-3 exceeded the NJDEP LOEL (6 mg/kg), however, did not exceed the EPA Consensus Based TEC (9.79 mg/kg).

Cadmium

Cadmium was detected in each of the five sediment samples obtained from Coles Brook, at concentrations ranging from 0.18 to 3 mg/kg. The maximum concentration was detected in sediment sample CB-1, which is located adjacent to the 111 Essex Street property, Maywood. Two samples contained cadmium at concentrations exceeding the NJDEP LOEL (0.6 mg/kg), and sample CB-1 contained cadmium at concentrations exceeding the EPA Consensus Based TEC (0.99 mg/kg).

Chromium

Chromium was detected in each of the five sediment samples obtained from Coles Brook at concentrations ranging from 7.1 to 59.4 mg/kg. The maximum concentration was detected in sediment sample CB-3, and is located downstream of samples CB-1 and CB-2. This sample contained chromium at concentrations exceeding the NJDEP LOEL (26 mg/kg) and the EPA Consensus Based TEC (43.4 mg/kg).

Copper

Copper was detected in five sediment samples obtained from Coles Brook at concentrations ranging from 19.1 to 131 mg/kg. The maximum concentration was detected in sediment sample CB-3. All five

samples contained copper at concentrations exceeding the NJDEP LOEL (16 mg/kg), whereas only the sample obtained from CB-3 exceeds the EPA Consensus Based TEC (31.6 mg/kg)

Lead

Lead was detected in five sediment samples obtained from Coles Brook at concentrations ranging from 20.2 to 304 mg/kg. The maximum concentration was present in sediment sample CB-3. Two samples contained lead at concentrations exceeding the NJDEP LOEL (31 mg/kg) and the EPA Consensus Based TEC (35.8 mg/kg).

Nickel

Nickel was detected in five sediment samples obtained from Coles Brook at concentrations ranging from 7.5 to 36.8 mg/kg. The maximum concentration was present in sediment sample CB-3. Only the sample collected from CB-3 contained nickel at a concentration exceeding the NJ LOEL (16 mg/kg) and the EPA Consensus Based TEC (22.7 mg/kg).

Zinc

Zinc was detected in five sediment samples obtained from Coles Brook at concentrations ranging from 64 to 565 mg/kg. The maximum concentration was present in sediment sample CB-3. The sample collected from CB-3 contained zinc at a concentration exceeding the NJ LOEL (120 mg/kg) and the EPA Consensus Based TEC (121 mg/kg).

4.8.4.3 Coles Brook Sediment Results - REEs

Three sediment samples were collected from Coles Brook and analyzed for REEs. Sediment samples from locations CB-1 and CB-2 were not analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium and yttrium were detected in Coles Brook sediments. Sampling results are presented in **Table 4-74**. Sediment quality criteria do not exist for the REEs. However, a Region IX PRG for dysprosium in soil (residential scenario) is used for comparison purposes. The Region IX PRG for dysprosium is 16,000 mg/kg. The detected REE compounds are addressed below and depicted spatially on **Figure 4-36**.

Cerium

Cerium was detected in three sediment samples at concentrations ranging from 12.2 to 30.3 mg/kg. The maximum detectable concentration was present in sediment sample CB-3. Downstream sediment samples CB-4 and CB-5 had comparable cerium concentrations.

Dysprosium

Dysprosium was detected in two of the three sediment samples collected from Coles Brook at concentrations of 0.63 and 1 mg/kg. The maximum concentration was detected at CB-4, which is located approximately 800 feet downstream of the 111 Essex Street property. This sample contained dysprosium at a concentration significantly below the Region IX Soil PRG of 16,000 mg/kg.

Lanthanum

Lanthanum was detected in one of three samples at a concentration of 50.8 mg/kg. This sample CB-3, was obtained immediately downstream of the 111 Essex Street property.

Neodymium

Neodymium was detected in three sediment samples at concentrations ranging from 6.3 to 15.6 mg/kg. The maximum concentration was detected in sample CB-3.

Yttrium

Yttrium was detected in three sediment samples at concentrations ranging from 3.6 to 10.3 mg/kg. The maximum concentration was detected at CB-3.

4.9 PHASE I SOIL RESULTS

During Phase I GWRI activities, soil samples were obtained from 65 soil borings advanced within the FMSS. A total of 84 soil samples were submitted for radiological parameters and RCRA 8 metals analysis. Similarly, 83 soil samples were submitted for REE analysis. Seventy-seven (77) soil samples were submitted for TCL VOCs analysis from 62 soil borings. Soil samples for radiological analysis were submitted to the on-site laboratory for Ra-226, Th-232, and U-238 analysis. Samples submitted for VOCs, RCRA 8 metals and REEs were submitted to an off-site laboratory for chemical analysis.

A single soil sample was submitted for radiological and chemical analysis from each of the individual PDI Environmental borings. Similarly, two soil samples were typically submitted for radiological and chemical analysis from the Transect Geoprobe® locations. During Phase I activities, 19 transect borings were advanced throughout the FMSS. The number of borings per transect and number of samples and types of analyses per transect are summarized as follows:

Summary of Borings, Samples, and Types of Analyses per Transect

Transect	Number of Borings	Number of Radiological Samples	Number of RCRA 8/REE Samples	Number of TCL VOC Samples
A	5	10	10	10
E	6	12	12	12
F	4	8	8	0
J	4	8	8	8

4.9.1 Phase I Soil Results - Radiological

Eighty-four (84) soil samples were analyzed for Ra-226, Th-232, and U-238. The proposed site radiological soil cleanup levels are being used for comparison purposes. These standards are Ra-226 + Th-232 of 5 pCi/g, and a U-238 concentration of 50 pCi/g. Ra-226 + Th-232, and U-238 isotope concentrations, data validation qualifier, measurement error, and MDAs are presented in **Tables 4-75** and **4-76**, respectively. The spatial distribution of Ra-226 + Th-232, and U-238 is shown on **Figure 4-37**. The following sections provide the radiological results for soils.

Ra-226 + Th-232

Eighty-four (84) soil samples were analyzed for Ra-226 and Th-232. Ra-226 was detected in 83 of 84 soil samples at concentrations ranging from 0.05 to 40.99 pCi/g. The maximum concentration was present in the sample obtained from Geoprobe® boring 07a001, which was collected from the 111 Essex Street property (Property No. 7a). Th-232 was detected in each of the 84 soil samples at a concentration ranging from 0.18 to 254 pCi/g. The maximum concentration was also present in soil boring 07a001.

The proposed Ra-226 + Th-232 soil cleanup level is 5 pCi/g. If the data validation qualifier was either "U" (non-detect) or "UJ" (estimated non-detect), then the isotope result was conservatively treated as being present at the reported concentration. Ra-226 + Th-232 concentrations ranged from 0.43 to 294.99 pCi/g. The maximum concentration of Ra-226 + Th-232 was detected in boring 07a001.

Twenty-eight (28) soil samples had concentrations of Ra-226 + Th-232 that exceeded the 5 pCi/g standard. Eleven (11) of the 28 exceedances were obtained from the MISS.

U-238

U-238 was detected in 37 of 84 soil samples obtained from the FMSS at concentrations ranging from 0.23 to 81.86 pCi/g. Samples with U or UJ qualifiers were treated as being present at the reported concentration. The maximum concentration was detected in boring 12b017, which was obtained from Transect A on the MISS. Three soil samples had concentrations of U-238 that exceeded the FMSS soil cleanup level of 50 pCi/g. The second exceedance (80.49 pCi/g) was detected in the sample obtained from boring 12b013, which was obtained from Transect E on the MISS. The third exceedance was present in the sample obtained from boring 07a001. This sample obtained from 111 Essex Street, Maywood was reported as a non-detect (U) at 61.60 pCi/g.

4.9.2 Phase I Soil Results - RCRA 8 Metals and Lithium/Boron

Eighty-four (84) soil samples were analyzed for RCRA 8 metals including lithium and boron. A summary of the metals detected in soil samples is presented in **Table 4-77**. The principal purpose for collecting soils data as part of the GWRI investigation was to further define source area soils that are contributing to groundwater impacts/plume development. The discussion of metals in soil includes those metals that (1) have a corresponding groundwater exceedance, or (2) exceeds site specific SSLs. Site specific SSLs were determined for RCRA metals in soils on the MISS, and are presented in **Table 4-77a**. Metals with corresponding groundwater exceedances include arsenic, barium, beryllium, cadmium, total chromium, lead, lithium, nickel, and thallium. Copper, mercury and selenium soil concentrations exceed SSLs, and are included for discussion. The spatial distribution of these metals (excluding Copper) is depicted on **Figures 4-38a**, **b**, and **c**. Samples exceeding site specific SSLs are presented in **Table 4-77b**.

Arsenic

Arsenic was detected in 83 of 84 soil samples with concentrations ranging from 0.94 mg/kg to 297 mg/kg. The maximum concentration was detected in boring 18a004, which was obtained along Transect J on the NYSW property. Three samples contained arsenic at concentrations exceeding the site specific SSL of 122 mg/kg. The other two samples were obtained from the MISS.

Barium

Barium was detected in 84 soil samples with concentrations ranging from 14.8 mg/kg to 428 mg/kg. The maximum concentration was detected in boring 09a008, which was obtained from the 149-151 Maywood Avenue property. There were no barium exceedances of the site specific SSL of 1600 mg/kg.

Beryllium

Beryllium was detected in 84 soil samples with concentrations ranging from 0.13 mg/kg to 2.3 mg/kg. The maximum concentration was detected in boring 12b013, which was advanced along Transect E on the MISS. There were no beryllium exceedances of the site specific SSL of 63 mg/kg.

Cadmium

Cadmium was detected in 38 of 84 soil samples. Concentrations ranged from 0.03 to 10.1 mg/kg. The maximum concentration was detected in boring 04a003, which was collected from the 160/174 Essex Street property. Only this sample contained cadmium at a concentration exceeding the site specific SSL of 8 mg/kg.

Copper

Copper was detected in 84 soil samples with concentrations ranging from 3.9 to 460 mg/kg. The maximum concentration was detected in boring 09a007, advanced along Transect F on the 149-151 Maywood Avenue property. Only this sample contained copper at a concentration exceeding the site specific SSL of 426 mg/kg.

Chromium (total)

Chromium was detected in 84 soil samples with concentrations ranging from 1.2 to 5860 mg/kg. The maximum concentration was detected in boring 10a003, which was collected from the Stepan Company property. Nine samples contained total chromium at a concentration exceeding the site specific SSL of 242 mg/kg. Three of the exceedances were from samples obtained from the MISS.

Lead

Lead was detected in 84 soil samples at concentrations ranging from 2.1 mg/kg to 556 mg/kg. The maximum concentration was detected in boring 09a007, which was advanced along Transect F on the 149-151 Maywood Avenue property. This sample and the sample obtained from 12b018 contained lead at a concentration exceeding the site specific SSL of 400 mg/kg.

Lithium

Lithium was detected in 75 of 84 soil samples at concentrations ranging from 3.4 mg/kg to 2090 mg/kg. The maximum concentration was present in soil boring 12b011, which was advanced along Transect E on the MISS. Fifteen soil samples contained lithium at a concentration exceeding the site specific SSL of 194 mg/kg. Eight of the exceedances were present in samples obtained from the MISS.

Mercury

Mercury was detected in 57 of 84 soil samples at concentrations ranging from 0.02 mg/kg to 12.4 mg/kg. The maximum concentration was detected in boring 09a007, which was advanced along Transect F on the 149-151 Maywood Avenue property. Five of the samples contained mercury at concentrations exceeding the site specific SSL of 2 mg/kg, with one sample collected from the MISS (12b019).

Nickel

Nickel was detected in 84 soil samples at concentrations ranging from 4.4 mg/kg to 297 mg/kg. The maximum concentration was detected in soil boring 12b017, which was advanced along Transect A on the MISS adjacent to Building 76. This sample exceeds the site specific SSL of 214 mg/kg.

Selenium

Selenium was detected in 28 of 84 soil samples at concentrations ranging from 0.4 mg/kg to 7 mg/kg. The maximum concentration was detected in boring 09a007, which was advanced along Transect F on the 149-151 Maywood Avenue property. This sample exceeds the site specific SSL of 5 mg/kg.

Thallium

Thallium was detected in 9 of 84 soil samples with concentrations ranging from 0.41 to 1.3 mg/kg. The maximum concentration of thallium was detected in sample 12b013, which is located along Transect E on the MISS. This sample exceeds the site specific SSL of 1.2 mg/kg.

4.9.3 Phase I Soil Results - REEs

Eighty-three (83) soil samples were obtained from Geoprobe® borings advanced within the FMSS and analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium and yttrium were all detected. REE results are presented in **Table 4-78** and the distribution of REEs in soils is shown on **Figure 4-39**. There are no NJDEP IGWC or Generic EPA SSL for the REEs. The detected REE compounds are addressed below.

Cerium

Cerium was detected in 77 of 83 soil samples at concentrations ranging from 9.9 to 5270 mg/kg. The maximum concentration was present in soil boring 12b013 collected from Transect E on the MISS.

Dysprosium

Dysprosium was detected in 78 of 83 soil samples at concentrations ranging from 0.6 to 58.2 mg/kg. The maximum concentration was detected in soil boring 12b013.

Lanthanum

Lanthanum was detected in 75 of 83 soil samples at concentrations ranging from 4.6 to 2620 mg/kg. The maximum concentration was detected in soil boring 12b013.

Neodymium

Neodymium was detected in 82 of 83 soil samples at concentrations ranging from 4.8 to 2130 mg/kg. The maximum concentration was detected in soil boring 12b013.

Yttrium

Yttrium was detected in 81 of 83 soil samples at concentrations ranging from 0.64 to 139 mg/kg. The maximum concentration was detected in soil boring 12b013.

4.9.4 Phase I Soil Results - TCL VOCs

Forty-seven (47) soil samples were obtained from individual PDI Environmental borings and 30 soil samples were obtained from 15 Geoprobe® transect (A, E, and J) borings and analyzed for TCL VOCs. A total of 7 VOC compounds were detected in the 77 soil samples, and included benzene, toluene, xylene, bromoform, carbon tetrachloride, chloromethane, and methylene chloride. Soil VOC results are compared to the stricter of the NJDEP IGWC or the EPA Generic SSLs. Soil sampling results and

applicable soil criteria are presented in **Table 4-79**. Soil VOC exceedances include benzene, carbon tetrachloride, and methylene chloride The frequency and range of detected VOCs will be discussed in greater detail below.

Benzene

Benzene was detected in 2 of 77 samples at concentrations of 120 µg/kg and 200 µg/kg. Samples were collected from borings 12b012 and 12b013, respectively, and were collected along Transect E (**Figure 2-3**). Both samples exceed the EPA Generic SSL of 30 µg/kg, but do not exceed the NJDEP IGWC of 1000 µg/kg.

Bromoform

Bromoform was detected in 1 of 77 samples, at a concentration of 210 µg/kg. The sample was collected at soil boring 12b012, which is located along Transect E (**Figure 2-3**). The detected bromoform concentration did not exceed the EPA Generic SSL (800 µg/kg) or NJDEP IGWC of 1000 µg/kg, respectively.

Carbon Tetrachloride

Carbon Tetrachloride was detected in 1 of 77 samples, at a concentration of 180 µg/kg. The sample was collected at soil boring 02d002 on the 8 Mill Street property, Lodi. The detected concentration exceeded the EPA Generic SSL of 70 µg/kg., but did not exceed the NJDEP IGWC of 1000 µg/kg.

Chloromethane

Chloromethane was detected in 1 of 77 samples, at a concentration of 1400 µg/kg. The sample was collected at boring 06d001 on the 239 NJ Rt. 17 North property, Maywood (**Figure 2-3**). This concentration did not exceed the NJ IGWC of 10,000 µg/kg. There is no corresponding EPA Generic SSL for chloromethane.

Methylene Chloride

Methylene Chloride was detected in 2 of 77 soil samples at concentrations of 880 and 2400 µg/kg. The maximum concentrations were detected in soil borings 03a001 and 12b006, respectively. Both samples exceed the EPA Generic SSL of 20 µg/kg. However, only the sample obtained from 12b006 exceeds the NJDEP IGWC of 1000 µg/kg.

Toluene

Toluene was detected in 2 of 77 soil samples at concentrations of 880 and 2400 µg/kg. The maximum concentration was detected in soil boring 12b006, which was advanced near the Former Thorium/Cerium Manufacturing Plant on the MISS. These concentrations are below the EPA Generic and the NJDEP IGWC of 12,000 and 500,000 µg/kg, respectively.

Total Xylene

Total Xylene was detected in 1 of 77 soil samples at a concentration of 270 µg/kg. This sample was detected in soil boring 12b012 obtained along Transect E within the MISS. This concentration was below the EPA Generic SSL and the NJ IGWC of 67,000 and 210,000 (meta xylene) µg/kg, respectively.

4.10 PHASE II SOIL SAMPLES

During Phase II GWRI activities, a single soil sample was obtained from each of the 22 soil borings completed as overburden monitoring wells. Additionally, 10 Geoprobe® borings were advanced and a total of 14 soil samples were obtained. Thirty-four (34) soil samples were submitted for TAL metals (including lithium and boron) and TCL VOCs. The two soil samples obtained from the 111 Essex Street property (Property No. 7a) were not analyzed for metals or VOCs. Eight Geoprobe® samples were also evaluated for REEs. Soil samples for both radiological and chemical analysis were submitted to an off-site laboratory for analysis. The analytical data for Phase II soil samples, both monitoring wells, and Geoprobe® soils are discussed concurrently.

4.10.1 Phase II Soil Results - Radiological

Thirty-six (36) soil samples were analyzed for Ra-226, isotopic thorium and isotopic uranium. The proposed site radiological soil cleanup levels are being used for comparison purposes. These standards are Ra-226 + Th-232 of 5 pCi/g, and a U-238 concentration of 50 pCi/g. Ra-226 + Th-232, and U-238 isotope concentrations, data validation qualifier, measurement error, and MDAs are presented in **Tables 4-80** through **4-83**. There were seven Ra-226 + Th-232 exceedances. The spatial distribution of Ra-226 + Th-232, and U-238 is depicted on **Figure 4-37**. The radiological results for soils are presented below.

Ra-226 + Th-232

Thirty-six (36) soil samples were analyzed for Ra-226 and Th-232. Ra-226 was detected in 35 of 36 soil samples, with concentrations ranging from 0.35 to 17.44 pCi/g. The maximum concentration of Ra-226 was detected in boring 07a003, which is located on the 111 Essex Street property. **Tables 4-80** and **4-81** present the analytical results for monitoring well and Geoprobe® soils, respectively.

Th-232 was detected in each of the 36 soil samples submitted for analysis with concentrations ranging from 0.23 to 540 pCi/g. The maximum concentration of Th-232 was detected in boring 07a002, which is located on the 111 Essex Street property.

The proposed soil cleanup level for the FMSS is based on a combined Ra-226 + Th-232 concentration of 5 pCi/g. As previously noted, if the data validation qualifier is either "U" (non-detect) or "UJ" (estimated non-detect), the isotope was conservatively estimated as being present at the reported concentration. Ra-226 + Th-232 concentrations ranged from 0.58 to 552.21 pCi/g. The maximum concentration was present in boring 07a002.

Seven soil samples had concentrations of Ra-226 + Th-232 exceeding 5 pCi/g. **Figure 4-37** presents the spatial distribution of Ra-226 + Th-232 in Phase II Geoprobe® and monitoring well soil samples. Locations where the concentrations of Ra-226 + Th-232 exceed 5 pCi/g are bolded in the figure.

U-238 Results

U-238 was detected in 36 soil samples obtained from within the FMSS at concentrations ranging from 0.31 to 37.53 pCi/g. The maximum concentration was detected in monitoring well MW-16S, located at Property No. 1a, 88 Money Street (72 Sydney Street), Lodi. **Table 4-83** and **Table 4-84** presents the analytical results for U-238 in monitoring well soil and Geoprobe® soil borings, respectively. None of the soil results had a U-238 concentration that exceeded the 50 pCi/g criteria. **Figure 4-37** presents the spatial distribution of U-238 in Phase II monitoring well and Geoprobe® soil borings.

4.10.2 Phase II Soil Results - TAL Metals and Lithium/Boron

Thirty-four (34) soil samples were analyzed for TAL Metals including lithium and boron. A summary of the metals detected in monitoring well soil borings is presented in **Table 4-85**, whereas, metals present in Phase II Geoprobe® borings are presented in **Table 4-86**. As noted, additional soil samples were collected to further define the source area soils that are contributing to groundwater impacts/plume development. The discussion of metals in soil includes those metals that (1) have a corresponding groundwater exceedance, or (2) exceed the site specific SSL Metals with corresponding groundwater exceedances include arsenic, barium, beryllium, cadmium, total chromium, lead, lithium, nickel, and thallium. Additionally, antimony was detected in one soil sample above the site specific SSL, and as such is discussed. The spatial distribution of these metals (excluding antimony) is presented on **Figures 4-40a** and **4-40b**. Exceedances of the site specific SSL are presented in **Table 4-87**.

Antimony

Antimony was detected in 4 of 34 soil samples obtained from monitoring well and Geoprobe® soil samples, at concentrations ranging from 0.3 to 9.4 mg/kg. The maximum concentration was detected in boring MW-16S, which is 72 Sydney/88 Money Street property, Lodi. This was the only sample that contained antimony at a concentration exceeding the site specific SSL of 5 mg/kg.

Arsenic

Arsenic was detected in 34 soil samples obtained from monitoring well and Geoprobe® soil samples, at concentrations ranging from 0.65 to 52.1 mg/kg. The maximum concentration was detected in boring MW-3S, which is located on the NYSW property just north of the MISS. Arsenic was not detected at a concentration exceeding the site specific SSL of 122 mg/kg.

Barium

Barium was detected in 33 of 34 soil samples with concentrations ranging from 7.5 to 446 mg/kg. The maximum concentration was detected in soil boring MW-14, which was collected adjacent to Lodi Brook on the 100 Hancock Street property, Lodi. None of the samples exceeded the site specific SSL of 1600 mg/kg.

Beryllium

Beryllium was detected in 33 of 34 soil samples with concentrations ranging from 0.13 to 1.3 mg/kg. The maximum concentration was detected in boring 12b026, which was advanced along the culverted section of Westerly Brook adjacent to Former Retention Pond B. None of the samples exceed the site specific SSL of 63 mg/kg.

Cadmium

Cadmium was detected in 19 of 34 soil samples with concentrations ranging from 0.03 to 2.4 mg/kg. The maximum concentration was detected in boring MW-16S, which was advanced within the 72 Sydney Street/88 Money Street property (Cluster No. 1 - adjacent to Lodi Brook). None of the samples exceed the site specific SSL of 8 mg/kg.

Chromium (total)

Chromium was detected in 33 of 34 soil samples with concentrations ranging from 1.2 to 579 mg/kg. The maximum concentration was detected in boring MW-14S, which was collected adjacent to Lodi Brook on

the 100 Hancock Street property, Lodi. Three samples exceed the site specific SSL of 242 mg/kg. Two samples (MW-3S/MW-20S) obtained adjacent to Former Retention Pond A on the NYSW contained chromium above the site specific SSL

Lead

Lead was detected in 34 soil samples at concentrations ranging from 2 to 280 mg/kg. The maximum concentration was present in boring MW-14S, which was collected adjacent to Lodi Brook on the 100 Hancock Street property, Lodi. There are no exceedances of the site specific SSL of 400 mg/kg.

Lithium

Lithium was detected in 34 soil samples at concentrations ranging from 2.7 to 828 mg/kg. The maximum concentration was present in soil boring 12b026, which was advanced along the culverted section of Westerly Brook adjacent to Former Retention Pond B. This sample and 12b020 also collected adjacent to Former Retention Pond B contained lithium at a concentration exceeding the site specific SSL of 194 mg/Kg.

Nickel

Nickel was detected in 34 soil samples at concentrations ranging from 3.9 to 19.3 mg/kg. The maximum concentration was detected in soil boring MW-16S, which was advanced within the 72 Sydney Street/88 Money Street property (Cluster No. 1 - adjacent to Lodi Brook). There were no exceedances of the site specific SSL of 214 mg/kg.

Thallium

Thallium was detected in soil sample MW-14S at 0.88 mg/kg. This sample was collected adjacent to Lodi Brook on the 100 Hancock Street property, Lodi. No samples exceeded the site specific SSL of 1.2 mg/kg.

4.10.3 Phase II Soil Results - REEs

Twelve (12) soil samples were obtained from monitoring well or Geoprobe® borings advanced on the FMSS and analyzed for REEs. Cerium, dysprosium, lanthanum, neodymium, and yttrium were detected in these soil samples. Sampling results are presented in **Table 4-88** and the distribution of REEs is depicted on **Figure 4-39**. There are no NJDEP IGWC or Generic EPA SSLs for the REEs. The detected REEs are addressed below.

Cerium

Cerium was detected in 11 of 12 soil samples at concentrations ranging from 8.9 to 188 mg/kg. The maximum concentration was present in boring 02b002, located on 80 Hancock Street, Lodi.

Dysprosium

Dysprosium was detected in 10 of 12 soil samples at concentrations ranging from 1.5 to 3 mg/kg. The maximum concentration was present in boring 13a002, which is located on the 96 Park Way property, Rochelle Park.

Lanthanum

Lanthanum was detected in 7 of 12 soil samples with concentrations ranging from 4.5 to 119 mg/kg. The maximum concentration was detected in boring 02b002, located on the 80 Hancock Street property, Lodi.

Neodymium

Neodymium was detected in 12 soil samples at concentrations ranging from 3.8 to 44.4 mg/kg. The maximum concentration was present in boring 02b002, located at 80 Hancock Street, Lodi.

Yttrium

Yttrium was detected in 12 soil samples at concentrations ranging from 0.62 to 17.3 mg/kg. The maximum concentration was present in boring 02b002, located at 80 Hancock Street, Lodi.

4.10.4 Phase II Soil Results - TCL VOCs

Thirty-four (34) soil samples were obtained from monitoring wells and Geoprobe® borings on the FMSS. Four (4) VOCs s were detected in the 34 soil samples, including 2-butanone, acetone, chloromethane, and methylene chloride. Soil VOC results were compared to the more stringent of the NJDEP IGWC or the EPA Generic SSLs. VOC results and applicable criteria are presented in **Table 4-89**. Two sample results exceeded the EPA Generic SSL for methylene chloride. Soil VOCs are addressed below.

2-Butanone

2-butanone was detected in 1 of 34 samples at a concentration of 30 µg/kg. This sample was obtained from monitoring well MW-21S that is located within the 111 Essex Street property (07a), Maywood. A NJDEP IGWC or EPA Generic SSL does not exist for 2-butanone.

Acetone

Acetone was detected in 6 of 34 samples at detected concentrations ranging from 15 to 2900 µg/kg. The maximum concentration was detected in soil sample MW-12S which is located within the 23 West Howcroft Road property (08a). All detected concentrations were below EPA's Generic Soil Impact to Groundwater of 16,000 µg/kg and the NJDEP IGWC of 100,000 µg/kg.

Chloromethane

Chloromethane was detected in 1 of 34 samples at a concentration of 160 µg/kg. This sample was obtained from monitoring well MW-13S that is located within the 99 Essex Street property (05a), Maywood. This concentration is below the NJDEP IGWC of 10,000 µg/kg and an EPA Generic SSL for chloromethane does not exist.

Methylene Chloride

Methylene chloride was detected in 3 of 34 soil samples at concentrations ranging from 11 to 1400 µg/kg. The maximum concentration was detected in soil sample 12b020, which is located within Former Retention Pond B on the MISS. Two samples (12b020 and 12b026) exceed the EPA Generic SSL to Groundwater of 20 µg/kg. One sample (boring 12b020) exceeds the NJDEP IGWC of 1000 µg/kg.

4.11 BATCH SORPTION (SOIL DISTRIBUTION) TESTS

Batch sorption (soil distribution) testing was conducted to measure the potential for site radiological constituents (Ra-226, Th-232, and U-238) and metals (arsenic, chromium, and lithium) to "sorb" to site soils or leach to groundwater. Soil samples were collected from five locations on the MISS that contained elevated levels of radiological contaminants and that represented differing soil types. Soil samples were obtained from Geoprobe® locations 12B-021, 12B-022, 12B-023, 12B-024, and 12B-025. Sample locations are shown on **Figure 4-14**. As shown in **Table 4-90**, soil samples were generally collected in the 0 to 4 feet depth range, except boring 12B-022, which was sampled at 4 to 6 feet below grade. Three of the soil samples consisted principally of sandy silt, USCS SM, one sample was classified as a well sorted sand, SW, and one sample was classified as a silty gravel, GM. Based on a review of boring logs and site geology, a preference was given to collecting a higher percentage of sandy silt samples for batch sorption analysis, since site soils consisted principally of this material.

All soil samples were analyzed for radiological constituents (Ra-226, Th-232, U-238), TAL metals (arsenic, chromium, and lithium), and total organic carbon. Particle size/hydrometer testing was also performed on samples, and soils were classified in accordance with the USCS. Soil organic carbon data and sample soil classifications are given in **Table 4-90**.

4.11.1 Test Methodology

The batch sorption tests were conducted in accordance with ASTM Method D-4646, which is described in Appendix R (ASTM 1999). As outlined in the ASTM method, a 5-gram aliquot of homogenized soil was placed in a solution of pH 5.5 containing a known concentration of the chemical and radiological parameters. A trivalent chromium solution was used in place of hexavalent chromium since it is more stable at standard conditions. The sample aliquot was then shaken and allowed to equilibrate with the spiking solution for approximately 24 hours. After the 24-hour period, the extract was separated from the soil matrix and tested.

Table 4-90 presents the spiking solution concentration and post contact solution concentrations for the radiological parameters. **Table 4-91** presents the spiking solution concentration and post contact solution concentrations for the metals. As shown in **Table 4-90**, the spiking solutions for the three radiological parameters varied based on the isotope and the type of soil. Spiking level concentrations remained fixed for the metals tested.

In order to define the isotopes/chemicals isotherm, the 5-gram aliquots of soil were spiked with increasingly elevated concentrations of COCs. As indicated in **Tables 4-90** and **4-91**, the spiking solutions were identified as A through D. Both tables provide the concentration of the spiking solution and the post contacting solution concentration. A plot of the equilibrium concentration of the spiking solution versus the amount of the isotope/chemical sorbed was prepared in order to define the respective contaminant isotherm (Fetter 1994). The slope of the isotherm is the distribution coefficient (K_d).

As shown in **Tables 4-90** and **4-91**, an individual Kd value is presented for a sample (e.g., 12B-021), whereas, the distribution ratio (Rd) values were determined for each spiking solution concentration. The plots of the isotherms and determination of the Rd/Kd values are presented in Appendix R and the transport of the radiological and chemical constituents are further described in Section 6. The batch sorption tests were not able to take into consideration that sorption sites may already have been occupied by other metals/complexes. Additionally, the results of the batch sorption results are not applicable to fate and transport in the saturated zone since these samples were obtained from the unsaturated zone (sample depths less than 6 feet bgs), as such these Rd/Kd results are best applied to a vadose zone leaching model, if warranted.

4.11.2 Ra-226 Rd/Kd Testing Results

For Ra-226, the calculated Rd ranged from 225.43 to 1821.63 milliliters per gram (mL/g). The low concentration spike, approximately 35,000 pCi/L, had an average Rd value of approximately 1465 mL/g. The Rd value for the high concentration spike, approximately 695,000 pCi/L, averaged approximately 255 mL/g.

Using the isotherm method described by Fetter (1994), Kd averaged approximately 400 mL/g, when all four post contacting solution concentrations were used to define the isotherm. If the high concentration spike was excluded from the plot (3-point plot), the Kd averaged approximately 230 mL/g. Information presented in Charbeneau (2000) indicates that a Kd value for radium (non-isotope specific) in a sand matrix is 500 mL/g and for radium in a silt matrix may be as high as 36,000 mL/g. The DOE (1992) RI report denotes the Kd for Ra-226 to range from 60 mL/g to 2400 mL/g for soils having a pH ranging from 6.0 to 7.7 SU. Appendix R presents the plots of the isotherms and presents the calculations used to determine the Rd/Kd values.

4.11.3 Th-232 Rd/Kd Testing Results

For Th-232, Rd ranged from 2315.88 to 54,306.66 mL/g. The Rd averaged approximately 10,500 mL/g for the low concentration spike (7800 pCi/L) associated with silt soils. The Rd values associated with the low concentration spike averaged approximately 2350 mL/g for the coarser grained soils (12B-021 and 12B-022).

With respect to the high concentration spike (approximately 155,000 pCi/L), the Rd value averaged approximately 17,500 mL/g for the silty soils. For the coarser grained soils the Rd value averaged approximately 5350 mL/g.

Using the isotherm method described by Fetter (1994), Kd averaged approximately 7100 mL/g for the three silt samples (12B-023 to 12B-025), 5100 mL/g for the sandy soil (12B-021), and approximately 20,000 mL/g for the gravelly silt sample (12B-022). Information presented in Charbeneau (2000) indicates that the Kd value for thorium (non-isotope specific) in a sand or silt matrix is approximately 3200 mL/g. The DOE (1992) RI report denotes the Kd for Th-232 may range from 3000 mL/g to 150,000 mL/g depending on the pH of the soil. Appendix R presents the plots of the isotherms and presents the calculations used to determine the Rd/Kd values.

4.11.4 U-238 Rd/Kd Testing Results

For U-238, Rd ranged from 10.69 to 901.67 mL/g. With respect to the low concentration spike (40 pCi/L), the Rd values ranged from approximately 40 to 140 mL/g when associated with the silt soils. The Rd associated with the low concentration spike averaged approximately 17 mL/g for the coarser grained soils (12B-021 and 12B-022).

With the high concentration spike (approximately 775 pCi/L), the Rd value averaged approximately 60 mL/g for the silty soils. The coarser grained soils had an Rd value of approximately 290 mL/g for sample 12B-021 (sand matrix) and approximately 75 mL/g for sample 12B-022 (gravelly silt).

Using the isotherm method described by Fetter (1994), Kds ranged from approximately 40 to 250 mL/g for the silty soils, whereas, the Kd determined for the well-sorted sand was approximately 80 mL/g. The Kd for the gravelly silt was approximately 40 mL/g as determined using the four equilibrium solution concentrations. Information presented in Charbeneau (2000) indicates that the Kd value for uranium (non-isotope specific) in a sand matrix is approximately 35 mL/g and 15 mL/g for uranium in a silt

matrix. The DOE (1992) RI report denotes the Kd for U-238 may range from 45 to 23,000 mL/g depending on the pH of the soil. Appendix R presents the plots of the isotherms and calculations used to determine the Rd/Kd values.

4.11.5 Lithium Rd/Kd Testing Results

For the five soil samples subjected to Rd testing, the Rd value ranged from 0.75 to approximately 9.5 mL/g (**Table 4-91**). The low concentration spike was 9880 µg/L, and had an average Rd value of approximately 6.4 mL/g. The high concentration spike at approximately 95,500 µg/L averaged 1.10 mL/g for all five soil samples tested.

Using the isotherm method described by Fetter (1994), the Kd averaged 1.5 mL/g utilizing all four data points. The DOE (1992) RI report cites Kd values of 50 mL/g for sand and 500 mL/g for soils and clay, respectively. Based on Rd/Kd values determined for site-specific soils, lithium apparently would be preferentially found in solution rather than sorbed to site soils. Appendix R presents the plots of the isotherms and calculations used to determine the Rd/Kd values.

4.11.6 Chromium Rd/Kd Testing Results

For the five soil samples subjected to Rd testing, the Rd value ranged from 3980 mL/g to 11,480 mL/g (**Table 4-91**). The low concentration spike was 20,400 µg/L, and had an average Rd value of approximately 6900 mL/g. The high concentration spike, 102,000 µg/L had an average Rd value of approximately 8630 mL/g.

Using the isotherm method described by Fetter (1994), Kd averaged 9310 mL/g utilizing all four data points. Information presented in Charbeneau (2000) indicates that the Kd value for total chromium in a sand matrix is approximately 70 and 30 mL/g for chromium in a silt matrix. Based on Rd/Kd values determined for site-specific soils, it appears that chromium would preferentially sorb to site soils than be found in solution. Appendix R presents the plots of the isotherms and calculations used to determine the Rd/Kd values.

4.11.7 Arsenic Rd/Kd Testing Results

The soil sample obtained from Geoprobe® location 12B-021 had all post contacting solution (i.e., equilibrium concentration) concentrations as non-detect for the four spiking level concentrations. As a result Rd values could not be determined for this sample. With respect to the other soil samples, the Rd values ranged from approximately 305 to 5835 mL/g. The low concentration spike was 295 µg/L, and had an average Rd value of approximately 850 mL/g. The high concentration spike, 1200 µg/L had an average Rd value of approximately 3050 mL/g.

As a result of the post contacting liquid concentrations being non-detect for several aliquot fractions, it was not feasible to define the isotherms for arsenic in soil. The spiking solutions did not apparently contain sufficient concentration of arsenic to define the isotherm since most of the post contacting solution concentrations was reported at the detection limit.

The DOE (1992) RI report cites a Kd value for arsenic of 0.3 and 3 mL/g for sand and soils/clays, respectively. Based on Rd values determined for site-specific soils, it appears that arsenic would preferentially sorb to site soils than be found in solution. Appendix R presents the calculations used to determine the Rd values for arsenic.

4.12 SUPPLEMENTAL INVESTIGATION - SAMPLING RESULTS

This section presents the results of the Phase II bedrock benzene groundwater sampling, background soil and groundwater benzene (source area) data evaluation, and additional benzene and biogeochemical sampling that was conducted as part of the Supplemental Investigation. Phase II benzene sampling results are presented in Section 4.12.1, and the results of the background soil and groundwater benzene data evaluation are presented in Section 4.12.2. Benzene and biogeochemical sampling results are presented in Sections 4.12.3 and 4.12.4, respectively.

4.12.1 Phase II Bedrock Groundwater Benzene Data Evaluation

Elevated benzene concentrations were detected in 17 bedrock wells during the Phase II investigation, including 4 wells on the MISS with benzene concentrations exceeding 1000 µg/L. A benzene isopleth map was prepared from the Phase II GWRI bedrock sampling data, and is shown on **Figure 4-42**. As shown, a contiguous benzene plume is plotted in the bedrock aquifer on the MISS, extending northeast to southwest from the area of upgradient well MW-26D to MISS-5B, which is located at the downgradient property boundary. Maximum detected benzene concentrations within the plume were recorded at wells BRPZ-5 (5000 µg/L) and MISS-5B (3500 µg/L). The benzene concentration isopleths were superimposed over the December 2001 bedrock groundwater contours on **Figure 4-42** and show a southwest plume flow direction. The interim results of the Phase II benzene sampling data were presented to the EPA in 2002, and further delineation of the benzene plume source area and downgradient extent of the plume was requested at that time.

4.12.2 Background Soil and Groundwater Benzene Data Evaluation

Background soil and groundwater benzene data was evaluated as part of the Supplemental Investigation-I to identify potential benzene source areas and determine the historical plume concentration and dimensions over time. Phase I and Phase II GWRI soil and groundwater data was evaluated as part of the background data evaluation.

Background Soil Benzene Sampling Data

Soil sampling data was reviewed from previous MCW (MISS and Stepan Company) Investigations and the Phase I/II GWRI. Soil data reviewed included Geoprobe® borings, and soil borings associated with monitoring well installation (GWRI Phase I/II), and test pit sampling data collected as part of the RI Report (DOE 1992), and Pilot Study Report (USACE 2000a) for the FMSS. Soil sampling data collected as part of the Stepan RI Report (CH2M HILL 1994) was also reviewed in the evaluation.

A total of 137 soil borings/monitoring well borings, and test pit soil samples were advanced within the MISS and adjacent areas of the Stepan Chemical property. From these 137 sample locations, 202 soil samples were submitted for benzene analysis. A majority of these samples were collected from the MISS. Soil sample locations, identification, and benzene sampling results are shown on **Figure 4-40**. Additional sampling data (sample type, date, and investigation) is summarized in **Table 4-92**. As shown on **Figure 4-40**, a large number of soil samples were collected in the probable source area, which is located upgradient and in proximity to monitoring well MW-26D (refer to **Figure 2-4**). Soils were also sampled along the slab of former MCW Building 62, which historical MCW maps show contained two above ground chemical storage tanks. The location of former MCW Building 62 is shown on **Figure 4-40**.

Soil sampling results show benzene exceedances of the EPA Generic SSL of 30 µg/kg in 13 of 202 samples, and 4 exceedances of the NJDEP IGWC of 1000 µg/kg. Benzene soil exceedances are highlighted on **Figure 4-40**, and show exceedances at USACE Test Pit 3 (maximum detected

4300 µg/kg), Test Pit 4 (maximum detected 3600 µg/kg), Test Pit 5 (380,000 µg/kg), Stepan soil boring C-44 (maximum detected 4700 µg/kg), DOE boring C701 (87 µg/kg), and GWRI borings 12b012 (330 µg/kg) and 12b013 (200 µg/kg).

Test Pits 3 and 4 are located at the edge of former Retention Ponds C and E', and Test Pit 5 is located at the southern edge of Building 76. Test Pits 3, 4, and 5 are located within the mapped extent of the overburden aquifer (Section 3.5.2). Soil samples obtained from borings on the Stepan property, C44 and C701 are located along the southwestern boundary of the Stepan property in proximity to the Former Aromatics Area, which is undergoing remediation (STEPAN, 2002). Lastly, soil samples were obtained from Geoprobe® borings advanced as part of Phase I GWRI activities. These GWRI borings were advanced along Transect E on the western boundary of the MISS within and south of Former Retention Pond E' on the MISS. As shown on **Figure 4-40**, benzene soil exceedances were not detected in test pits along the slab at former MCW building 62.

Background Overburden Groundwater Benzene Data

Overburden groundwater benzene sampling data was reviewed on the MISS and adjacent Stepan Company Property as part of the source evaluation. This included a review of overburden groundwater benzene data collected from the RI Report (DOE 1992), GWRI activities (Phase I/II), 2002 Annual Monitoring Report (USACE 2003d), and the Stepan Company RI Report (CH2M Hill 1994).

VOC overburden groundwater sampling was conducted on the MISS and adjacent Stepan property during the Phase I and II GWRI (see Sections 4.1.4 and 4.4.4/4.5.4). An overburden benzene isopleth map was prepared from the Phase II data and is shown on **Figure 4-41**. Low-level benzene exceedances were detected in MISS Geoprobe® locations 12b017 (4 and 71 µg/L), 12b028 (2 µg/L), 12b020 (9 µg/L), and 12b011 (36 µg/L). As shown on **Figure 4-41**, overburden wells located adjacent and downgradient to former Building 62 and monitoring well MW-26D (B38W25S, MISS-6A, MISS-7A, PW-1S, OVPZ-17, B38W19S, and MISS-1AA) report very low or non-detect concentrations of benzene. The overburden groundwater benzene concentrations on the MISS are considered too low to constitute a source of benzene to the bedrock aquifer.

Historical overburden groundwater sampling data (except newly installed wells PW-1S and OVPZ-17) for these wells goes back to 1987, and likewise do not report exceedances of benzene in groundwater (USACE 2003a). Evaluation of the current and historical overburden groundwater benzene data does not show any evidence of a current/former overburden groundwater source to the bedrock aquifer. Historical groundwater benzene data for the bedrock aquifer is presented and discussed in the following section.

Background Bedrock Groundwater Benzene Data

Historical bedrock benzene sampling data was evaluated with Phase II data to further characterize the benzene contamination in bedrock. Historical benzene sampling data are presented in **Table 4-93**, and shows intermittent bedrock benzene exceedances from the start of sampling in 1985 at downgradient (MISS) wells MISS-5B and MISS-7B. Downgradient MISS well B38W19D also shows intermittent low-level exceedances from the onset of sampling in 1994. These data indicates the existence of a MISS benzene plume from at least 1985, although at a lower concentration than detected at MISS-5A and new install Phase II GRWI bedrock wells. The onset of bedrock groundwater contamination would pre-date the initial detection of benzene in these wells. The fluctuation of benzene concentrations at well MISS-5B and other wells with time is likely influenced by a number of factors, including: (1) the change in sampling methods from dedicated bladder pumps in 1999 to low flow sampling in 2000; (2) groundwater level at the time of sampling; (3) variable benzene concentrations within a residual/stable plume over time; and/or (4) variable benzene source loading or intermittent source of benzene.

4.12.3 Benzene Sampling Results

Thirty-four (34) groundwater VOC samples were collected in July and August 2002, with later installed wells sampled in October 2002 (MW-33D/MW- 34D), March 2003 (MW-31D) and May 2003 (MW-32D). **Table 4-94** presents detectable TCL VOC results, and **Table 4-95** presents those samples that contain benzene above the groundwater standard.

Benzene was detected in 19 of 38 bedrock groundwater samples, with 14 samples exceeding the New Jersey GWQC of 1 µg/L. Benzene groundwater concentrations ranged from 0.2 µg/L to 9500 µg/L, with the maximum detected concentration reported at MISS bedrock monitoring well BRPZ-5. Benzene results are depicted spatially on **Figure 4-43**. With the exception of samples obtained from wells MISS-4B (Stepan) and MW-3D (NYSW), all of the benzene exceedances were present in wells located within the MISS.

4.12.4 Biogeochemical Sampling Results

Field parameters were analyzed for DO, redox potential (Eh), pH, temperature, and turbidity. Of these parameters, DO and redox potential are important parameters in assessing in-situ bioremediation potential. Additionally, alternate electron acceptors consisting of manganese reduction, nitrate reduction, iron reduction, sulfate reduction, and methanogenesis are indicators of in-situ bioremediation. Biological community data was also collected in the form of BOD, COD, and BTEX Degrader Heterotrophs and Total Heterotroph analysis. Furthermore, nutrient data in the form of phosphate, nitrate, and TOC data were collected. These data are presented in the following sections.

Dissolved Oxygen (DO)

DO is the most thermodynamically favored electron acceptor used by microbes for the degradation of organic carbon. Aerobic biodegradation of benzene typically occurs with DO concentrations greater than 1.0 mg/L, but has been reported as low as 0.5 mg/L (EPA 1998b, 1998c). DO was measured at all wells in the field during sampling, using a YSI 650 multimeter and flow through cell. Measured DO values are presented in **Table 2-8**.

DO was measured at 38 bedrock monitoring wells, and is shown on **Figure 4-44**. Values of DO recorded at wells MISS-2B, B38W25D and MW-26D were rejected since they exceeded the maximum theoretical D.O. value of 9.9 mg/L at sea level (North Carolina State University, College of Agriculture and Life Sciences, April 2002). The field measured DO values at wells BRPZ-5 (1.58 mg/L), MISS-5B (1.16 mg/L), and MW-26D (1.67 mg/L) are inconsistent with other sampling data showing deeply reduced groundwater conditions at these wells, and may reflect DO meter/sensor error during purging.

Twenty-nine (29) wells have DO concentrations less than 1.0 mg/L, with 20 wells below 0.5 mg/L. These data indicate anaerobic groundwater conditions at a majority of site wells. Low DO concentrations (0.5 to 1.0 mg/L) were detected at eight wells located upgradient and sidegradient to the plotted benzene plume. Elevated DO levels were detected at wells MISS-1B (2.24 mg/L) and MW-5D (4.02 mg/L). The DO data indicates anaerobic groundwater conditions at a majority of site wells, and in all wells located downgradient from the projected benzene source area.

Oxidation - Reduction Potential

The ORP of groundwater is a measure of electron activity and is an indicator of the relative tendency of a solution to accept or transfer electrons. The ORP of groundwater generally ranges from -500 millivolts (mV) to +800 mV. Under aerobic (or oxidizing) conditions, the ORP of groundwater is positive and

typically above +800 mV, whereas anaerobic (reducing) conditions are characterized by ORP readings below +800 mV. The ORP of groundwater can be used as an indicator since certain biodegradation processes (i.e., sulfate reduction, methanogenesis) only operate within a prescribed range of ORP conditions. The ORP for various oxidation-reduction reactions is shown on **Figure 4-44**.

ORP was measured in 38 wells during sampling, and is presented in **Table 2-8**, and depicted spatially on **Figure 4-44**. Groundwater ORP ranged from -626.3 mV to +332.6 mV, with 31 of 38 values below +0.0 mV. The lowest Eh values are reported at wells located within the benzene plume including MW-26D (-626 mV), BRPZ-9 (-72.8 mV), BRPZ-5 (-332 mV), MISS-5B (-88.9 mV), BRPZ-4 (-55.4 mV) and BRPZ-3 (-578 mV). The range of Eh values in the plume area indicate that precipitated iron/iron dissolved ($Fe_{solid}/Fe_{dis)}$, SO_4/HS and CO_2/ CH_4 reduction reactions may be occurring in groundwater as part of the anaerobic benzene biodegradation process (see **Figure 4-45**). Projected downgradient compliance wells (B38W17B, MW-31D, MW-32D, B38W15D, and MW-2D) are less reduced, and indicate potential Mn_{solid}/Mn_{dis} and Fe_{solid}/Fe_{dis} reduction reactions.

pH Data

The pH is defined as the negative logarithm of the hydrogen ion activity and describes whether a solution is acidic (pH<7), neutral (pH=7), or basic (pH>7). Microbes capable of degrading petroleum hydrocarbon compounds generally prefer pH values ranging from 6 to 8 standard units (SU).

The pH of the groundwater was measured during sample purging, and is presented in **Table 2-8**. The pH values ranged from 5.54 to 7.49 SU, with three samples (B38W18D, B38W24D, and BRPZ-5) slightly outside the prescribed range.

Alternate Electron Acceptors

Microorganisms obtain energy by transferring electrons from donors, such as organic carbon compounds (BTX), to compounds that accept electrons. For biodegradation to occur, electron acceptors must be present. In respiration, electrons are transferred directly to inorganic compounds that are relatively oxidized, and include molecular oxygen, nitrate, manganese (Mn_{solid}), iron (Fe_{solid}), sulfate, or carbon dioxide. In fermentation (methanogenesis), organic compounds act as both the electron donor (BTX) and acceptor (CO_2), and generate incompletely oxidized by-products such as CH_4.

The alternate electron acceptors (other than oxygen) were sampled to identify available acceptors, and provide data for the Feasibility Study. Reduced electron acceptor species/compounds (NH_4^+, Mn^{+2} (Mn_{dis}), Fe^{+2} (Fe_{dis}), HS, and CH_4 were also sampled to provide evidence of specific acceptor utilization and biologic activity. Although nitrogen gas (N_2) is the thermodynamically favored reaction and product of denitrification, measurement of nitrogen gas is not feasible in the field. Therefore, ammonia was measured in order to show that nitrate reduction is occurring as part of in-situ biodegradation. As illustrated on **Figure 4-45**, biochemical reactions will preferentially reduce electron acceptors in the order of NO_3^-/NH_4^+], manganese total/manganese dissolved (Mn_{Tot}/Mn_{dis}), iron dissolved/iron total (Fe_{Tot}/Fe_{dis}), sulfate (SO_4^{-2}/S^{-2}), and carbon dioxide (CO_2)/CH_4). Alternate electron acceptors were sampled and analyzed in nine monitoring well samples. The electron acceptor data are given in **Table 4-96**, and depicted graphically on **Figure 4-46**. Sampling results for each electron acceptor and reduced compound are presented in the following section.

Nitrate/Ammonia Reduction

Low concentrations of nitrate (0.04 to 0.14 mg/L) were detected in four of nine samples. Three of four wells with detected nitrate are located downgradient of the plotted benzene plume. Ammonia, the

reduced form of nitrate, was detected in wells at concentrations ranging from 0.88 mg/L to 19 mg/L (MISS-5B). The highest ammonia concentration was detected at wells located within the mapped benzene plume, indicating more reduced conditions. The absence/trace detected concentrations of nitrate, and high concentrations of ammonia in groundwater indicate the depletion of nitrate as an electron acceptor. These data also indicates continued reduced groundwater conditions, and ongoing degradation of organic carbon in the aquifer.

Manganese Reduction

Manganese occurs as a solid in the form of the minerals rhodochrosite, manganite, and pyrolusite. Under anaerobic conditions, bacteria can use these minerals as electron acceptors. In the presence of benzene, manganite (MnO_2) will be reduced from Mn_{solid} to Mn_{dis}. Under anaerobic conditions (DO < 0.5 mg/L), manganese (Mn_{solid}) is reduced to Mn_{dis}. The Mn_{solid} concentration was estimated by subtracting the filtered or dissolved (Mn_{dis}) sample results from the total manganese concentration.

As indicated in **Table 4-96**, low/trace concentrations of Mn_{solid} were detected in all but one sample (BRPZ-9), with detected concentrations ranging from 0.02 to 3.82 mg/L (BRPZ-4). Dissolved Mn_{dis} concentrations substantially exceeded Mn_{solid} at all locations, and ranged from 0.328 to 5.26 mg/L (BRPZ-4). Overall, approximately 95% of the total manganese was in the dissolved (reduced) form. As depicted on **Figure 4-46**, the highest dissolved (Mn_{dis}) manganese concentrations are detected at wells located within the plotted benzene plume, and downgradient well B38W17B.

The low concentrations/absence of Mn_{solid}, and relatively high concentrations of dissolved manganese (Mn_{dis}), indicate that the Mn_{solid} is depleted as an electron acceptor in the bedrock aquifer. The higher concentrations of dissolved manganese in plume areas appear to indicate that reduced conditions have occurred due to degradation of organics in groundwater. However, it should be noted that site-specific analysis for Biologically Extractable $Mn_{(solid)}$ has not been conducted, therefore, it is difficult to determine the amount of Biologically Extractable $Mn_{(solid)}$ that has been reduced in the aquifer.

Iron Reduction

Ferric Iron (Fe_{solid}) was detected in seven of eight groundwater samples, with concentrations ranging from 0.02 to 5.85 mg/L (BRPZ-4). Dissolved (ferrous or Fe_{dis}) iron was detected in five of seven wells, with detected concentrations ranging from 0.44 to 62.7 mg/L (MW-26D). As shown on **Figure 4-46**, the highest dissolved iron concentrations are detected in wells within the plotted benzene plume and at downgradient well B38W17B. Downgradient wells show decreasing ferrous (dissolved) iron concentrations (to non-detect) with distance from the site.

Iron sampling data indicates that ferric iron (as an electron acceptor) is substantially diminished at monitoring wells MW-26D and B38W17B, and is significantly (>50%) diminished at benzene plume monitoring wells BRPZ-9 and BRPZ-4. Downgradient (offsite) wells, except B38W17B, show little if any iron reduction activity. These data appears to indicate that microbes are utilizing iron (Fe_{solid}) as an electron acceptor in much of the benzene plume, and plume fringe areas. Other plume areas are more heavily reduced, and biodegradation may proceed using sulfate or CO_2 as alternate electron acceptors. However, it should be noted that site-specific analysis for Biologically Extractable $Fe_{(solid)}$ has not been determined for this site, therefore, it is difficult to determine the amount of Biologically Extractable $Fe_{(solid)}$ that has been reduced in the aquifer.

Sulfate Reduction

Sulfate can be used as an electron acceptor during biodegradation, where sulfate (S^{+6}) is reduced to sulfide (S^{-2}), and hydrogen sulfide is generated as an end product. Sulfate was detected in eight of the nine samples collected, with concentrations ranging from 350 to 3000 mg/L (MW-26D). Sulfate/sulfide concentrations are given in **Table 4-96** and shown on **Figure 4-46**.

Sulfide was detected in 3 of 9 samples, including benzene plume monitoring wells BRPZ-9 (1.0 mg/L) and BRPZ-4 (0.2 mg/L), and downgradient well MW-32D (0.5 mg/L). Sulfate reduction at wells BRPZ-9 and BRPZ-4 is consistent with the high ferrous iron concentrations at those wells, and is likewise predicted at wells MW-26D and B38W17B.

Methanogenesis

Carbon dioxide can act as an electron acceptor during anaerobic biodegradation, and is ultimately reduced to CH_4 under strongly reducing (-240 mV) conditions. Methane groundwater concentrations in excess 0.5 mg/L are an indicator of methanogenesis (EPA 1998b). As presented in **Table 4-96**, methane was detected in nine groundwater samples at concentrations ranging from 0.002 to 3.1 mg/L. High CH_4 concentrations (>1.0 mg/L) were detected in benzene plume monitoring wells BRPZ-4 (3.1 mg/L), BRPZ-9 (2.9 mg/L), and MW-26D (1.8 mg/L). As shown on **Figure 4-46**, CH_4 concentrations generally decrease with distance from the mapped benzene plume.

Methane groundwater data indicates that methanogenesis is an ongoing process in the plotted benzene plume and monitoring wells MW-26D, BRPZ-9, and BRPZ-4. Reduction of sulfate is also predicted in these wells and plume area wells.

Nutrients

The essential microbial nutrients, nitrogen, phosphorous, and carbon, were sampled as part of the Supplemental Investigation. Nine samples were collected and analyzed for ammonia and nitrate, total phosphorous, and TOC. Nutrient sampling results are summarized in **Table 4-97**, and sample results are presented on **Figure 4-47**. The sampling results for each nutrient are briefly discussed in the following sections.

Nitrogen

Nitrogen is needed by microorganisms for protein and nucleic acid synthesis. The most common inorganic source is ammonia, but nitrate can also be reduced by microbes to obtain ammonia. As indicated in **Table 4-96**, ammonia was detected in all samples, and nitrate was detected in three of nine samples (**Tables 4-96** and **4-97**).

Phosphorous

Phosphate is utilized by microorganisms for synthesizing phospholipids and nucleic acids, and is also essential for energy transfer reactions involving adenine triphosphate (ATP). As indicated in **Table 4-97**, phosphorous (as total phosphorous or TP) was detected in 8 of 9 groundwater samples, with detected concentrations ranging from 0.0579 to 1.37 mg/L. Phosphorous was not detected in groundwater at well BRPZ-9, and may be a limiting factor to biodegradation at that location (**Figure 4-47**). It is noted, however, that high total phosphorous concentrations were detected in nearby benzene plume monitoring wells BRPZ-4 (1.37 mg/L), MISS-5B (0.604 mg/L), and MW-26D (0.201 mg/L). However, it should be noted that phosphorous may also be sorbed to the aquifer matrix, and that nutrient cycling will occur among dying and growing populations of microorganisms.

Total Organic Carbon

Microorganisms require carbon sources for cell growth, and are capable of using a wide variety of carbon bearing compounds. They also obtain energy by transferring electrons from donors such as carbon, to compounds that accept electrons. As indicated in **Table 4-97**, and depicted on **Figure 4-47**, TOC was detected in 5 of 9 samples at concentrations ranging from 0.38 to 34 mg/L. Total organic carbon was detected in all benzene impacted wells, with the highest concentrations reported at wells BRPZ-9 (25 mg/L) and MW-26D (34 mg/L). Total organic carbon was not detected in downgradient monitoring wells B38W17B, MW-2D, and MW-31D, which lie outside the plotted extent of the benzene plume.

Oxygen Demand

BOD was evaluated in groundwater as an indicator of biologic activity. COD measures the non-biologic oxygen demand from reduced compounds, and is used to gauge the degree of aquifer reduction. BOD and COD data will also be used in the Feasibility Study to estimate aquifer oxygen demand for remedial design purposes. BOD and COD sample results are summarized in **Table 4-98**, and spatially depicted on **Figure 4-48**.

BOD

BOD is the amount of DO consumed in 5 days by biochemical oxidation of organic matter. The sample is initially spiked with bacteria, and incubated over a five-day period under aerobic conditions. Typically, BOD represents 45-55% of the Theoretical Oxygen Demand (THOD), with COD comprising the balance of the oxygen demand (Corbitt, 1990). BOD was measured in 8 of 9 samples at concentrations ranging from 0.42 to 20 mg/L. As shown on **Figure 4-48**, the highest BOD values were measured in benzene plume monitoring wells MW-26D (20 mg/L), BRPZ-9 (9.4 mg/L), MISS-5B (9.1 mg/L), and BRPZ-4 (4.8 mg/L). Noting that the mass ratio of benzene is 0.326:1, benzene present within the center of the plume could only account for 1.5 to 6.4 mg/L of the BOD. This may be attributed to the presence of other organics (e.g. chlorotoluene, surfactants, amines) at these locations. The high BOD values are attributed to the presence of benzene (and potentially other organics) and other partially oxidized organic substrates, and nutrients in strongly reduced groundwater samples.

COD

COD is a measure of the oxygen required to oxidize all compounds, both organic and inorganic, in water to carbon dioxide. COD is also used to assess the ORP of groundwater, where increasing COD values correspond to reduced redox conditions. COD was detected in 6 of 9 samples at concentrations ranging from 9.82 to 125 mg/L. As shown on **Figure 4-48**, the highest COD values were detected at benzene plume monitoring wells BRPZ-9 (125 mg/L), MW-26D (105 mg/L), BRPZ-4 (40.3 mg/L), MISS-5B (19.7 mg/L), and offsite well B38W17B (33.6 mg/L). Downgradient COD concentrations generally decrease to non-detect with distance from the MISS.

Monitoring well COD concentrations correspond well with the measured ORP and electron acceptors, and supports the distribution of redox and electron acceptor (reduction) zones in the study area.

Microbiologic Activity

Direct biologic activity is measured by bacterial plate counts on non-selective (total heterotroph) and/or selective (BTEX) media. Noting that groundwater is moderately to strongly reduced in the site aquifer, replication of the aquifer environment would require incubation on an electron acceptor specific growth

media, under anaerobic conditions. Unfortunately, anaerobic bacteria are difficult to grow, and the results are often inconsistent. Total heterotroph bacteria counts (THC) are the most commonly used indicator of microbiologic activity in groundwater. Groundwater samples were also evaluated for BTEX degraders, which utilized a selective media with BTEX as the sole carbon source. However, according to the American Society for Testing and Materials (ASTM), microbial counts are often unreliable indicators of biodegradation. The results of the THC and BTEX Degrader counts are summarized in **Table 4-98**, and are spatially shown on **Figure 4-48**. Plate count results for each method are discussed in the following sections.

Total Heterotroph Bacteria

Nine groundwater samples were collected and evaluated for THC as a general indicator of bacterial activity. Heterotrophic bacteria were detected in seven of nine samples, with a reported range of 160 to 75,000 colony forming units per milliliter (CFU/mL). Heterotroph bacteria counts are highest in downgradient areas, and probably reflect the relative abundance of facultative (oxygen tolerant) bacteria in less reduced aquifer areas. Heterotrophic bacteria were not reported in samples from benzene plume area wells MW-26D and BRPZ-4, and probably indicate the dominance of obligate anaerobic sulfur reducing and methanogenic bacteria at those locations. Redox potential (Eh), electron acceptor, and COD data all indicate strongly reduced conditions at wells MW-26D and BRPZ-4. As noted, obligate anaerobic bacteria will not grow in aerobic (THC and BTEX degrader) test environments. Metals toxicity at wells MW-26D and BRPZ-4 is unlikely, noting the growth of spiked bacteria and high BOD measurements at those wells.

BTEX Degrader Bacteria

Nine groundwater samples were evaluated for BTEX degrader bacteria. As noted, groundwater samples are incubated in a selective media, where BTEX is the only available carbon source. The BTEX degrader test should give a more realistic count of organisms that can degrade BTEX compounds than the THC. The BTEX degrader test also incubates samples under aerobic conditions, and will have limited utility with respect to evaluation of anaerobic biodegradation.

BTEX Degrader bacteria were detected in seven of nine wells, with counts ranging from 270 CFU/mL (B38W15D) to 1,700 CFU/mL (MW-32D). Like the THC data, the highest BTEX degrader counts were obtained in downgradient well locations. The relative abundance of BTEX degraders mirror the THC, but actual counts were lower than THC in four of seven detected samples, and the same (at the detection limit of 300 CFU/mL) in two samples. The BTEX degrader counts should be lower due to the more selective growth media. BTEX degraders were also not detected at benzene plume wells MW-26D and BRPZ-4, and may indicate the prevalence of methanogenic (anaerobic) bacteria at these locations.

4.13 QUALITY ASSURANCE/QUALITY CONTROL

The GWRI QA/QC program was performed in compliance with the CDQMP (USACE 2002c) and the *Groundwater Remedial Investigation Work Plan* (December 2000). Field quality control samples were collected during sampling, and included trip blanks, equipment rinsate/field blanks, confirmation samples (radiological), and USACE replicates.

All radiological laboratory analysis was performed by Eberline Services (Formerly ThermoRetec) of Oak Ridge, Tennessee. Chemical analysis was performed by LVLI Lionville Laboratory Inc. (Formerly RCRA) of Exton, PA and STL Laboratories of Shelton, Connecticut. The data evaluation process was performed in accordance with the US Army Corp CENWK-EC-EF Data Quality Evaluation Guidance (USACE 1999) and the EPA Region II Data Validation Procedures (EPA 1999c, EPA 2002).

As required by the NJDEP Site Remediation Program, and as identified in NJAC 7:26E, or the Tech Regs., an electronic data submission is required for samples obtained as part of a Site Investigation, RI or Remedial Action. The HazSite deliverable was formatted in a database format (dbf). Appendix S contains the electronic deliverable on CD. Both chemical and radiological data obtained as part of the Phase I and II program is contained on the CD. As recommended by NJ DEP, USACE utilized the EDSA routine to verify that the files would be acceptable for importing into the NJ DEP database. The database files were accepted by the EDSA routine. Individual directories exist on the CD for radiological and chemical data.

Field quality control sampling, laboratory QA/QC, and data validation are addressed in the following sections.

4.13.1 Trip Blanks

Trip blanks were provided by the laboratory and consisted of High Purity Liquid Chromatographic (HPLC) grade water. Trip blanks were shipped with each cooler containing samples for VOC analysis. A total of 119 trip blanks were submitted for TCL VOC analysis, including 20 during Phase I and 103 during Phase II activities. The results of the VOC analysis are presented in Appendix S, **Table 1**.

4.13.2 Equipment Rinsate/Field Blank Analysis

As part of the GWRI program, two types of blanks were obtained for analysis. The first type was a field blank, which is used to assess whether disposable equipment or material such as polyethylene tubing/tygon tubing, macro-core sampler or micro-bailer is free of COPCs. New lots of tubing/bailers/macro-core samplers were evaluated by pouring laboratory supplied HPLC grade water through the equipment and analyzing the rinsate for the COPCs. Information obtained from the field blank data was tracked and supplied to the data validator so that the results of the blanks could be applied to the appropriate samples. A total of 14 field blanks were submitted for radiological analysis, 15 samples for metals analysis, and 12 samples for VOC analysis.

The equipment rinsate blank was used to assess potential cross contamination from reusable equipment, which includes split-spoon samplers and Grundfos submersible pumps. A rinsate sample is collected by pouring an aliquot of HPLC-grade water through each type of equipment after decontamination, and checks whether the decontamination procedure was successful in removing contaminants from the equipment. Information obtained from the equipment rinsate blank data was tracked and supplied to the data validator such that the results of the equipment blank data could be applied to the samples associated with a particular sampling event. A total of 74 equipment rinsate blanks were submitted for radiological analysis, 80 equipment blanks were submitted for metals analysis, and 74 equipment rinsate blanks were submitted for VOC analysis.

The results of the field/equipment rinsate blanks are provided in Appendix S, Tables 2 through 4 and discussed by program as follows.

4.13.3 Field Replicates Analysis

As part of the GWRI field program, 35 field replicates were submitted for radiological analysis. Thirty-two (32) replicate samples were collected for chemical analysis. The aqueous and soil field replicates were collected to determine both the precision/reproducibility of the laboratory test method and the sample handling/blending process. The results of the replicate pairs were subsequently used by the data validator to qualify the data.

Aqueous radiological and chemical replicate data are shown in **Table 4-99**. Soil replicate data are presented in **Table 4-100**. A comparison of the relative percent difference (RPD) between the sample and its replicate pair is presented in the Quality Control Status Report (QCSR), which is included in Appendix S.

4.13.4 Confirmation Analysis

As specified in the CDQMP, 10% of the samples submitted to the on-site laboratory for radiological analyses were also submitted to a NJDEP certified lab for confirmation analysis. The on-site laboratory was responsible for preparation of the confirmation sample for counting by the fixed base laboratory. The on-site laboratory analyzed 84 soil samples for Ra-226, Th-232, and U-238. Eleven (11) soil samples were submitted to the off-site laboratory for the same analyses and analyzed by gamma spectroscopy (Method LANL ER-130 Modified). Soil confirmation analysis data are presented in **Table 4-100**.

4.13.5 USACE Split Sample Analyses

As required in the CDQMP, split samples were submitted to the USACE QA laboratory for testing. This testing is in addition to laboratory replicate (duplicate) sample analysis. The purpose of the USACE split sample analysis is to evaluate the performance of the field crew and inter-laboratory variability. As depicted in **Table 4-101**, 28 split samples were submitted to the USACE laboratory for split sample analysis out of a total of 438 samples. Shaw has provided the USACE with the split sample results for their use in comparing inter-laboratory variability.

4.13.6 Sample Management/Data Validation

Sample management includes laboratory QA/QC and data package review by the project chemist. Shipped samples were logged in by laboratory staff and temperature blanks and/or the temperature of the cooler were measured. The sample containers were checked for breakage/leakage, and in the case of the VOC samples, the sample containers were inverted to check for the presence of air bubbles. The laboratory then verified that the samples identified on the chain-of-custody were received and that the sample containers/methods of analysis match the information on the chain-of-custody. If there were discrepancies, they were noted on the sample login form.

A laboratory chain-of-custody was prepared which identifies the methods of analysis required for each sample aliquot. The pH of the sample was verified, if applicable, and the laboratory then recorded this information. After analysis, the data package was assembled and internally reviewed by the laboratory QA Staff. Discrepancies were addressed in the case narrative, which may include sample holding time exceedances, temperature issues, poor MS/MSD or laboratory control standards (LCS) recoveries, etc.

Upon receipt of the data package from the laboratory, the Project Chemist reviewed all packages for completeness and the case narrative to identify major issues. All data packages were submitted to a certified validator for validation in accordance with the US Army Corp Guidance CENWK-EC-EF Data Quality Evaluation Guidance (USACE 1999). Ten percent (10%) of the data packages were validated in accordance with EPA Region II procedures. The following components of the data packages were reviewed by the validator:

- Holding times
- Laboratory blank data
- LCSs
- Surrogate recovery (organic methods)

- MS/MSD and MS/MD percent recoveries and relative percent differences
- Internal standards (primarily organic methods)
- Isotopic tracers (radionuclide methods)
- Inductively Coupled Plasma (ICP) or atomic absorption QC (inorganic methods only)
- Calibration
- Sample reanalysis
- Secondary dilutions
- Laboratory case narrative

Data qualifiers were assigned to samples by the validator, and include the following:

- U - denotes the analyte was non-detect
- UJ - denotes that the analyte was non-detect and that the detection limits were estimated
- J - denotes that the concentration presented, was estimated
- R - denotes that the analyte was rejected
- D - denotes that the analysis required dilution prior to analysis
- B - denotes that blank contamination was encountered in the sample

A data validation memorandum was prepared by the validator for each data package. The data validation memo was reviewed by the project chemist, and entered into the project database. Copies of the laboratory data packages and data validation memoranda are presented in Appendix S.

4.13.7 Rejected Data

A small percentage of samples/analytes were rejected for excessive holding times, elevated cooler temperature, and poor laboratory control standard recoveries. None of the soil/sediment radiological analyses were rejected. Less than 5% of the radiological water samples were rejected, which complies with the CDQMP.

The percentage of rejected chemical data was below 5% for all metals and VOC compounds except for the following:

- TAL metal copper, and boron
- VOCs acetone, methyl ethyl ketone (MEK), 1,2-DCE and 2,2'-oxybis(1-Chloropropane).

The rejected data are presented in Appendix S, **Table 5** and **6**.

4.13.8 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements that specify the quality of data required to support decisions made during investigation activities, and are based on the end uses of the data being collected.

In accordance with EPA guidance (EPA, 1994a) and USACE guidance (USACE, 1997), a combination of Screening Level and Definitive Level data are required for each project. Definitive data are typically data generated under laboratory conditions using EPA-approved procedures. Data of this type, both

qualitative and quantitative, are used for determination of source, extent, or characterization and to support evaluation of remedial technologies and preliminary assessment memorandum. The elements in the DQO process are described in the CDQMP (USACE 2002c).

The ability of a data generation process to meet the DQOs was provided through the establishment of data quality criteria, which include precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS) parameters. Laboratory and field sampling activity documentation were used to assess the PARCCS parameters. Reference is given to Appendix A of the FSP for appropriate field procedures, and Appendix D of the CDQMP for laboratory analytical procedures. Both documents have been submitted under separate cover and are not transmitted within. Additionally, Appendix S of this report includes the QCSR for this project. Included in this appendix is the laboratory data packages and data validation memoranda.

PARCCS parameters were established during soil and groundwater sampling as follows:

Measurements of soil headspace VOC content and total gamma activity within the soil cores were continuously scanned at an approximate rate of 3 inches per second. Continuous Screening results were recorded on the GWRI Soil Probe Logs located in Appendix I.

Measurements of the water quality stabilization parameters pH, DO, conductivity, ORP, and turbidity were taken prior to groundwater sample collection. In an effort to minimize the turbidity of the groundwater samples, a low pumping rate (less than 500 mL/min) was used during purging and rates approaching 250 mL/min were obtained prior to sample collection.

DQOs were also met by meeting certain goals for the PQL concentrations. PQLs for groundwater testing, must be lower than the proposed MCLs and New Jersey GWQC for chemicals and the National Primary Drinking Water Regulations for radionuclides. If PQLs could not be achieved by the laboratory for certain parameters, this was discussed with the USACE. Groundwater data in the report is compared to the lower of the Federal/ State MCLs or the New Jersey GWQC/Standards.

To provide for reliability of field sampling procedures and materials, the following QC samples are recommended by the CDQMP:

- Trip blanks, one per shipping container that has volatile samples;
- Field blanks, one per sampling equipment;
- Temperature blanks, one per shipping container where samples are required to be maintained at 4°C;
- Equipment rinsate blanks, where possible collected following decontamination of sampling equipment; and
- Field replicates, representing no less than 10% of the total number of samples per matrix per parameter of interest.

Field quality control samples were collected during sampling, and included trip blanks, equipment rinsate/field blanks, confirmation samples, and USACE replicates. Temperature blanks were included in shipping containers, where applicable. In addition to the collection of QC samples, the collection of QA samples are recommended at a frequency of 10% of the field samples collected pursuant to the CDQMP. QA samples were collected at a frequency of 10% of all soil and water samples submitted to the mobile

laboratory for analysis and were submitted to a USACE-approved outside laboratory for confirmation analysis.

Detailed QA/QC compliance information that satisfies these DQOs can be found in Section 4.13.1 through 4.13.7. The Federal/State MCLs for water samples, and non-promulgated State soil criteria for chemicals are presented in Appendix A of the CDQMP along with radionuclides soil criteria.

4.13.9 Supplemental Investigation

4.13.9.1 Data Collection

Samples were collected at 38 bedrock wells during the Supplemental Investigation. As outlined in the RI Addendum Work Plan, the RI Addendum, and EMP, field-sampling efforts were combined to avoid duplication of effort and reduce costs. TCL VOC data was utilized from 11 bedrock wells sampled as part of the EMP.

Biogeochemical sampling was performed to further characterize the bedrock aquifer, and provide specific information about the utilization and availability of electron acceptors, oxygen demand, nutrients and bacteria in groundwater. MNA is currently being evaluated for remediation of the benzene plume, and collection of biogeochemical samples/parameters is the first step in the evaluation process. Biogeochemical samples were collected from nine wells, and samples were obtained for the following alternate electron acceptors and reduced species: NO_3^-/NH_4^+, total and dissolved manganese (Mn_{Tot}/Mn_{dis}), total and dissolved iron (Fe_{Tot}/Fe_{dis}), sulfate/sulfide (SO_4^{-2}/S^{-2}), and CH_4.

Groundwater oxygen demand was measured by sampling and analysis for BOD and COD. Sampled nutrients include nitrate/ammonia, total phosphorous, and TOC. Microbiologic samples were collected to measure bacteria concentrations in groundwater, and include analysis for total heterotrophs and BTEX degraders.

Similar to the RI investigation, field quality control samples were collected as part of the supplemental investigation and consisted of trip blanks, rinseate blanks, and field duplicates. Trip blanks were submitted on a daily basis for analysis. Similarly, rinseate blank samples were collected on a daily basis to determine impacts associated with cross-contamination issues, if any. Lastly, field duplicates/replicates were collected at a 10% frequency in accordance with the CDQMP. The data validation contractor(s) to validate the field samples used these field quality control samples in addition to laboratory QC samples.

4.13.9.2 Data Analysis and Validation

All samples were analyzed by STL Connecticut with the exception of CH_4 and BTEX Degrader Heterotrophs/Total Heterotrophs. Methane analyses were performed by STL's Burlington laboratory, Burlington, Vermont. BTEX Degraders/Total Heterotroph analysis was performed by New Jersey Analytical Laboratory, Pennington, NJ. Analytical methods used during the Supplemental Investigation are summarized as follows:

- SW-846 Method 8260B: TCL VOCs
- EPA's Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846) 6010B: Iron and manganese, total and dissolved.
- SW-846 8015A modified: Methane.
- MCA 300: Nitrate.
- MCA 300: Sulfate.

- MCA 365.2: Phosphorous (total).
- MCA 350.1: Ammonia.
- MCA 376.1: Sulfide.
- MCA 415.1: Total organic carbon.
- MCA 405.1: BOD.
- MCA 410.4: COD.
- SM 9215M: BTEX Degrader Heterotrophs.
- SM9215B: Total Heterotrophs.

All data packages received from the laboratories (refer to Appendix S) were validated in accordance with USACE guidance (refer to Section 4.13.6) by Kestrel or Validata. The data validation memorandum was reviewed by the project chemist, and entered into the project database. Copies of the laboratory data packages and data validation memoranda are presented as attachments to the supplemental investigation QCSR Appendix T. Additionally, Appendix T contains the HazSite deliverable on CD. Both chemical and geochemical data obtained as part of the Supplemental Investigation is contained on the CD.

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5.0 NATURE AND EXTENT OF CONTAMINATION

This section addresses the nature and extent of radiological and chemical contamination in overburden and bedrock groundwater, soil, surface water, and sediment media. Phase II groundwater sampling data was primarily used in this section for delineation and discussion of COPCs. The Phase II groundwater sampling database is the most current and comprehensive, and data quality should be improved (over Phase I and Geoprobe® groundwater data) due to more stringent (low turbidity) sampling procedures adapted at the onset of the Phase II program. Phase I/II VOC Geoprobe® groundwater data are used to supplement Phase II overburden well data and define the extent of benzene and chlorinated solvents in the overburden aquifer. Additional groundwater benzene data was collected during the Supplemental Investigation, and is used to delineate benzene in the bedrock aquifer.

Soil samples collected for radiological and chemical constituents from the Phase I/II program will be used to define the extent of radiological and chemical contamination, whereas, for surface water and sediment contamination, these samples were only collected during the Phase II program. Phase I sampling results were addressed in the *Draft Phase I Groundwater Data Report* (USACE 2000a) and were presented in Section 4.0 of this report.

Compound exceedances in all media are identified in figures with bolded compound concentrations. Where isolated exceedances are plotted, the extent of contamination probably extends beyond the immediate plotted well or sample location.

The parameters analyzed and frequency of detection of radiological and chemical constituents is presented in **Tables 5-1** through **5-5**, and is presented in Section 5.0. Compound exceedances in all media are identified in figures with bolded compound concentrations. Groundwater compound isopleth maps were prepared for the major detected compound exceedances, and include total radium, total uranium, total thorium, gross alpha, lithium, arsenic, chromium, benzene, PCE, TCE, DCE and VC. Where isolated exceedances are plotted, it is noted that the extent of contamination probably extends beyond the immediate plotted well or sample location. Data will be presented in the order of radiological constituents, metals, and VOCs.

5.1 OVERBURDEN GROUNDWATER RESULTS

Exceedances of total radium, total uranium, and adjusted gross alpha were detected in overburden monitoring wells during the Phase II sampling event. Additionally, seven metals and nine VOCs were detected above groundwater standards. The range of concentrations and number of exceedances for each parameter is summarized in **Table 5-1**. Although not presented in Section 5, REEs were analyzed. The principal reason for the REE analysis was as a fingerprint for radiological contamination since the REEs were present in the monazite ore matrix along with thorium and uranium. Data indicates that there was a fairly good correlation between the presence of radiological constituents and REEs in the various matrix analyses.

5.1.1 Radiological Parameters

Total Radium

The distribution and concentration of total radium exceedances are shown on **Figure 5-1**, and the range/frequency of detection for total radium is presented in **Table 5-1**. Total radium groundwater exceedances were detected at overburden wells OBMW10 (17.5 pCi/L) and MW-9S (6.58 pCi/L). The Federal/State MCL for total radium is 5 pCi/L. Well OBMW10 is located on the 149-151 Maywood

Avenue property, Property No. 9a. The likely source of the groundwater contamination is impacted process waste within NRC Burial Pit 3 and/or fill material placed on the 149-151 Maywood Avenue property adjacent to well OBMW10.

Well MW-9S is located on the NYSW property (Property No. 12a), adjacent to Maywood Ave, in Maywood. This monitoring well is located approximately 600 feet east of NRC Burial Pit 2. The source of total radium in overburden groundwater is not known at that location.

Total Uranium

The distribution and concentration of total uranium exceedances are shown on **Figure 5-2**, and the range/frequency of detection for total uranium is presented in **Table 5-1**. Groundwater uranium exceedances were detected at overburden wells MISS-5A (73.48 pCi/L or 110.2 µg/L) and Well 5 (30.02 pCi/L or 41.46 µg/L). The Federal/State MCL is 30 µg/L. Well MISS-5A is located between Former Retention Ponds C and E on the MISS, which is known to contain waste residues from MCW activities. Well 5 is located within NRC Burial Pit 1 on the Stepan Company property. Radiological impacted process sludge and fill is the likely source of overburden groundwater contamination at each location.

Adjusted Gross Alpha

As shown on **Figure 5-3** and similarly presented in **Table 5-1**, one exceedance of adjusted gross alpha was detected at well OBMW10 (288.99 pCi/L). The State/Federal MCL for gross alpha is 15 pCi/L. Well OBMW10 is located on the 149-151 Maywood Avenue property, Maywood, and also reported a groundwater exceedance of total radium (Section 5.1). The probable sources of adjusted gross alpha in groundwater is fill material around well OBMW10.

5.1.2 TAL Metals and Lithium/Boron

As presented in **Table 5-1**, seven metals were detected in overburden groundwater samples at concentrations exceeding the lower of the Federal/State MCL, or applicable NJDEP PQL/GWQC. Metal exceedances in overburden groundwater include lithium (15 samples), arsenic (14 samples), chromium (2 samples), barium (1 sample), cadmium (1 sample), lead (1 sample), and thallium (1 sample).

Arsenic

Fourteen groundwater samples exceeded the NJDEP PQL of 8 µg/L for arsenic. The maximum concentration was detected at monitoring well MISS-2A (2600 µg/L), which is located adjacent to Former Retention Pond A on the MISS.

As presented on **Figure 5-4**, arsenic exceedances are located on the MISS, and to a lesser extent off-site within the Stepan Company (Cluster No. 10), 149-151 Maywood Avenue (Cluster No. 9), 23 West Howcroft Avenue (Cluster No. 8), 99 Essex Street (Property No. 5a), and 29 Essex Street (Property No. 6e) properties. Arsenic groundwater exceedances are detected adjacent Former Retention Pond A at wells MISS-2A (2600 µg/L), MW-20S (465 µg/L) and MW-3S (831 µg/L). This data are plotted on **Figure 5-4** and shows a potential arsenic plume extending approximately 550 feet downgradient from well MISS-2A to the projected 8 µg/L isopleth. The probable source of arsenic is an approximate 10 to 12 foot thick layer of coal ash and sludge that was landfilled in Former Retention Pond A (DOE 1992).

An arsenic exceedance was detected at MISS overburden well B38W19S (31.8 µg/L), which is located within Former Retention Pond C. The probable source of the arsenic is an approximate 10-foot thick layer of coal ash and sludge measured in that basin (DOE 1992).

An isolated arsenic groundwater exceedance of 218 µg/L was detected at monitoring well MISS-3A, which is located in the western corner of the Stepan Company property. A 1939 MCW map (see Appendix A) shows the storage of a large coal pile at the current location of MISS-3A, and may account for the presence of arsenic at that location.

Arsenic groundwater exceedances were detected at Stepan Company overburden Well 2 (15 µg/L) and OBMW10 (19.8 µg/L). As shown on **Figure 5-4**, a small arsenic plume was plotted and extends 270 feet downgradient from Well 2 to the projected 8 µg/L isopleth. The likely source of arsenic in groundwater is coal and fly ash fill at NRC Burial Pit 3, on the Stepan Company property, and at well OBMW10, located on the 141-151 Maywood Ave. property.

Isolated arsenic exceedances were also detected at overburden wells B38W12A (13.7 µg/L) and MW-12S (13.2 µg/L), which are located on the 23 West Howcroft Avenue and adjacent 149-151 Maywood Avenue property, respectively. Arsenic in these wells is probably derived from locally impacted fill.

Isolated arsenic exceedances were also detected at wells OBMW14 (55.2 µg/L) and MW-13S (42.9 µg/L), which are located on the 149-151 Maywood Avenue and 99 Essex Street properties, respectively. In both instances, local fill containing coal and fly ash is the suspected source of arsenic in the overburden groundwater.

Barium

One barium overburden groundwater exceedance of 2319 µg/L was detected at well MW-13S on the 99 Essex Street property (**Figure 4-18** and **Table 5-1**). The applicable Federal/State standard is 2000 µg/L. The specific source of barium in groundwater is not known, but may be derived from locally impacted fill.

Cadmium

One cadmium groundwater exceedance was detected at overburden well OBMW13 (16 µg/L), which is located on the 149-151 Maywood Avenue property (see **Figure 4-18**). The NJDEP groundwater standard for cadmium is 4 µg/L. The source of cadmium in groundwater is not known, but it may be derived from locally impacted fill.

Chromium (Total)

Two isolated total chromium groundwater exceedances were detected at overburden wells OBMW15 (104 µg/L) and B38W14S (200 µg/L) at a concentration exceeding the Federal/State and NJ GWQC of 100 µg/L. Chromium concentrations in overburden wells are shown on **Figure 4-17**. Overburden well OBMW15 is located adjacent NRC Burial Pit 2, where a chromium exceedance was also detected at bedrock cluster well BRMW15. NRC Burial Pit 2 is the probable source of chromium in overburden groundwater. The other exceedance was detected at overburden well B38W14S, which is located near the downgradient edge of Former Retention Pond D. The detected chromium in groundwater may have been derived from remediated Former Retention Ponds D and/or E.

Chromium (Hexavalent)

Hexavalent chromium was detected in 1 of 55 overburden groundwater samples. This sample contained hexavalent chromium at 240 µg/L. However, since there was a large disparity between this result and the total chromium result of 58.9 µg/L, the sample results were rejected. A total chromium sample obtained from this well as part of Phase I activities contained 5.7 µg/L. No concentration exceeded the Federal/State and NJ GWQC of 100 µg/L.

Lead

A lead groundwater exceedance was detected at overburden well MW-20S (27.7 µg/L), which is located adjacent to Former Retention Pond A on the MISS. The NJDEP GWQS for lead is 10 µg/L. Lead concentrations in overburden groundwater are shown on **Figure 4-17**. The specific source of lead in groundwater is not known.

Lithium

The location and concentration of lithium exceedances in overburden groundwater is shown on **Figure 5-5**. Lithium was detected in 15 overburden wells at concentrations exceeding the Region IX PRG Tap Water Standard of 730 µg/L (**Table 5-1**). The maximum concentration of lithium was detected at monitoring Well 8 (14,400 µg/L), which is located within NRC Burial Pit 2 on the Stepan Company property. The source of the lithium is probably leaching of lithium impacted fill in NRC Burial Pit 2. The fill material consists of Former Retention Pond D and E process waste, which was excavated and placed in the NRC Burial Pits during the 1960s (DOE 1992). High concentrations of lithium were detected in Burial Pit 1 borings (DOE 1992). A lithium groundwater exceedance was also detected at overburden well OBMW18 (1590 µg/L), which is located 400 feet downgradient from Well 8 (14,400 µg/L). Lithium was also detected in soils at Burial Pit 2 and may be a contributing source of lithium in groundwater at well OBMW18.

Lithium exceedances were also detected in MISS overburden wells MISS-2A (10,100 µg/L), MW-20S (6,560 µg/L), MW-3S (1,650 µg/L) and B38W01S (1,510 µg/L), which are located adjacent and downgradient to Former Retention Pond A. As shown on **Figure 5-5**, a lithium plume was plotted in the overburden aquifer, and extends approximately 500 feet downgradient from well MISS-2A to the 8 µg/L isopleth. Former Retention Pond A received process waste and is the probable source of lithium in groundwater.

Lithium exceedances were detected at MISS overburden wells B38W19S (1730 µg/L) and MISS-5A (1130 µg/L), and downgradient wells B38W15S (3240 µg/L) and MW-2S (1860 µg/L). A lithium plume was plotted in the overburden aquifer, and extends approximately 1025 feet west from well B38W19S to the 730 µg/L isopleth. Former Retention Pond C was known to have received lithium process waste, and is the probable source of lithium in groundwater (DOE 1992).

Overburden wells B38W15S and MW-2S lie downgradient from formerly remediated Retention Ponds D and E, and may be impacted by leaching of residual lithium impacted soils from these Ponds. Former Retention Ponds D and E were excavated to remove radiologically impacted soils, and residual chemically impacted soils may remain. Groundwater may be impacted by leaching of these soils, and act as the source (or contributing source) of lithium to these wells.

Two lithium groundwater exceedances are also detected at wells OBMW13 (2860 µg/L) and OBMW14 (1620 µg/L), which are located on the 149-151 Maywood Avenue property. An elevated concentration of lithium (498 µg/L) was also detected at downgradient well MW-22S. As shown on **Figure 5-5**, a lithium

plume was plotted in the overburden aquifer at this location, and extends approximately 350 feet downgradient from well OBMW13 to the 730 µg/L isopleth.

Thallium

One thallium groundwater exceedance of 3.9 µg/L was detected at well MW-3S, which is located adjacent Former Retention Pond A (**Figure 4-18** and **Table 5-1**). The applicable Federal/State MCL standard is 2.0 µg/L. The probable source of thallium in groundwater is leaching of impacted soils from Former Retention Pond A.

5.1.3 Volatile Organic Compounds

VOC samples were collected from 55 overburden monitoring wells and 10 Geoprobe® borings during the Phase II Investigation. Selected Phase I and II Geoprobe® data was incorporated with well data to prepare VOC isopleth maps, and determine the extent of VOCs in the overburden aquifer. Detected VOC exceedances include benzene, xylene, PCE, TCE, 1,2-DCE, VC, 1,1,2-TCA, and chloroform. Overburden well VOC data are summarized in **Table 5-1**. Each compound is addressed in the following sections.

Benzene

Benzene was detected in overburden monitoring wells PT-2S (2500 µg/L) and OBMW3 (63 µg/L) at a concentration exceeding the NJDEP GWQS of 1 µg/L. Well PT-2S is located on the Stepan Company property in the Former Aromatics area, while OBMW3 is located on the 239 NJ Route 17 North property. The benzene detected at these wells is being addressed by the Stepan Company as part of an ongoing groundwater remedial action.

As shown on **Figure 5-6**, five benzene exceedances were detected in Geoprobe® groundwater samples on the MISS. The highest concentration (71 µg/L) was detected at boring 12b016. Low-level groundwater exceedances were also detected at nearby Geoprobe® borings 12b017 (4 µg/L) and 12b028 (2 µg/L). As shown on **Figure 5-6**, a benzene plume was plotted from the area of boring 12b016, and extends downgradient approximately 300 feet west to the 1 µg/L isopleth.

Isolated benzene exceedances were detected at Geoprobe® 12b020 (9 µg/L) and 12b011 (36 µg/L), which is located within Former Retention Pond B and C, respectively. The source of benzene in groundwater at these two locations is not known.

Xylene

Xylene was detected in three overburden monitoring well samples at concentrations exceeding the NJDEP GWQC of 40 µg/L. The maximum xylene concentration (4900 µg/L) was detected in Stepan Company monitoring well OBMW18 (**Table 5-1**). As shown on **Figure 4-20**, a xylene exceedance was also detected at nearby Stepan Company well MW-1 at 160 µg/L.

A xylene exceedance was also detected at Stepan Company well PT-2S (280 µg/L), which is located in the Former Aromatics Storage Area. The three detected xylene exceedances are being addressed by the Stepan Company as part of an ongoing remedial action.

Tetrachloroethene (PCE)

The distribution and concentration of PCE in overburden is shown on **Figure 5-7**. PCE exceedances were detected in five overburden wells: MW-7S (200 µg/L), B38W14S (6 µg/L), MW-2S (5 µg/L), OBMW3

(3 µg/L) and OBMW7 (2 µg/L) at a concentration exceeding the NJDEP PQL/State MCL of 1 µg/L. PCE was also detected at seven Geoprobe® samples, with concentrations ranging from 3 to 360 µg/L. The highest PCE concentrations were detected in Geoprobe® borings 13a003 (360 µg/L), 13a001 (200 µg/L), 14a002 (55 µg/L) and 14a001 (22 µg/L). A PCE isopleth map was prepared from available well and Geoprobe® data, and is shown on **Figure 5-7**. As shown, a plume is plotted from the area of monitoring well MW-7S, and extends approximately 1800 feet southwest to the 1 µg/L isopleth.

As depicted on **Figure 5-7**, PCE (and other solvents) were detected in Geoprobe® borings 13a001 (200 µg/L) and 13a003 (360 µg/L) located on the north side of the Westerly Brook culvert, but were not detected in nearby Geoprobes® 13a002 and 13a004, which are located on the south side of the culvert. The intervening Westerly Brook culvert pipe is a 6-foot ID pipe, and was reportedly installed on or near the bedrock surface (See Appendix O). As discussed in Section 3.5.4, the top of the east - west section of culvert pipe lies almost completely below March 2000 water table and is below the seasonal low groundwater table. These data indicates that the culvert pipe completely penetrates the local overburden aquifer, and may act as a physical barrier to groundwater flow. This probably accounts for the apparent local discontinuity of PCE and other solvent concentrations across the trace of the Westerly Brook culvert pipe.

As addressed in Section 1.0, there is a potential upgradient, offsite source of PCE in the overburden aquifer. Two previous investigations by the NJDEP at the 158 West Central Avenue property detected PCE in overburden groundwater, and identified a 5,000-gallon above ground PCE tank as the likely source. One NJDEP Geoprobe® sample (GW-4) detected 140,000 µg/L PCE in groundwater. This concentration approaches the solubility limit (150,000 µg/L) of PCE in water, and suggests that product may be present in the aquifer. An RI Report was prepared by Dixo Company in July 2002 (NJDEP 2002), which reported the results of soil and groundwater sampling conducted at the 158 West Central Avenue property. High concentrations of PCE were detected at cluster overburden well MW-4 (75,000 µg/L), MW-3 (56,000 µg/L) and MW-1 (37,000 µg/L). The highest concentration was detected at well MW-4, which is located on the south side of the 158 West Central Avenue property. Overburden well (and Geoprobe® - GW-4) PCE concentrations are presented on **Figure 5-7**. Sampling and groundwater flow data indicate that the 158 West Central Avenue property is a potential source of the mapped (main) PCE plume within the FMSS.

Trichloroethene

The distribution and concentration of TCE in overburden wells and Geoprobe® borings are shown on **Figure 5-8**. TCE exceedances were detected in three overburden wells and four Geoprobe® borings, including wells MW-7S (65 µg/L), B38W14S (5 µg/L), MW-2S (1 µg/L) and Geoprobe® borings 13a001 (38 µg/L), 13a003 (160 µg/L), 14a001 (6 µg/L) and 14a002 (21 µg/L) at a concentration exceeding the NJDEP GWQC/State MCL of 1 µg/L. A TCE plume was plotted 1200 feet downgradient from overburden well MW-7S to the 1 µg/L isopleth. TCE is a common degradation product of PCE, and is probably associated with the detected PCE plume in groundwater.

The Dixo Company RI Report sampling results show high concentrations of TCE at the 158 West Central Avenue property wells MW-4 (12,000 µg/L), MW-1 (7,200 µg/L), and MW-3 (2,500 µg/L). Overburden well locations and sampling results are presented on **Figure 5-8**. Sampling and groundwater flow data indicate that the 158 West Central property is a potential source of the mapped (main) plume within the FMSS.

1,2-Dichloroethene (total)

The distribution and concentration of 1,2-DCE in overburden wells and Geoprobe® borings are shown on **Figure 5-9**. 1,2-DCE exceedances were detected at well MW-7S (28 µg/L), and Geoprobe® boring 13a001 (100 µg/L), 13a003 (140 µg/L) and 14a002 (28 µg/L). A 1,2-DCE plume was plotted 1200 feet downgradient from overburden well MW-7S to the 10 µg/L isopleth, which is the NJDEP GWQC for cis 1,2-DCE. 1,2-DCE is a sequential degradation product of PCE and TCE, and is probably associated with the mapped PCE and TCE plumes shown on **Figures 5-7** and **5-8**. The Dixo Company RI Report (NJDEP 2002) sampling results show high concentrations of cis-1,2 DCE at 158 West Central Avenue overburden wells. Dixo Company well MW-4 (28,000 µg/L), MW-1 (9,200 µg/L) and MW-3 (2,800 µg/L). Overburden well locations and cis-1,2 DCE sampling results are presented on **Figure 5-9**. Sampling and groundwater flow data indicate that the 158 West Central Avenue property is a potential source of the mapped (main) 1,2 DCE plume within the FMSS.

Vinyl Chloride

VC was detected at the Federal/State MCL of 2.0 µg/L in well PT-2S on the Stepan Company property. VC is the final sequential degradation product of PCE. The probable source of VC is the Former Aromatic Area on the Stepan Company property.

1,1,2-Trichloroethane, Chloroform

1,1,2-TCA was detected at the NJDEP GWQC of 3 µg/L at well OBMW3. Chloroform was detected at the NJDEP GWQC of 6 µg/L in monitoring well B38W14S.

5.2 BEDROCK GROUNDWATER RESULTS

A total of three radiological, eight metal and nine VOC groundwater exceedances were reported during sampling of Phase II bedrock wells. The range of concentrations and number of exceedances for each parameter or compound is summarized in **Table 5-2**.

5.2.1 Radiological Parameters

Total Radium

One total radium exceedance was detected at well B38W18D (19.4 pCi/L), which is located near Building 76 on the MISS. The applicable Federal/State MCL is 5 pCi/L. As shown on **Figure 5-10**, B38W18D is located approximately 100 feet downgradient of the Former Cerium and 200 feet downgradient of the Former Thorium processing unit. Impacted soils in the Former Thorium Manufacturing area are the likely source of radium in bedrock.

Soil samples obtained from Transect A, which were advanced within approximately 75 feet of B38W18D contained elevated concentrations of Ra-226 + Th-232 in exceedance of the 5 pCi/g standard (**Figure 5-22**). Similarly, as depicted in the DOE RI report (1992), a mound of sludge material existed in proximity to Bedrock well B38W18D (see **Figure 4-14**) (DOE 1992).

Adjusted Gross Alpha and Total Thorium

The distribution and concentration of adjusted gross alpha in bedrock wells is shown on **Figure 5-11**. Adjusted gross alpha exceedances were detected at MISS bedrock wells BRPZ-5 (57.42 pCi/L) and BRPZ-2 (27 pCi/L). The Federal/State MCL for gross alpha is 15 pCi/L. Both wells are located within Former Retention Pond C on the MISS. An adjusted gross alpha exceedance was also detected in bedrock

well MW-3D at 18.42 pCi/L. This well is located 75 feet north of Former Retention Pond A on the NYSW property. As shown on **Figure 5-11**, an adjusted gross alpha plume was plotted approximately 100 feet downgradient from well BRPZ-2 to the 15 pCi/L isopleth. There is no overburden sampling data in the plotted bedrock plume area to determine if local overburden groundwater is impacted, and a source to the bedrock aquifer. Impacted fill and/or overburden groundwater aquifer in Former Retention Pond C is the probable local source of the bedrock gross alpha exceedance.

Although Gross Alpha was not evaluated at well B38W18D in conjunction with the GWRI, a Gross Alpha sample was taken at that well in July 2002 as part of the Annual EMP. The B38W18D Gross Alpha sample measured 27.02 pCi/L. The total thorium analysis from well B38W18D, obtained as part of the GWRI program, contained 16.14 pCi/L. Impacted soils and the overburden aquifer in the Former Thorium Manufacturing area are the likely source of the elevated total thorium and adjusted gross alpha in well B38W18D.

The spatial distribution of total thorium in bedrock groundwater is shown on **Figure 5-12**.

Adjusted Gross Beta

The distribution and concentration of adjusted gross beta in bedrock wells is shown on **Figure 5-13**. Adjusted gross beta exceedances were detected at bedrock wells BRPZ-2 (168.02 pCi/L), MW-26D (117.51 pCi/L), BRPZ-5 (53.41) and MW-13D (68.98 pCi/L). The Federal/State screening level for gross beta is 50 pCi/L. The source of adjusted gross beta exceedances is likely associated with a localized shallow source in the overburden. The source of gross beta activity at well MW-13D on the 99 Essex Street property, Maywood, is not known; however it is believed to be associated with impacted fill identified at that site. There are, however, no exceedances of parent radionuclides (Ra-228 and Ac-228) in bedrock and overburden groundwater samples at the site.

5.2.2 TAL Metals and Lithium/Boron

As presented in **Table 5-2**, arsenic, barium, beryllium, chromium, lead, lithium, nickel and thallium exceedances were detected in bedrock groundwater. Exceedances of each compound are addressed in the following section.

Arsenic

The distribution and concentration of arsenic in bedrock wells are shown on **Figure 5-14**. Four bedrock wells detected arsenic concentrations in excess of the NJDEP PQL standard of 8 µg/L. Arsenic exceedances were detected at wells B38W19D (89.1 µg/L), MISS-7B (72.4 µg/L) and offsite well B38W15D (19.1 µg/L). Wells B38W19D and MISS-7B are located in Former Retention Pond C on the MISS, and well B38W15D is located downgradient of Former Retention Pond E. Arsenic concentration isopleths are plotted on **Figure 5-14**. One arsenic plume is shown extending 250 feet downgradient from well MISS-7B (and B38W19D) to the 8 µg/L arsenic isopleth. As discussed in Section 5.1.2, arsenic was also detected in overburden well B38W19S within the Former Retention Pond C, and is the likely source of arsenic to the local bedrock aquifer. The source of arsenic detected at well B38W15D is probably derived from remediated (excavated) Former Retention Pond E. As shown on **Figure 5-14**, an arsenic exceedance of 12.5 µg/L was also detected at bedrock monitoring well B38W18D. This well is located adjacent Building 76 and downgradient of the Former Cerium/Thorium Manufacturing Building. Arsenic exceedances were detected in fill soils around Building 76, as reported in the RI Report (DOE 1992), and is the likely source of arsenic in groundwater.

Barium

A single barium exceedance was detected in bedrock groundwater at well MISS-5B (9750 µg/L), which is located within Former Retention Pond C (**Figure 4-26**). The NJDEP/Federal Standard for barium is 2000 µg/L. Barium exceedances were not detected in (Former Retention Pond C) soils or overburden well samples, and the specific source of barium in bedrock groundwater is not known.

Chromium

The distribution and concentration of chromium in bedrock wells are shown on **Figure 5-15**. Chromium was detected in five offsite bedrock wells in excess of the 100 µg/L Federal/State MCL and NJ GWQC. A chromium exceedance was detected at well B38W05B (173 µg/L), which is located downgradient from NRC Burial Pit 2. An elevated chromium concentration of 50.3 µg/L was detected at BRMW15, which also borders Burial Pit 2. A chromium exceedance of 160 µg/L is detected at well BRMW17, which is located 400 feet downgradient from well B38W05B. A chromium groundwater plume was plotted approximately 650 feet downgradient from well B38W05B to the extrapolated 100 µg/L isopleth. Chromium groundwater exceedances were formerly reported at overburden well OBMW15 (149 µg/L) and bedrock well BRMW15 (250 µg/L), which are also located immediately downgradient from Burial Pit 2 (CH_2M Hill 1994a). The likely source of chromium is NRC Burial Pit 2, which received fill from the MCW operations.

Chromium exceedances were also detected at wells BRMW6 (689 µg/L) and B38W12B (513 µg/L), which are located on the 149-151 Maywood Avenue and 23 West Howcroft Avenue properties. As shown on **Figure 5-15**, a chromium plume in groundwater is plotted 800 feet from the area of bedrock well BRMW6 downgradient to the 100 µg/L isopleth. The local source of chromium in bedrock is not known.

An isolated chromium exceedance is detected at well BRMW9 (160 µg/L), which is located on the 29 Essex Street property. The source of chromium in groundwater is not known.

Hexavalent chromium was detected on the MISS in well MISS-5B, which is located within Former Retention Pond C, at 38 µg/L. The source of hexavalent chromium detected in well MISS-5B is not known, but is likely related to the former MCW leather tanning operations.

Lead

One lead groundwater sample was detected in excess of the 10 µg/L Federal/NJDEP MCL. The exceedance (33 µg/L) was detected at well MW-3D, which is located on the NYSW property, adjacent Former Retention Pond A. Coal ash fill is the suspected source of lead in groundwater within Former Retention Pond A. The distribution of lead in groundwater is shown on **Figure 4-17**.

Lithium

The distribution and concentration of lithium in bedrock wells are shown on **Figure 5-16**. Lithium was detected in excess of the Region IX PRG tap water standard of 730 µg/L in 32 groundwater samples. The maximum concentrations of lithium in bedrock are detected at bedrock wells MISS-2B (16,100 ppb) and MW-20D (13,700 ppb), which are located adjacent Former Retention Pond A on the MISS. As shown on **Figure 5-16**, a lithium plume is plotted approximately 1200 feet downgradient from wells MISS-2B and MW-20D to the 730 µg/L isopleth. Former Retention Pond A was identified in Section 5.1.2 as a probable source of lithium in the overburden aquifer, and is also the likely source of lithium in bedrock. Within the plotted plume, elevated lithium concentrations were detected at wells MISS-5B (7400 µg/L),

BRPZ-5 (5260 µg/L), and MISS-7B (6920 µg/L), which are located in Former Retention Pond C. Former Retention Pond C is identified in Section 5.1.2 as a probable source of lithium to the overburden aquifer, and is probably an ongoing source to the bedrock aquifer. The plotted plume also extends through the footprint of former Retention Ponds D and E, which were remediated (excavated) in 1986. Leaching of residual lithium impacted soils from these basins may be the source, or contributing source, of lithium detected in wells MW-2D and B38W15D.

Lithium exceedances in bedrock were also detected at wells PT-1DA (5100 µg/L) and B38W04B (2490 µg/L) on the Stepan Company property, and well BRMW-1 (4260 µg/L) on the adjacent 149-151 Maywood Avenue property. A lithium plume in bedrock was plotted 1200 feet downgradient from the area of well B38W04B, to the 730 µg/L isopleth.

Lithium was detected at high concentrations (14400 µg/L) in the overburden aquifer at NRC Burial Pit 2, and is a potential source of lithium in bedrock. NRC Burial Pit 1 was also identified as a potential overburden groundwater lithium source (to well OBMW18), and likewise, is a potential lithium source to the bedrock aquifer.

An isolated lithium exceedance was detected at bedrock well MW-14D (751 µg/L), which is located at 80 Hancock Street property (Property No. 2b), in Lodi, NJ. Elevated concentrations of lithium were also detected in overburden cluster well MW-14S (617 µg/L). The specific source of lithium in groundwater at this location is not known.

Thallium

Three isolated thallium exceedances were detected at bedrock wells MW-15D (3.1 µg/L), BRMW13 (4.4 µg/L) and BRPZ-5 (4.4 µg/L). The thallium Federal/State groundwater standard is 2.0 µg/L. Well MW-15D is located at the 8 Mill Street property (Property No. 2d), along the trace of Lodi Brook. Well BRMW13 is located on the 149-151 Maywood Avenue property, adjacent to NJ Route 17. Well BRPZ-5 is located on the MISS, adjacent Former Retention Pond C. The specific source of thallium in bedrock groundwater is not known at these locations.

5.2.3 Volatile Organic Compounds

This section describes the nature and extent of VOC contamination on the FMSS. Bedrock VOC exceedances include benzene, PCE, TCE, 1,2-DCE, 1,1-DCE, VC, methylene chloride, toluene, and total xylene. Benzene data was collected during the Supplemental Investigation. **Table 4-48** presents the results and sample locations for VOC groundwater exceedances. The frequency of detection, number of exceedances of each compound, and location of maximum detection is presented in **Table 5-2**.

Benzene

Benzene was detected in 19 of 38 bedrock groundwater samples, with 14 samples exceeding the NJDEP GWQS of 1 µg/L. The maximum concentration of 9500 µg/L was detected at bedrock well BRPZ-5, which is located on the MISS within Former Retention Pond C. Benzene sampling results are summarized in **Table 5-3**, and exceedances are presented in **Table 5-4**.

Benzene sample concentrations were plotted and contoured using 1, 10, 100 and 1000 µg/L concentration contours. As depicted on **Figure 5-17**, the extent of the plume has been delineated by the 1.0 µg/L benzene standard. Low concentrations of benzene are detected at upgradient well MW-3D (15 µg/L), and the upgradient edge of the benzene plume is projected offsite onto the NYSW property. A potential benzene source area was delineated based upon benzene sampling data, and is marked on **Figure 5-17**.

The downgradient edge of the benzene plume is extrapolated between MISS well MW-24D (29 µg/L) and downgradient offsite wells B38W17B (ND), MW-31D (ND), and MW-32D (ND). Wells B38W17B and MW-32D are located approximately 150 feet downgradient from the plotted 1 µg/L benzene isopleth, and along the projected centerline of the plume. The benzene plume extends approximately 1075 feet, and is oriented NNE to SSW along the plume axis. The plotted SSW plume flow direction does not follow the predicted site bedrock groundwater flow, and may reflect aquifer anisotropy and/or local flow conditions not captured by site wells.

Groundwater samples were collected at two shallow/deep MISS bedrock well clusters, and show decreasing benzene concentrations with depth at well clusters BRPZ-5 (9500 µg/L)/ BRPZ-1D (ND) and MW-24D (29 µg/L)/MW-24DD (9 µg/L).

Toluene

Toluene was detected at well BRPZ-5 (1400 µg/L) at concentrations exceeding the Federal/State MCL of 1000 µg/L (**Figure 4-28**). Like benzene, the specific source of toluene at this location is not known, and is currently under investigation.

Xylene

One xylene exceedance of 460 µg/L was detected at well B38W04B on the Stepan Company property. The NJDEP GWQC for xylene is 40 µg/L. The source of xylene at this well is not known.

Tetrachloroethene (PCE)

The distribution and concentration of PCE in bedrock wells is shown on **Figure 5-18**. PCE was detected in 18 bedrock groundwater samples at concentrations exceeding the NJDEP PQL/State MCL of 1 µg/L. The maximum concentration of 1200 µg/L was detected at well MW-7D, which is located on the 141 West Central Avenue property, Rochelle Park. The highest PCE concentrations were detected at bedrock wells B38W14D (300 µg/L), B38W15D (150 µg/L), MW-8D (80 µg/L), MW-2D (37 µg/L) and MW-6D (22 µg/L). As shown on **Figure 5-18**, a plotted PCE plume extends approximately 1600 feet downgradient from well MW-7D to the 1 µg/L isopleth.

The Dixo Company RI Report (NJDEP 2002) sampling results show high concentrations of PCE at the 158 West Central Avenue property bedrock wells MW-4D (20,000 µg/L) and MW-3D (8200 µg/L). High concentrations of PCE were also detected in overburden wells MW-4 (75,000 µg/L), MW-3 (56,000 µg/L) and MW-1 (37,000 µg/L) on that property. Bedrock well locations and PCE sampling results are presented on **Figure 5-18**. Sampling and groundwater flow data indicate that the 158 West Central Avenue property is a potential source of the mapped (main) plume within the FMSS.

Additional low-level PCE exceedances were detected at cluster bedrock wells BRPW-1D (4 µg/L) and BRPZ-4 (3 µg/L) on the MISS. As shown on **Figure 5-18**, these wells lie outside the mapped edge of the PCE plume. The detected PCE is probably derived from fractures connected to the main plume, or possibly represents a small isolated source in bedrock.

Similarly, low-level PCE exceedances were also detected at the 149-151 Maywood Avenue property monitoring wells BRMW13 (4 µg/L) and BRMW14 (2 µg/L), and the 239 NJ Route 17 North property monitoring well BRMW3 (6 µg/L). The specific source of PCE is not known, but may be associated with the detected 1,2-DCE and VC exceedances shown on **Figures 5-20** and **5-21**, respectively.

Trichloroethene

The distribution and concentration of TCE in bedrock wells is shown on **Figure 5-19**. Exceedances of the NJDEP GWQC/State MCL of 1 µg/L were detected in 19 wells (**Table 5-2**), with the highest concentrations detected at MW-7D (380 µg/L), B38W14D (82 µg/L), B38W15D (30 µg/L), and MW-8D (15 µg/L). As shown on **Figure 5-19**, a TCE plume was plotted in the bedrock aquifer and extends approximately 1600 feet downgradient from well MW-7D to the 1 µg/L isopleth.

The Dixo Company RI Report (NJDEP 2002) sampling results show elevated concentrations of TCE at the 158 West Central Avenue property wells MW-3D (3,400 µg/L) and MW-4D (1,100 µg/L). Elevated TCE concentrations were also detected in overburden well MW-4 (12,000 µg/L), MW-1 (7,200 µg/L) and MW-3 (3,400 µg/L). Bedrock well locations and TCE sampling results are presented on **Figure 5-19**. Sampling and groundwater flow data indicate that the 158 West Central Avenue property is a potential source of the mapped (main) TCE plume within the FMSS.

Low-level TCE exceedances were also detected at bedrock wells BRPZ-4 (8 µg/L), BRPZ-2 (6 µg/L), MW-24D (8 µg/L) and deep cluster well MW-24DD (2 µg/L) on the MISS. As shown on **Figure 5-19**, these exceedances lie outside the plotted edge of the TCE plume. The detected TCE is probably derived from fractures connected to the PCE plume, or alternatively, indicates a small local source in bedrock.

Isolated, low level TCE exceedances were detected in wells BRMW14 (2 µg/L) and MW-12D (2 µg/L) on the 149-151 Maywood Avenue property, well B38W12B (2 µg/L) on the 23 West Howcroft Avenue (Cluster No. 8) property, and well BRMW8 (2 µg/L) on the 85-101 NJ Route 17 North (Property No. 6a) property. The source of TCE at these locations is not known.

1,2-Dichloroethene (total)

The distribution and concentration of 1,2-DCE in bedrock wells is shown on **Figure 5-20**. A total of six samples contained 1,2-DCE at a concentration exceeding the NJDEP GWQC of 10 µg/L for cis 1,2-DCE, with the highest concentrations detected in samples collected from wells MW-8D (270 µg/L), MW-7D (190 µg/L), B38W15D (55 µg/L) and B38W14D (50 µg/L). A 1,2-DCE plume in bedrock is plotted on **Figure 5-20**, and extends approximately 1500 feet downgradient from well MW-8D to the 10 µg/L isopleth.

The Dixo Company RI Report (NJDEP 2002) sampling results show elevated concentrations of cis-1,2 DCE in the 158 West Central Avenue property wells MW-3D (2,200 µg/L) and MW-4D (2,100 µg/L). Cis-1,2 DCE was also detected at this site in overburden wells MW-4 (28,000 µg/L), MW-1 (9,200 µg/L) and MW-3 (2,800 µg/L). Bedrock well locations and 1,2 DCE concentrations are presented on **Figure 5-20**. Sampling and groundwater flow data indicate that the 158 West Central Avenue property is a potential source of the mapped (main) 1,2- DCE plume within the FMSS.

1,2-DCE exceedances were also detected in wells BRMW1 (110 µg/L) and BRMW14 (10 µg/L), which are located on the 149-151 Maywood Avenue property adjacent to NJ Route 17. As shown on **Figure 5-20**, a 1,2-DCE plume extends approximately 450 feet downgradient from well BRMW-1 to the 10 µg/L isopleth. Noting the distribution of VC in the aquifer, the Stepan Company property (Former Aromatics Area) is the probable source of 1,2-DCE at well BRMW1.

1,1-Dichloroethene

Three 1,1-DCE exceedances (**Table 5-2**) were detected in bedrock monitoring wells B38W14D (4 µg/L), B38W15D (2 µg/L), and MW-19DD (3 µg/L). The Federal/State groundwater MCL is 2 µg/L. The

specific source of 1,1-DCE is believed to be derived from the nearby detected PCE and TCE plumes shown on **Figures 5-18** and **5-19**, respectively.

Vinyl Chloride

The distribution and concentration of VC, an end daughter product of PCE/TCE degradation, is presented on **Figure 5-21**. VC was detected in four bedrock groundwater samples at concentrations exceeding the Federal/State MCL of 2 µg/L (**Table 5-2)**. A total of four VC exceedances of the 2 µg/L groundwater standard were detected in the bedrock aquifer (**Table 5-2**). The highest concentrations were detected at well BRMW1 (210 µg/L) and well MISS-4B (66 µg/L). As shown on **Figure 5-21**, a small VC plume extends approximately 850 feet downgradient from well MISS-4B to the 2 µg/L isopleth. The source of VC at MISS-4B is probably on the Stepan Company property, in the Former Aromatics Area.

The Dixo Company RI Report (NJDEP 2002) reported VC at well MW-3D (98 µg/L) on the 158 West Central Avenue property. The well location and VC concentration is shown on **Figure 5-21**. VC is not reported in overburden groundwater at that site. As noted, VC is a sequential degradation product of PCE, TCE and cis-1,2-DCE, and may be detected at FMSS bedrock (and overburden) wells in the future.

5.3 SOIL SAMPLING RESULTS

Soil samples were collected from Geoprobe® and overburden borings and analyzed for radiological constituents, metals, REEs, and VOCs during GWRI activities. Radiological, VOCs, and TAL metal exceedances are presented in the following sections.

5.3.1 Radiological Parameters

FMSS cleanup levels in soil have been developed for Ra-226 + Th-232 (5 pCi/g) and U-238 (50 pCi/g) compounds. Out of a total 151 soil samples, 35 Ra-226 + Th-232 and 3 U-238 exceedances were detected.

Ra-226 + Th-232

The distribution and concentration of Ra-226+Th-232 in soils are shown on **Figure 5-22**. A total of 35 soil Ra-226 + Th-232 exceedances of the 5 pCi/g standard were detected within the FMSS (**Table 5-3**). The vast majority of exceedances are grouped in six areas within the FMSS, including Former Retention Ponds A, B, and C; Property No. 9a; 149-151 Maywood Avenue, Maywood, Lodi Brook (properties 02a, 02b, 02c and 01a), and 111 Essex Street, Property No. 7a, Maywood.

In the area of Former Retention Pond A, exceedances were detected at borings 12b017 (194.15 pCi/g) and 12b015 (87.73 pCi/g). Exceedances at/adjacent to Former Retention Pond B include boring 18a002 (70.41 pCi/g), 18a001 (135.76 pCi/g), 12b020 (5.81 pCi/g), 12b004 (35.14 pCi/g) and 12b026 (38.51 pCi/g). Exceedances associated with Former Retention Pond C include boring 12b010 (78.41 pCi/g) and 12b011 (29.01 pCi/g). There were no gross alpha or total radium groundwater exceedances detected in overburden wells in proximity to Former Retention Ponds A, B or C. However, not all overburden monitoring wells were analyzed for gross alpha as part of the Phase II program (refer to Section 4.5.1 and **Figure 5-3**). Subsequent sampling of all Former Retention Pond B & C overburden wells during the 2001 and 2002 EMP reported no gross alpha exceedances. Adjusted gross alpha exceedances were detected in bedrock wells BRPZ-2 (27 pCi/L), and BRPZ-5 (57.47 pCi/L), which are located within Former Retention Pond C. Additionally, an adjusted gross alpha exceedance was detected in well MW-3D (18.42 pCi/L). This well is located 75 feet north of Former Retention Pond A on the NYSW property.

Five Ra-226 + Th-232 soil exceedances were detected on Property No. 9a, 149-151 Maywood Avenue, Maywood, and adjacent 239 NJ Route 17N (Property No. 6d), which included borings 09a007 (169.87 pCi/g), 09a008 (44.75 pCi/g), 09a009 (11.40 pCi/g), 09a010 (12.99 pCi/g), and 06d001 (61.06 pCi/g). There were no gross alpha or total radium groundwater exceedances detected in nearby overburden wells MW-12S, OBMW13, OBMW14, and OBMW3.

Six soil exceedances were detected in Geoprobe® borings located along Lodi Brook on 80 and 100 Hancock Street (properties 02a and 02b), 80 Industrial Avenue (Property No. 2c), 8 Mill Street (Property No. 2d), and 72 Sidney/88 Money Street (Property No. 1a). Exceedances were detected at borings 02a001 (6.79 pCi/g), MW-14S (54.10 pCi/g), 02a002 (33.66 pCi/g), 02b002 (8.34 pCi/g), 02c001 (5.68 pCi/g), 02d002 (10.29 pCi/g), and MW-16S (26.86 pCi/g). There were no gross alpha or total radium groundwater exceedances detected at corresponding overburden wells MW-14S, MW-15S, and MW-16S.

Three soil exceedances were detected on the 111 Essex Street property, (07a), including boring 07a001 (294.99 pCi/g), 07a002 (552.21 pCi/g) and 07a003 (227.84 pCi/g). There was no gross alpha or total radium groundwater exceedance detected at nearby overburden well MW-21S.

As depicted on **Figures 5-1** and **5-3**, total radium and gross alpha contamination in groundwater does not appear to be associated with those areas containing elevated Ra-226 + Th-232 in soil.

U-238

The distribution and concentration of U-238 in soils are shown on **Figure 5-22**. Three samples contained U-238 above the 50 pCi/g site standard (**Table 5-3**). The maximum concentration was present in soil sample 12B017 (81.86 pCi/g), which was advanced adjacent to Former Retention Pond A. A second exceedance was detected in soil boring 12B013 (80.49 pCi/g), which is located in the southwest corner of the MISS. The third exceedance was detected at soil boring 07a001, which is located on the 111 Essex Street property. This sample was qualified non-detect "U" by the validator, with a reported concentration of 61.6 pCi/g. There are no corresponding total uranium groundwater exceedances associated with the soil borings cited or in proximity to overburden monitoring wells.

5.3.2 TAL Metals and Lithium/Boron

A total of 118 Geoprobe® and overburden well soil samples were collected for TAL metals including lithium and boron. Soil samples were compared to site specific SSL (Table 4-77a). Metal exceedances in soil include: antimony, arsenic, cadmium, chromium, copper, lead, lithium, mercury, nickel, selenium and thallium. These metals are discussed as follows:

Antimony

The site specific SSL for antimony is 5 mg/kg. One of 118 soil samples contained antimony above the SSL (**Tables 4-87** and **5-3**). This sample obtained from boring MW-16S (72 Sydney/88 Money Street, Lodi) contained antimony at 9.4 mg/kg. Antimony was not detected in the corresponding groundwater sample. Similarly, there were no other groundwater samples that contained antimony at a concentration exceeding groundwater standards.

Arsenic

The site specific SSL for arsenic is 122 mg/kg. Three of 118 soil samples contained arsenic at concentrations exceeding the site specific SSL as depicted on **Figure 4-38a** and **Figure 4-40a** (see **Tables**

4-77b, **4-87**, and **5-3**). Arsenic was detected at its maximum concentration of 297 mg/kg in boring 18a004.

Arsenic soil exceedances were detected in borings 18a004 (297 mg/kg) and 12b002 (172 mg/kg), which are located in or adjacent to Former Retention Pond A. As shown on **Figure 5-4**, groundwater exceedances were detected in overburden wells MISS-2A (2600 µg/L), MW-20S (465 µg/L), and MW-3S (831 µg/L), which are located along the northern edge of Former Retention Pond A in close proximity to the soil borings.

Arsenic was also detected in Transect E boring 12b010 (134 mg/kg). This boring was advanced adjacent to Former Retention Pond C. Groundwater arsenic exceedances were detected in samples obtained from overburden monitoring well B38W19S (31.8 µg/L), and bedrock wells B38W19D (89.1 µg/L) and MISS-7B (72.4 µg/L)located within Former Retention Pond C.

Cadmium

Cadmium was detected in 1 soil sample (04a003), **Figure 4-38b**, at a concentration exceeding the site specific SSL of 8 mg/kg (**Tables 4-77b** and **5-3**). Cadmium was detected at its maximum concentration of 10.1 mg/kg in boring 04a003. The groundwater sample obtained from this Geoprobe® boring did not contain cadmium. Cadmium was detected in monitoring well OBMW13 (149-151 Maywood Avenue, Maywood) at 16 µg/L. This was the only sample containing cadmium at a concentration exceeding the NJ DEP GWQC of 4 µg/L (**Table 5-1**).

Chromium

Chromium was detected in 12 soil samples at concentrations exceeding the site specific SSL of 242 mg/kg (**Tables 4-77b**, **4-87**, and **5-3**). Chromium was detected at its maximum concentration of 5850 mg/kg in boring 10a003. Chromium in soil is depicted spatially on **Figure 4-38b** and **Figure 4-40b**.

Chromium soil exceedances were detected in proximity to Former Retention Pond A at Geoprobes®12b006 (356 mg/Kg), 12b018 (386 mg/kg), 12b019 (463 mg/kg), and wells MW-3S (329 mg/kg), and MW-20S (454 mg/kg). No overburden or bedrock (**Figure 5-15**) chromium groundwater plumes were noted in proximity to Former Retention Pond A.

Chromium was detected in soil boring 12b011 (383mg/kg) advanced within Former Retention Pond B at a concentration exceeding the site specific SSL. There were no overburden or bedrock (**Figure 5-15**) chromium plumes noted in proximity to Former Retention Pond B. Chromium was detected in soil sample 10a003 on the Stepan property at 5850 mg/kg. This boring is located in the southwestern portion of the Stepan property. No overburden or bedrock (**Figure 5-15**) chromium plumes were noted in proximity to this boring. A chromium plume was noted in bedrock adjacent NRC Burial Pit 2 and included wells B38W05B (173 µg/L) and BRMW17 (160 µg/L). Additionally, overburden monitoring well OBMW15 (104 µg/L) (**Figure 4-17**), contained chromium exceeding the NJDEP GWQC/Federal MCL of 100 µg/L.

Chromium was detected in soil sample 09a007 (490 mg/kg) obtained from 149-151 Maywood Avenue.), Groundwater samples obtained from this Geoprobe® boring were below the NJ GWQC/Federal MCL of 100 µg/L. Additionally, soil sample 08a002 contained chromium at 262 mg/kg, this sample was obtained from the 23 West Howcroft Road property. The filtered Geoprobe® sample from this boring did not contain chromium above the groundwater standard. However, as depicted on **Figure 5-15**, chromium was detected in bedrock well B38W12B (513 µg/L), which is part of the chromium plume.

Isolated chromium exceedances of the site specific SSL were present in soil borings 04a001 (251 mg/kg), located south of Essex Street, Lodi, and in boring 06d001 (796 mg/kg), located in Maywood. Additionally, chromium was detected in the soil sample obtained from boring MW-14S (579 mg/kg). Groundwater samples obtained from these Geoprobe® borings and overburden (**Figure 4-17**) and bedrock wells (**Figure 4-25**) either within or in proximity to these soil borings did not detect chromium at concentrations exceeding groundwater standards.

Copper

Copper was detected in one soil sample at a concentration exceeding the site specific SSL of 426 mg/kg (**Tables 4-77b** and **5-3**). Copper was detected at its maximum concentration of 460 mg/kg in boring 09a007, obtained from Transect F, 149-151 Maywood Avenue, Maywood. Copper was not analyzed as part of the Phase I Geoprobe® groundwater samples; however, no overburden or bedrock monitoring wells within or downgradient of the property contained copper above the NJ GWQC (1000 µg/L) or Federal MCL (1300 µg/L).

Lead

Lead was detected in 2 of 118 soil samples at concentrations exceeding the site specific SSL of 400 mg/kg (**Table 5-3**). Lead was detected at its maximum concentration of 556 mg/kg in boring 09a007, which is located along Transect F within the 149-151 Maywood Avenue property (**Figure 4-38b**). The other exceedance was detected at boring 12b018 (404 mg/kg), which is located southeast of Former Retention Pond A. There were no corresponding groundwater lead exceedances detected in filtered groundwater samples from Geoprobe® borings 09a007 or 12b018. The source of the lead in soil may be associated with coal used to run the MCW. Thick ash deposits were identified in soil borings advanced within Former Retention Pond A, in close proximity to 12b018. Similarly, fill and ash material was identified in soil samples obtained from boring 09a007 on the 149-151 Maywood Avenue property.

Lithium

Lithium was detected in 17 of 118 soil samples (**Tables 4-77b, 4-87, and 5-3**), at concentrations exceeding the site specific SSL of 194 mg/kg. Lithium was detected at its maximum concentration of 2090 mg/kg in boring 12b011, which is located within Former Retention Pond C. Lithium concentrations in soils are presented on **Figures 4-38a** and **4-40a**. With the exception of three exceedances, the remaining 15 soil exceedances were detected in samples collected within or adjacent to Former Retention Ponds A, B, C, and E' on the MISS.

Soil samples collected within proximity to Former Retention Pond A, 12b017 (614 mg/Kg), 12b018 (584 mg/Kg), and 18a004 (589 mg/Kg and 1080 mg/Kg) contained lithium above the site specific SSL of 194 mg/Kg. **Figures 5-5** & **5-16** depict lithium plumes in overburden and bedrock emanating from Former Retention Pond A.

Soil Samples collected within proximity to Former Retention Pond B, 12b004 (250 mg/Kg), 12b007 (773 mg/Kg), 12b020 (263 mg/Kg), 12b026 (828 mg/Kg), and 18a002 (516 mg/Kg and 772 mg/Kg) contained lithium at a concentration exceeding the site specific SSL. Lithium detected in soils in proximity to Former Retention Pond B is likely contributing to groundwater degradation within the MISS.

Soil samples collected within proximity to Former Retention Pond C and adjacent pond E' contained lithium at concentrations exceeding the site specific SSL. These samples included 12b010 (1880 mg/Kg), 12b011 (1390 mg/Kg and 2090 mg/Kg), and 12b013 (742 mg/Kg). Overburden and bedrock lithium

groundwater exceedances were detected in Former Retention Ponds C and E', as depicted on **Figure 5-5** and **5-16**, respectively.

Soil samples collected from borings 09a007 (374 mg/Kg) and 09a008 (250 mg/Kg) along Transect F on the 149-151 Maywood Avenue property contained lithium above the site specific SSL. Groundwater samples obtained from these borings did not contain lithium at a concentration above the Region IX PRG of 730 µg/L. However, lithium was detected in overburden and bedrock groundwater samples from the property as depicted on **Figures 5-5** and **5-16**, respectively. Lithium was detected in the soil sample obtained from boring 08a002 collected from the 23 West Howcroft Road property, Maywood. This sample contained 548 mg/Kg lithium. Overburden including Geoprobe® groundwater samples and bedrock groundwater samples obtained from the 23 West Howcroft property did not contain lithium at a concentration exceeding the Region IX PRG.

Mercury

Mercury was detected in 5 of 118 soil samples at a concentration exceeding the site specific SSL of 2 mg/kg (Table 4-77b and **Figure 4-38c**). Mercury was detected at its maximum concentration of 12.4 mg/kg in sample 09a007 obtained from 149-151 Maywood Avenue, Maywood. A second sample obtained from 09a007 (9 mg/kg) and sample 09a009 (2.4 mg/kg) contained mercury above the site specific SSL. However, Geoprobe® groundwater samples obtained from these borings did not contain mercury. Mercury was not detected in overburden or bedrock monitoring wells at a concentration exceeding the NJDEP GWQS/Federal MCL of 2 µg/L.

Other isolated mercury exceedances in soil were detected in samples 12b019 (3.1 mg/kg) and 04a001 (5.3 mg/kg). Groundwater samples obtained from these Geoprobe® borings did not detect the presence of mercury.

Nickel

Nickel was detected in 1 of 118 soil samples at a concentration exceeding the site specific SSL of 214 mg/kg (**Tables 4-77b and 5-3**). Nickel was present in soil boring 12b017 at a concentration of 297 mg/kg. This boring is located east of Former Retention Pond A (see **Figure 4-38a**). Nickel was not analyzed as part of the Phase I Geoprobe® groundwater samples; however, no overburden or bedrock monitoring wells within or downgradient of the MISS contained nickel above the NJ GWQC of 100 µg/L. Nickel was detected in well B38W12B located on the 23 West Howcroft Road property, 08a, Maywood at a concentration of 160 µg/L.

Selenium

Selenium was detected in 1 of 118 soil samples at concentrations exceeding the site specific SSL of 5 mg/kg (**Tables 4-77b and 5-3**). Selenium was detected at its maximum concentration of 7 mg/kg in boring 09a007, which is located on the 149-151 Maywood Avenue property, Maywood along Transect F (see **Figure 4-38C**). Selenium was not detected in the groundwater sample obtained from the Geoprobe® boring or in any overburden/bedrock monitoring wells at concentrations exceeding the NJ GWQC/Federal MCL of 50 µg/L.

Thallium

Thallium was detected in 1 of 118 soil samples at concentrations exceeding the site specific SSL of 1.3 mg/kg (**Tables 4-77b** and **5-3**, and **Figure 4-38b**). Thallium was detected at its maximum concentration of 1.3 mg/kg in boring 12b013, which is located on the MISS south of Former Retention

Pond E. The groundwater samples obtained from this boring did not detect thallium at a concentration exceeding the Federal/State MCL of 2 µg/L.

Isolated thallium groundwater exceedances were detected in wells MW-3S (3.9 µg/L) located adjacent to Former Retention Pond A, BRPZ-5 (4.8 µg/L), located within Former Retention Pond C, 13a003 (4.5 µg/L) located on the Ballod property, BRMW13 (4.4 µg/L) located on 149-151 Maywood Avenue property, and MW-15D (8 Mill Street, Lodi). The spatial distribution of thallium in overburden and bedrock groundwater is shown on **Figures 4-18** and **4-26**, respectively.

5.3.3 Volatile Organic Compounds

Forty-seven (47) soil samples were obtained from individual PDI Environmental borings and 30 soil samples were obtained from 15 Geoprobe® transect (A, E, and J) borings and analyzed for TCL VOCs. Additionally, during Phase II activities a total of 34 soil samples were submitted for VOCs analysis. A total of 111 soil samples were submitted for VOC compound analysis. Soil VOC results are compared to the stricter of the NJDEP IGWC and the EPA Generic SSLs. Soil sampling results exceeding applicable soil criteria are presented in **Tables 4-79** and **4-89** for Phase I/II activities, respectively. Soil VOC exceeding the most stringent criteria consisted of benzene, carbon tetrachloride, and methylene chloride. These VOCs are discussed in greater detail as follows and frequency of detections are presented in **Table 5-3**:

Benzene

Benzene was detected in 2 of 111 samples at concentrations of 120 µg/kg and 200 µg/kg. Samples 12b012 and 12b013 were collected along Transect E (**Figure 2-3**) within and south of Former Retention Pond E. These samples contained benzene at a concentration exceeding the EPA Generic SSL of 30 µg/kg. These concentrations were below the NJDEP IGWC of 1000 µg/kg. Geoprobe® groundwater samples from these two borings did not detect the presence of benzene (**Figure 4-41**). As indicated in Section 4.12, a benzene plume in bedrock was mapped within the MISS (**Figure 5-17** and **Table 5-2**).

Carbon Tetrachloride

Carbon Tetrachloride was detected in 1 of 111 samples, at a concentration of 180 µg/kg. This sample was collected at soil boring 02d002 on the 8 Mill Street property, Lodi. The detected concentration exceeded the EPA Generic SSL of 70 µg/kg, but did not exceed the NJDEP IGWC of 1000 µg/kg. Groundwater samples for VOC constituents were not obtained south of Essex Street in Lodi.

Methylene Chloride

Methylene chloride was detected in 5 of 111 samples, with 2 samples exceeding the both the EPA Generic SSL of 20 µg/kg and the NJ IGWC of 1000 µg/kg. These exceedances were detected in borings 12b006 (2400 mg/kg) and 12b020 (1400 mg/kg). Boring 12b006 is located in the Former Cerium/Thorium processing plant area, and boring 12b020 is located in Former Retention Pond B on the MISS. Methylene chloride concentrations in Phase I/II soil samples are presented in **Tables 4-79** and **4-89.** There were no methylene chloride exceedances in overburden or bedrock groundwater samples (**Tables 5-1** and **5-2**).

5.4 SURFACE WATER

Twenty-one (21) surface water samples were submitted for radiological and chemical analysis from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. The frequency of detection of the

radiological/chemical constituents in surface water is presented in **Table 5-4**. Sample locations are presented on **Figure 5-23**.

5.4.1 Radiological Parameters

Total Radium

The distribution and concentration of total radium in surface water is shown on **Figure 5-23**. Total radium was detected in four surface water samples at concentrations above the 5 pCi/L NJDEP/Federal groundwater standard (**Table 5-4**). Three total radium surface water exceedances were detected in Lodi Brook (LB), including samples LB-3 (5.48 µg/L), LB-5 (9.25 µg/L), and LB-7 (6.07 µg/L). Sample LB-7 was obtained from a culverted section of Lodi Brook. As shown on **Figure 5-25**, one Ra-226 + Th-232 sediment exceedance (31.98 pCi/g) was detected at the headwater of Lodi Brook (LB-1). One total radium surface water exceedance of 5.58 pCi/L was detected in Westerly Brook at sampling location WB-2. There are no Ra-226 + Th-232 sediment exceedances in Westerly Brook or upgradient drainages. Likewise, total radium groundwater exceedances were not detected in the area of Westerly Brook. The specific source of total radium to surface water is not known.

5.4.2 TAL Metals and Lithium/Boron

Surface water metal results were compared to the most stringent of the NJDEP SWQC, or the Federal Ambient Water Quality (Acute, Chronic or Organoleptic) Criteria. Surface water exceedances were detected in each drainage and included aluminum (5 samples), arsenic (11), copper (10), iron (4) lead (7), silver (2), thallium (2) and zinc (1). Sample frequency of detection, concentration range and exceedance data are provided in **Tables 5-4** and **5-5**. The spatial distribution of metals in surface water are shown on **Figure 4-32** and **4-33**. Sampling results are discussed for each metal with a reported exceedance in the sections below.

Aluminum

Aluminum was detected in 5 of 21 samples at concentrations exceeding the Federal Ambient Water Quality Chronic Criteria of 87 µg/L (**Figure 4-32**). The maximum concentration of aluminum in surface water was detected in sample WB-3, which contained 225 µg/L. The other four exceedances were detected in Lodi Brook samples LB-2, LB-3, LB-5 and LB-8. The source of aluminum in Lodi and Westerly Brook surface water is unknown, but may be derived from urban storm water runoff, runoff or leaching from the former MCW or downstream (fill) impacted properties, and/or groundwater discharge into the brooks.

Arsenic

Arsenic exceeded the NJDEP SWQC of 0.017 µg/L in 11 of 21 surface water samples collected from Westerly Brook (4 samples), Lodi Brook (6 samples), and the Saddle River (1 sample). The spatial distribution of arsenic in surface water is shown in **Figure 4-32**. The maximum concentration of arsenic was detected in surface water sample WB-3, which contained 48.3 µg/L.

The source of arsenic in Westerly Brook surface water is probably derived from groundwater infiltration into the Westerly Brook culvert pipe on the MISS.

Low levels of arsenic were detected in surface water samples obtained from Lodi Brook. Arsenic levels ranged from 3.6 to 9.7 µg/L, with the maximum concentration detected at upstream sample, LB-2. The source of arsenic in Lodi Brook surface water is unknown, but may be derived from urban stormwater

runoff, runoff or leaching from the former MCW or downstream (fill) impacted properties, and/or groundwater discharge into Lodi Brook.

One arsenic surface water exceedance was detected in the Saddle River at sample location SR-3 (8.3 µg/L), which is located downstream of the confluence with Westerly Brook.

Copper

Ten (10) samples containing copper were present in surface water samples at concentrations above the NJDEP SWQC of 7.9 µg/L.

Six of the exceedances were present in samples obtained from Lodi Brook. Concentrations ranged from 11.7 to 23.8 µg/L along Lodi Brook, with the maximum concentration detected in sample LB-3, located north of NJ Route 17 and Essex Street, refer to **Figure 4-33**.

Four samples from the Saddle River contained copper ranging from 10.3 to 11.3 µg/L. The maximum concentration of copper in the Saddle River was present in samples SR-6 and SR-7, both samples were obtained downstream of the confluence with Lodi Brook.

The sources of copper in Lodi Brook and Saddle River surface water are not known, but may be derived from urban storm water runoff, or runoff/leaching from the former MCW or downstream (fill) impacted properties. There were no groundwater copper exceedances detected during Phase II sampling, and accordingly, a groundwater source to surface water is considered unlikely.

Iron

Iron was detected in 4 samples at concentrations exceeding the Federal Freshwater AWQC Acute Criteria for Non-Priority Pollutants of 1000 µg/L (**Figure 4-33**). The maximum iron concentration was detected in sample WB-3 (3460 µg/L). Other exceedances included WB-2 (1090 µg/L), WB-4 (1110 µg/L) an upstream sample, and Lodi Brook sample LB-2 (1160 µg/L). The source of elevated iron concentrations in Westerly and Lodi Brook surface waters are not known.

Lead

Lead was detected in seven samples at concentrations above the Federal AWQC (Chronic) Criteria of 2.5 µg/L (**Figure 4-32**). Two samples obtained from Westerly Brook, WB-3 (5.4 µg/L), WB-4 (4 µg/L) an upstream sample, four samples from Lodi Brook, LB-2 (7.7 µg/L), LB-3 (2.6 µg/L), LB-4 (3.6 µg/L), and LB-5 (2.8 µg/L) contained lead above the surface water criteria. Additionally, Saddle River sample (SR-2), contained lead (10.8 µg/L) at its maximum detectable concentration. This sample was obtained downstream of the confluence with Westerly Brook. The specific sources of lead in Lodi Brook surface water are not known, but may be derived from urban storm water runoff, or runoff/leaching from the former MCW or downstream (fill) impacted properties. The surface water source at Westerly Brook location WB-3 is also not known, but may be derived from urban storm water runoff. Two low level exceedances of lead was detected in groundwater at upgradient overburden well MW-20S and bedrock well MW-3D, and is considered a potential source to Westerly Brook. The sample from SR-2 may be attributable to urban storm water runoff.

Silver

Silver exceeded the Federal AWQC (Acute) Criteria of 3.4 µg/L in two samples obtained from Westerly Brook. The maximum detected concentration was present in sample WB-3 (59.4 µg/L). The other exceedance was detected in sample WB-5 (8.6 µg/L), an upstream sample (**Figure 4-33**). The specific

source of silver in sample WB-3 may be derived from urban storm water runoff, or runoff/leaching from the former MCW, or groundwater discharge into the brook. However, there were no overburden or bedrock samples that contained silver above groundwater criteria (**Tables 5-1** and **5-2**).

Thallium

Thallium exceeded the NJ SWQC of 1.7 µg/L in samples LB-5 (4.3 µg/L) and WB-1 (6.1 µg/L) (**Figure 4-32**). The specific source of thallium in surface water at Lodi Brook and Westerly Brook is unknown. Two low level thallium groundwater exceedances were detected at upgradient overburden (MW-3S) and bedrock (BRPZ-5) wells, and are considered a potential source to the Westerly Brook. The specific sources of thallium in Lodi Brook surface water are not known, but may be derived from urban storm water runoff or downstream (fill) impacted properties. This sample was obtained from an exposed portion (non-culverted) of the brook adjacent Redstone Lane.

Zinc

Zinc exceeded the Federal AWQC (Acute/Chronic) Criteria of 120 µg/L in Westerly Brook sample WB-3 (186 µg/L) (**Figure 4-33**). The specific source of zinc in this sample may be derived from urban storm water runoff, or runoff/leaching from the former MCW, or groundwater discharge into the brook.

5.5 SEDIMENT RESULTS

Twenty-two (22) sediment samples were submitted for radiological and chemical analysis from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. The locations of the samples are depicted on **Figure 5-25**. The frequency of detection of radiological constituents in sediment is presented in **Table 5-6**.

5.5.1 Radiological Parameters

Ra-226 + Th-232 and U-238

The distribution and concentration of Ra-226 + Th-232 constituents in sediment is shown on **Figure 5-25**. Sediment data for radiological parameters were compared to the FMSS soil cleanup level of 5 pCi/g for Ra-226 + Th-232, and 50 pCi/g for U-238. A total of 22 sediment samples were obtained from Westerly Brook and associated upstream drainage, Lodi Brook, Coles Brook, and the Saddle River.

One Ra-226 + Th-232 exceedance was detected at sediment sample location LB-1 (31.89 pCi/g), which is located at the headwaters of Lodi Brook on the 149-151 Maywood Avenue, Property No. 9a, Maywood. There were no exceedances of the U-238 criteria of 50 pCi/g.

5.5.2 TAL Metals and Lithium/Boron

As noted 22 sediment samples were obtained from Westerly Brook, Lodi Brook, Coles Brook and the Saddle River. Metals data was compared to the most stringent of either the NJDEP Lowest Observed Effects Level (LOEL) or the EPA Recommended Consensus Based TEC for Freshwater Systems (TEC). Metals exceedances in sediments included arsenic, cadmium, chromium, copper, lead, nickel and zinc. Sediment metal exceedances were also compared to the average value for sediments in seven major New Jersey rivers (mixed use watershed) and the average Rahway River value (high density urban watershed). These values were cited in the USGS report titled *Water Quality in the Long Island-New Jersey Coastal Drainages* (USGS 2000). A large majority of individual metal sediment exceedances fell below or within the cited background sediment metal concentrations for mixed and urban watersheds in New Jersey.

Sample locations and results are shown on **Figure 4-35**. The frequency of detection of chemical constituents in sediment is presented in **Table 5-6** and exceedances are presented in **Table 5-7**.

Arsenic

Three samples contained arsenic at a concentration exceeding the NJDEP Freshwater Sediment Criteria of 6 mg/kg. These concentrations ranged from 6.7 mg/kg to 30.5 mg/kg (LB-1). Samples containing arsenic above the sediment criteria of 6 mg/kg was present in samples LB-1 (30.5 mg/kg), which is located on the 149-151 Maywood Avenue property, Coles Brook samples CB-3 (6.7 mg/kg), and Saddle River sample SR-3 (8.3 mg/kg). The spatial distribution of arsenic in sediments is presented on **Figure 4-35**.

The potential sources of arsenic include storm water runoff and contamination from local impacted fill. The USGS study reported an average freshwater sediment arsenic concentration of 7.0 mg/kg for eight New Jersey Rivers, and 10 mg/kg in the Upper Saddle River. The reported arsenic concentrations in CB-3 and SR-3 fall within the cited range of background arsenic concentrations in New Jersey and Upper Saddle River drainage sediments. The elevated arsenic levels at sample LB-1 may be derived from impacted fill at the 149-151 Maywood Ave. property.

Cadmium

Cadmium was detected in five samples at a concentration exceeding the NJ Freshwater Sediment Criteria of 0.6 mg/kg. These concentrations ranged from 0.79 mg/kg to 3 mg/kg (CB-3). Samples containing cadmium above the sediment criteria of 0.6 mg/kg was present in samples LB-1 (0.89 mg/kg), which is located on the 149-151 Maywood Avenue property, Coles Brook samples CB-1 (0.79 mg/kg) and CB-3 (3 mg/kg) and samples collected upstream of the MISS from the un-named drainage ditch UD-6 (1.1 mg/kg) and UD-7 (1.7 mg/kg). The spatial distribution of cadmium in sediments is presented on **Figure 4-35**.

The potential sources of cadmium include storm water runoff and contamination from local impacted fill. Sediment data in the USGS study show an average New Jersey drainage and Upper Saddle River cadmium concentration of 1.0 mg/kg, with a maximum value of 2.5 mg/kg reported in the Rahway River. Four of five samples fall within the cited background cadmium range for mixed and urban drainage sediments in New Jersey. The slightly elevated cadmium concentration at CB-3 may be attributed to the sample location in a ponded stream segment in the upper Coles Brook (light industrial/commercial) watershed.

Chromium

Chromium was detected in seven samples at a concentration exceeding the NJDEP Freshwater Sediment Criteria. These concentrations ranged from 27.3 mg/kg to 191 mg/kg (LB-1). Samples containing chromium above the sediment criteria of 26 mg/kg was present in samples LB-1 (191 mg/kg), which is located on the 149-151 Maywood Avenue property, Lodi Brook samples LB-4 (81 mg/kg), LB-6 (28.2 mg/kg), and LB-8 (27.3 mg/kg), Coles Brook sample CB-3 (59.4 mg/kg), and the un-named drainage ditch samples UD-6 (40.5 mg/kg) and UD-7 (60.8 mg/kg). The spatial distribution of chromium in sediments is presented on **Figure 4-35**.

The potential sources of chromium include storm water runoff and contamination from local impacted fill. The USGS study reported an average New Jersey drainage and Upper Saddle River sediment chromium concentration of approximately 80 mg/kg, with higher average values of 120 mg/kg reported in the Rahway River. All but the sample collected at LB-1 (191 mg/kg) fall at or below the reported average

for drainage sediment in New Jersey. The elevated chromium concentrations reported in sample LB-1 may be attributed to local stormwater runoff and/or impacted fill on the 149-151 Maywood Ave. property.

Copper

Copper was detected in 11 of 22 samples at a concentration exceeding the NJDEP Freshwater Sediment Criteria of 16 mg/kg. These concentrations ranged from 19.1 mg/kg to 131 mg/kg (CB-3). Samples containing copper above the sediment criteria of 16 mg/kg was present in all five sediment samples obtained from Coles Brook (**Table 5-7**), LB-1 (96 mg/kg), three samples collected upstream of the MISS, UD-6 (96.8 mg/kg), UD-7 (90.2 mg/kg), WB-5 (31.7 mg/kg), and two samples obtained from the Saddle River, SR-3 (26.6 mg/kg) and SR-7 (23 mg/kg). The spatial distribution of copper in sediments is presented on **Figure 4-35**.

The potential sources of copper include storm water runoff and contamination from local impacted fill. The USGS study reported an average New Jersey drainage copper sediment concentration of approximately 70 mg/kg, with the highest average value of 120 mg/kg reported in the Rahway River. Ten (10) of 11 sediment sample values fall within the background range for mixed use and urban drainages in New Jersey. Sample CB-3 (131 mg/kg) lies slightly above the upper range urban drainage value for copper in sediment. As noted, copper soil and groundwater exceedances were not detected on the FMSS, and the site is not considered a potential source of copper in local stream sediments.

Lead

Lead was detected in 16 of 22 samples at a concentration exceeding the NJDEP Freshwater Sediment Criteria of 31 mg/kg. These concentrations ranged from 33.8 mg/kg to 427 mg/kg (LB-7). Samples containing lead above the sediment criteria of 31 mg/kg was present in all surface water bodies sampled (**Figure 4-35** and **Table 5-7**). The spatial distribution of lead in sediments is presented on **Figure 4-35**.

The potential sources of lead include storm water runoff and contamination from local impacted fill. The USGS study reported a mean NJ drainage and Upper Saddle River lead sediment concentration of approximately 70 mg/kg and 120 mg/kg, respectively. The maximum average lead sediment concentration of 250 mg/kg was detected in the urban Rahway River. Twelve of 16 samples fall below the upper average lead value (Rahway River) for drainage sediment. Samples UD-6 (276 mg/kg) and CB-3 (304 mg/kg) lie within ponded stream segments, and may accumulate stormwater derived sediment at those locations. Elevated (above study background) lead sediment concentrations were also detected at LB-1 (354 mg/kg) and LB-7 (427 mg/kg), and may be attributed to the effects of high density urban/light industrial runoff and/or impacted fill along Lodi Brook.

Nickel

Nickel was detected in 7 of 22 samples at concentrations exceeding the NJDEP Freshwater Sediment Criteria of 16 mg/kg. These concentrations ranged from 17.7 mg/kg to 61 mg/kg (LB-7). Samples containing nickel above the sediment criteria of 16 mg/kg was present in Lodi Brook samples LB-6 (23.9 mg/kg), LB-7 (61 mg/kg) and LB-8 (24.3 mg/kg), Coles Brook sample CB-3 (36.8 mg/kg) and Westerly Brook samples WB-2 (17.7 mg/kg), and from UD-6 (48.6 mg/kg) and UD-7 (30.3 mg/kg) collected from the un-named drainage ditch north of the MISS (**Figure 4-35** and **Table 5-7**). The spatial distribution of nickel in sediments is presented on **Figure 4-35**.

The potential sources of nickel include storm water runoff and contamination from local impacted fill. The USGS study reported an average New Jersey drainage sediment nickel concentration of approximately 30 mg/kg, with a maximum average nickel concentration of 45 mg/kg in the Rahway River

sediments. Five of seven reported exceedances either fell below or within the cited average sediment nickel concentrations for mixed use and urban drainages in New Jersey. Nickel sample exceedances at locations UD-6 (48.6 mg/kg) and LB-7 (61 mg/kg) may be attributed to local stormwater sources and/or impacted fill.

Zinc

Zinc was detected in 13 of 22 samples at concentrations exceeding the NJDEP Freshwater Sediment Criteria of 120 mg/kg. These concentrations ranged from 154 mg/kg to 1020 mg/kg (LB-7). Samples containing zinc above the sediment criteria of 120 mg/kg was present in Lodi Brook samples LB-1 (226 mg/kg), LB-4 (179 mg/kg), LB-6 (621 mg/kg), LB-7 (1020 mg/kg), and LB-8 (323 mg/kg), Coles Brook sample CB-3 (565 mg/kg) and Westerly Brook samples WB-1 (221 mg/kg), WB-2 (202 mg/kg), WB-4 (154 mg/kg), WB-5 (158 mg/kg), UD-6 (452 mg/kg), UD-7 (349 mg/kg), and Saddle River sample SR-3 (176 mg/kg) (**Figure 4-35** and **Table 5-7**). The spatial distribution of zinc in sediments is presented on **Figure 4-35**.

The potential sources of zinc include storm water runoff and contamination from local impacted fill. The USGS study reported an average New Jersey sediment zinc concentration of approximately 225 mg/kg, with the maximum average sediment concentration of approximately 400 mg/kg in the Rahway River. Ten of 13 samples fall within the cited background "urban gradient" sediment values for zinc. The highest zinc concentrations are reported at downstream Lodi Brook locations LB-6 (621 mg/kg) and LB-7 (1020 mg/kg), and upstream Westerly Brook sample UD-6 (452 mg/kg). The elevated zinc sediment concentrations at LB-6 (621 mg/kg), LB-7 (1020 mg/kg) and UD-6 (452 mg/kg) are probably derived from local runoff. Noting that there are no reported soil and groundwater zinc exceedances in the FMSS, the site is not considered a potential source of zinc to local stream sediments.

5.6 AREAS OF CONCERN (AOCs)

5.6.1 Introduction

Potential FUSRAP wastes (FUSRAP COPCs) were identified in groundwater, surface water and sediment media based upon the definition provided in the FFA (September 1990), which states as follows:

> "FUSRAP Waste" shall mean and be specifically limited to all contamination, both radiological and chemical, whether commingled or not, on the MISS and all radiological contamination above DOE's action levels related to past thorium processing at the MCW site occurring on any Vicinity Properties. Also included are any chemical or non-radiological contamination on Vicinity Properties that would satisfy either of the following requirements:
>
> (1) The chemical or non-radiological contaminants are mixed or commingled with radiological contamination above DOE's action levels or
>
> (2) The chemical or non-radiological contaminants originated in the MISS or were associated with the specific thorium manufacturing or processing activities at the MCW site, which resulted in the radiological contamination.

In the definition of a FUSRAP waste those radiological or chemicals that do not have a DOE action level will be subject to the lowest of the Federal or State drinking water standards, or appropriate criteria when assessing the extent of contamination and determining and choosing COPCs for the risk assessment.

A total of 16 groundwater, 5 surface water and 1 sediment FUSRAP COPC(s) are identified in the RI, and are shown by media in **Table 5-8**. Most groundwater FUSRAP COPCs on the MISS are detected at low concentrations in one or more isolated wells, and have a limited aerial extent. A number of FUSRAP COPCs on the MISS are probably derived from offsite sources, and include PCE, TCE and VC.

Probable FUSRAP COPC groundwater source areas were located on the FMSS, and designated as groundwater AOCs. Probable groundwater source areas were primarily delineated by detected groundwater exceedances, with the use of soil sampling data and historical process information to further define the source area boundaries. The groundwater AOCs do not include the area of a constituent groundwater plume. Groundwater AOCs are defined by the presence of: (1) FUSRAP COPC exceedances in groundwater, and (2) a probable active (ongoing) groundwater contamination source. A total of seven groundwater AOCs were identified in the FMSS study area, as follows:

- AOC 1 - Former Retention Pond A
- AOC 2 - Former Retention Pond C
- AOC 3 - NRC Burial Pit 1
- AOC 4 - NRC Burial Pit 3
- AOC 5 - Well B38W18D (Former Thorium Manufacturing Area)
- AOC 6 – Probable Benzene (Bedrock) Source Area
- AOC 7 - Overburden Benzene Source Area (Former MCW Chemical Bldg.)

In addition, one sediment/surface water and one surface water AOC was identified based upon sediment and surface water sampling results. Surface water and sediment AOCs are limited to the stream segment adjacent an impacted sample and do not include the entire downgradient drainage. The sediment and surface water AOCs include the following:

- AOC 8 - Lodi Brook (sediment and surface water)
- AOC 9 - Westerly Brook (surface water)

The groundwater, sediment and surface water AOC locations are shown on **Figure 5-26a** and **5-26b**. A summary of the impacted media and FUSRAP COPCs at each AOC are provided in **Table 5-9**. A more detailed discussion of each groundwater, sediment, and surface water AOC is provided in the following section.

5.6.2 AOC 1 - Former Retention Pond A

Former Retention Pond A located within the MISS is identified as a potential groundwater source area based upon detected arsenic, lithium, lead, and thallium exceedances at adjacent wells. Groundwater exceedances of selected constituents were detected in both the overburden and bedrock aquifers.

Background

Former Retention Pond A was identified as a primary source of contamination, and a source area for lithium and boron in groundwater in the DOE RI (1992). This report also identified "the area of contaminated soils east of Former Retention Pond A in the vicinity of Building 76" as a source of lithium in groundwater.

The former retention pond was constructed by MCW as an earthen dike to hold process slurry effluent containing thorium and other process wastes. Former Retention Pond A held primarily lithium wastes; whereas, Former Retention Pond C (AOC 2) contained both thorium and lithium wastes (DOE 1992). Based on former site drawings, it appears that the dimension of Retention Pond A is approximately 300 feet x 150 feet with the longest dimension being in an east-west direction. Fill thickness in Former Retention Pond A reportedly varies from 2 to 9 feet, with the greatest thickness noted along the eastern and northern portion (DOE 1992).

Groundwater Constituents of Concern

Arsenic, lithium, lead, and thallium exceedances were detected in groundwater samples obtained from wells located adjacent and downgradient to Former Retention Pond A. An overburden arsenic plume was plotted from the sampling data and extends approximately 500 feet west of this well (**Figure 5-4**). The distribution of arsenic in the overburden and bedrock aquifer (in AOC 1) is shown on **Figure 5-27**. As shown, the plotted overburden arsenic plume does not extend past well MISS-01A, and has not impacted the underlying bedrock aquifer. As noted in Section 1.0, large quantities of fly ash/bottom ash from coal were disposed of in Retention Pond A and are the likely source of arsenic in groundwater.

Lithium was also detected in overburden well MISS-2A at 10,100 µg/L, which exceeds the Region IX PRG of 730 µg/L. The plotted extent of the lithium plume in overburden extends approximately 475 feet west of this well (**Figure 5-5**). Lithium was also detected in bedrock cluster well MISS-2B at 16,100 µg/L. The plotted extent of the lithium plume in bedrock extends approximately 1800 feet west of this well (**Figure 5-16**).

A single lead and thallium groundwater exceedance was each detected in overburden and bedrock groundwater, and a boron exceedance was detected in two bedrock wells located in AOC 1.

Groundwater Conditions

Phase II groundwater data shows that the depth to groundwater at AOC 1 (MISS-2A) ranges from 10 to 11 feet bgs. Noting that the former pond sediments extend to approximately 9 feet bgs, the likely contamination pathway is the leaching of FUSRAP COPCs from the pond sediment to shallow groundwater. The local overburden and bedrock aquifer flow direction is west/northwest, which corresponds with the observed sampling results and plotted plumes for each FUSRAP COPC. As discussed in Section 3, groundwater heads measured at local overburden and bedrock cluster wells (MISS-2A/2B and MW-20S/20D) show a downward vertical flow gradient from the overburden to bedrock aquifer along the eastern side of the pond. It is noted, however, that arsenic is not detected in bedrock wells that are clustered with highly impacted overburden wells. High concentrations of lithium are detected in bedrock and overburden cluster wells in AOC 1; however, lithium in groundwater could be derived from impacted soils located east of Former Retention Pond A and/or from AOC 5.

Based on the direction of groundwater flow, the closest potential receptor to the overburden aquifer is Westerly Brook, although Westerly Brook is culverted (piped) along most of its length to the Saddle River. The video inspection of the culvert indicated that it was leaking (infiltration) along a substantial portion of its run. Accordingly, Westerly Brook is considered a local (overburden) groundwater receptor. The Saddle River is probably the principal receptor for the overburden and bedrock aquifer. The Saddle River is located approximately 0.4 mile from the downgradient edge of AOC 1.

Planned Remedial Investigations or Actions in AOC 1

Excavation and disposal of impacted soils within the MISS, including Former Retention Pond A, is proposed in the Soils OU ROD (USACE 2003b). Former Retention Pond A and C lithium plumes in overburden and bedrock will be further delineated at a later stage.

5.6.3 AOC 2 - Former Retention Pond C

Former Retention Pond C is identified as a potential groundwater source area based upon detected exceedances of total uranium, adjusted gross alpha, adjusted gross beta, arsenic, lithium, barium, benzene, and limited detections of PCE, TCE, and VC in overburden and bedrock wells.

Background

Former Retention Pond C (AOC 2) was identified as a contaminant source, and source of lithium in groundwater in the DOE RI (DOE 1992). The former retention pond was constructed by MCW as an earthen dike to hold process slurry effluent containing thorium process wastes. Retention Pond A primarily held lithium wastes (AOC 1), while AOC 2 is believed to have received both thorium and lithium wastes. The MCW also reportedly placed waste from other process operations into former Retention Pond C.

Based on former site drawings, the dimensions of this retention pond are approximately 250 feet x 250 feet. The maximum fill thickness observed in GWRI borings is 10 feet; however, DOE (1992) reported basin thickness up to 15 feet. Soil containing elevated concentrations of lithium was reported to a maximum depth of 13.5 feet bgs. The approximate extent of AOC 2 is shown on **Figure 5-26**.

Groundwater Constituents of Concern

Total uranium was detected in overburden monitoring well MISS-5A at 73.48 pCi/L (110.2 µg/L), which exceeds the MCL of 30 µg/L (**Figure 5-2**). Uranium was present within the monazite ore and subsequently was present as a waste product of the manufacturing process. Adjusted gross alpha and adjusted gross beta exceedances were detected in bedrock wells located within Former Retention Pond C, and are shown on **Figures 5-11** and **5-13**, respectively.

Arsenic was detected in overburden monitoring well B38W19S at 31.8 µg/L, which exceeds the NJDEP GWQS of 8 µg/L. Fly ash and sludge deposits were mapped in cross section within Former Retention Pond C by DOE (1992), and are the probable source of arsenic in groundwater. Arsenic exceedances were also detected in bedrock monitoring wells MISS-7B and B38W19D. A bedrock arsenic plume was plotted on **Figure 5-14**, and extends approximately 250 feet downgradient from well MISS-7B (and B38W19D) to the 8 µg/L isopleth. An arsenic exceedance was detected at downgradient bedrock well B38W15B (19.1 µg/L), and may be derived from offsite remediated Former Retention Ponds D/E.

Lithium was detected at overburden monitoring wells B38W19S and MISS-5A at 1730 µg/L and 1130 µg/L, respectively. The EPA region IX PRG for lithium in groundwater is 730 µg/L. As shown on **Figure 5-5**, an overburden lithium plume is plotted 1000 feet downgradient of well B38W19S. The probable source of lithium in the overburden aquifer is impacted pond sludge media in AOC 2. Elevated lithium concentrations (3240 µg/L) were also detected in downgradient overburden well B38W15B, and may be derived (in whole or part) from offsite remediated Former Retention Ponds D/E. Elevated lithium concentrations were also detected in AOC 2 bedrock wells, and is presumably derived from the overlying overburden aquifer (**Figure 5-16**). The vertical distribution of lithium in the overburden and bedrock

aquifer is shown on **Figure 5-28**. The lithium source areas in AOC 1 and AOC 2 form an overlapping bedrock lithium plume that extends approximately 900 feet downgradient from the edge of AOC 2. Elevated lithium concentrations were also detected in downgradient bedrock wells B38W15B and MW-2D, and may be derived from offsite remediated Former Retention Ponds D/E. A barium exceedance was also detected at well MISS-5B, which is located within Former Retention Pond C.

Benzene was detected at Geoprobe® 12b011 (36 µg/L), which is located at the western (downgradient) edge of the former pond (**Figure 5-6**). Process wastes or discharges from MCW to Former Retention Pond C are the likely sources.

Groundwater Conditions

Groundwater levels measured within AOC 2 during July and August 2001 ranged between 10 feet and 11.5 feet bgs at upgradient wells, to 14.2 and 14.7 feet bgs at downgradient well locations. Noting that the impacted sludge deposits (2 to 10 feet, bgs.) overly the water table, leaching is the probable mechanism for ongoing groundwater contamination. Overburden and bedrock groundwater flow is west/southwest, toward the Saddle River. Groundwater head measurements from 3 overburden/bedrock well clusters (OVPW-1S/BRPZ-9, B38W19S/19D, and MISS-5A/5B) show a consistent downward vertical gradient from the overburden aquifer into the bedrock aquifer. This may explain the detection of arsenic, lithium and other radiological FUSRAP COPCs in the bedrock aquifer at AOC 2.

Based on the direction of groundwater flow, the closest principal receptor to AOC 2 is the Saddle River. The Saddle River is located approximately 800 feet from the downgradient edge of AOC 2.

Planned Remedial Investigations or Actions in AOC 2

Excavation and disposal of impacted soils within the MISS, including AOC 2 (Former Retention Pond C), is addressed in the OU1 Soils ROD (USACE 2003b). Former Retention Pond A and C lithium plumes in overburden and bedrock will be further delineated at a later stage.

5.6.4 AOC 3 - NRC Burial Pit 1

NRC Burial Pit 1 was identified as a potential groundwater source area based upon the detection of an isolated total uranium exceedance in overburden monitoring Well 5. There were no radiological or chemical exceedances detected at adjacent bedrock well BRMW-16.

Background

As part of a corrective action in 1966, Stepan Company excavated 8400 cubic yards (yd^3) of contaminated material from the former Ballod property (Former Retention Ponds D and E) and relocated the material in Burial Pit 1, which is located on the Stepan Company property. In 1967, an additional 2100 yd^3 of contaminated material was removed from the same area and buried on Stepan Company in Burial Pit 2 (DOE 1992). Burial Pit 1 measures approximately 120 x 225 feet, with the long axis oriented east-west. Fill thickness was measured at 15.5 feet bgs (CH_2M Hill 1994a).

Constituents of Concern

A total uranium exceedance of 30.02 pCi/L (41.46 µg/L) above the Federal MCL of 30 µg/L was detected in overburden Well 5, which is located in Burial Pit 1, refer to **Figure 5-2**. Elevated concentrations of gross alpha, gross beta, Ra-226, Ra-228, U-234 and U-238 were reported in Burial Pit 1 soil boring samples, at a sampling depth of 10-12 feet, bgs (CH_2M Hill 1994a). Impacted fill in Burial Pit 1 is the likely source of total uranium in overburden groundwater.

Groundwater Conditions

Overburden groundwater flow (July 26, 2001) varies from south to southwest in the Burial Pit 1 area. Depth to water at overburden Well 5 is 6.5 feet, bgs, which places the impacted fill deposits in contact with the overburden aquifer. Noting that Burial Pit 1 is covered with permeable fill and a lawn, leaching of radiological constituents to groundwater is probably a significant contaminant pathway.

The nearest groundwater receptor is Lodi Brook on the 149-151 Maywood Avenue property, and is located approximately 800 feet downgradient from Well 5 in AOC 3.

Planned Remedial Investigations or Actions in AOC 3

Excavation and disposal of impacted soils within the vicinity properties, including AOC 3 (Burial Pit 1) and upgradient Burial Pit 2, is proposed in the OU1 (Soils) ROD (USACE 2003b).

5.6.5 AOC 4 - NRC Burial Pit 3

NRC Burial Pit 3 was identified as a potential groundwater source area based upon the detection of total radium, adjusted gross alpha, and arsenic exceedances in the overburden aquifer.

Background

Burial Pit 3 was constructed after radiological surveys identified impacted tailing and slurry piles on the former Ballod Property, which is located across NJ Route 17 from the MISS. The pile materials subsequently excavated and buried on the Stepan Company property in unlined pits. In 1967 and 1968, 8,600 yd^3 was placed in Burial Pit 3. Of that total, an estimated 3,000 yd^3 contains approximately 0.25% thorium, which yields approximately 8,150 pounds of thorium containing about 400 millicuries of Th-232 (DOE 1992).

Burial Pit 3 was constructed of five trenches, which were excavated 8 to 15 feet deep from grade to the depth of a shale and rock base. The excavations were observed to be free of water. The burial pit is roughly rectangular in shape and measures approximately 300 feet x 220 feet with the longest dimension being in an east-west direction. Excavated material from the Ballod property was disposed of within Burial Pit 3, and was subsequently covered with 3 to 4 feet of clean fill.

Groundwater Constituents of Concern

Total radium (17.5 pCi/L) and adjusted gross alpha (288.99 pCi/L) exceedances were detected in overburden monitoring well OBMW10, which is located on the 149-151 West Hunter Avenue property, immediately downgradient of Burial Pit 3 (see **Figures 5-1** and **5-3**). The Federal MCL for total radium and gross alpha is 5 pCi/L and 15pCi/L, respectively.

Arsenic was also detected in overburden monitoring wells OBMW10 and Well 2 at 19.8 µg/L and 15 µg/L, respectively (**Figure 5-4**). These concentrations exceed the NJDEP PQL of 8 µg/L for arsenic in groundwater. The plotted arsenic plume appears to extend approximately 100 feet downgradient of OBMW10 in a south/southwesterly direction.

Groundwater Conditions

Based on the water levels obtained from Well 1 and Well 2 in July 2001, the depth to groundwater within the burial pit ranged from approximately 9 to 10 feet bgs. Groundwater measured slightly less than 1.25 feet bgs in well OBMW10 located on the 149-151 Maywood Avenue property. This monitoring

well is located downgradient of the burial pit and is 10 feet lower in topography than the burial pit monitoring wells. The burial of pond wastes to 15 feet bgs places the potential FUSRAP COPCs below the water table and in contact with the overburden aquifer. Noting that a structure was built on top of the burial pit, leaching is not considered a major contaminant transport mechanism.

Based on the July 2001 synoptic gauging round, the direction of groundwater flow at Burial Pit 3 ranges from southeast to southwest, toward Lodi Brook. There are no overburden/bedrock cluster wells located within or adjacent to AOC 4. FUSRAP COPCs were not detected in bedrock wells in the area of AOC 4.

Based upon the direction of groundwater flow, the closest receptor to FUSRAP COPCs in the overburden aquifer is Lodi Brook. Lodi Brook is located approximately 350 feet from AOC 4, and may be receiving groundwater discharge from the overburden aquifer.

Planned Remedial Investigations or Actions in AOC 4

Excavation and disposal of impacted soils within the vicinity properties, including AOC 4 (Burial Pit 3) and portions of the adjacent 149-151 Maywood Avenue property is proposed in the OU1 (Soils) ROD (USACE 2003b).

5.6.6 AOC 5 - Well B38W18D (Former Thorium/Cerium Manufacturing Area)

The area around bedrock monitoring well B38W18D, is identified as a potential groundwater source area, based upon the detection of total radium, gross alpha, lithium, and arsenic exceedances in that well. The detected FUSRAP COPCs in groundwater may be derived from the impacted fill from the Former Cerium/Thorium Manufacturing Building area located to the northeast (upgradient) of the well.

Background

Well B38W18D is located approximately 115 feet southwest from the former Thorium Processing Area, which includes the former MCW Cerium and Thorium Manufacturing Buildings. In 1916, the MCW plant began extracting thorium and REEs from monazite sand for use in manufacturing industrial products such as mantles for gas lanterns. The manufacturing process involved the production of mantle-grade thorium nitrate. Thorium extraction ceased in 1956, but thorium processing of stockpiled material continued until 1959.

As shown on **Figure 5-26b**, AOC 5 extends over an approximate 400 x 200 feet area, including well B38W18D. AOC 5 reports the highest soil radioactivity on the MISS, with radiological contamination extending to 22 feet bgs, in isolated locations (DOE 1992). Elevated concentrations of lithium were also detected along the Stepan Company property and NYSW property.

Groundwater Constituents of Concern

Total radium and adjusted gross alpha exceedances were detected at bedrock well B38W18D at 19.40 and 27.02 pCi/L, respectively (**Figures 5-10** and **5-11**). The Federal MCLs for total radium and adjusted gross alpha are 5 and 15 pCi/L, respectively. There is no corresponding (cluster) overburden well.

Arsenic and lithium exceedances were also detected in bedrock groundwater samples obtained from monitoring well B38W18D. Arsenic was detected at 12 µg/L and lithium was detected at 2990 µg/L (**Figures 5-14** and **5-16**). These concentrations exceed the NJDEP PQL of 8 µg/L and the EPA Region IX PRG of 730 µg/L, respectively. Concentrations of lithium were detected in subsurface soil, and are the probable source of lithium in groundwater. Lithium is mobile in groundwater, and may be derived

from Burial Pit 2, or other nearby lithium source areas. The specific source of arsenic is not known; however, it is probably derived from fly ash and cinder fill.

Groundwater Conditions

The depth to groundwater at bedrock well B38W18D ranged from approximately 5 to 6.5 feet bgs in July 2001 and December 2001, respectively. Based on the July 2001 synoptic gauging rounds, the direction of bedrock groundwater flow is west/southwest. Overburden groundwater flow direction is west at this location. There are no well clusters adjacent AOC 5; however, cluster wells MISS-2A/MISS-2B (275 feet NW) and MW-20S/-20D (350 feet NW) show a downward vertical gradient from the overburden aquifer into the bedrock aquifer. These data suggests that detected FUSRAP COPCs in the bedrock aquifer may be derived from the overburden aquifer. The former Thorium and/or Cerium manufacturing sites are located upgradient of well B38W18D, are the likely source(s) of radiological contamination in the overburden aquifer and bedrock well B38W18D.

Based on the direction of bedrock groundwater flow, the closest receptor to the detected radiological and chemical FUSRAP COPCs is the Saddle River. The Saddle River is located approximately 0.5-mile from well B38W18D.

Proposed Remedial Investigations or Action in AOC 5

Excavation and disposal of impacted soils within the MISS, including AOC 5 (Former Thorium and Cerium Manufacturing Area), is proposed in the OU1 (Soils) ROD (USACE 2003b). The extent of radium in overburden groundwater, if any, will be further investigated at a later stage.

5.6.7 AOC 6 - Probable Benzene Source Area (Bedrock)

A bedrock benzene plume was identified on the MISS during the Phase II GWRI, and was the subject of the Supplemental Investigation in 2002. The probable benzene source area is delineated in **Figures 5-17** and **5-26**.

Background

Elevated benzene concentrations (5000 µg/L) were detected at well MISS-05B in 2001, and in nearby bedrock pump test and monitoring wells that were installed/sampled as part of the Phase II Investigation. The proposed bedrock pump test was cancelled due to the elevated benzene concentrations and concerns about the potential for deep bedrock contamination. The Phase II benzene results were presented to the EPA in 2002, and based on discussions with EPA further delineation of the benzene source area and downgradient extent of the plume was identified as an action item. The ensuing Supplemental Investigation involved the installation of six bedrock monitoring wells, and a round of VOC and biogeochemical sampling and groundwater elevations. The probable benzene source area and downgradient plume edge was delineated in the Supplemental Investigation, and is shown on **Figure 5-17**. Biogeochemical sampling was also conducted in plume and downgradient wells to characterize the groundwater geochemistry, and determine if there is active biodegradation in the bedrock aquifer.

Benzene Source/Plume Characterization

A potential benzene bedrock source area was delineated based upon benzene sampling data, and is shown on **Figures 5-17** and **5-26**. Noting that there is no detected product in bedrock, the plotted potential source area represents the predicted upgradient extent of elevated (>100 µg/L) benzene concentrations in

bedrock. The plotted potential source area is located sidegradient to well MW-26D (180 µg/L), and is upgradient relative to plume monitoring wells BRPZ-9 (1800 µg/L) and BRPZ-5 (9500 µg/L). The plotted potential source area is located on a local bedrock groundwater high (see **Figure 5-17**), and may account for the distribution of benzene in MW-33D, MW-27D, MW-3D and other site wells. **Figure 5-17** shows low concentrations of benzene (15 µg/L) at upgradient well MW-3D, and projects the extent of the plume further upgradient onto the NYSW property. An active upgradient source of benzene is considered unlikely. A potential benzene source located in soils adjacent Building 76 is also considered unlikely, due to the low detected concentrations of benzene in downgradient bedrock monitoring wells MW-28D (6 µg/L), MW-34D (16 µg/L) and B38W25D (ND). An intermittent benzene source, however, cannot be precluded at these locations.

The source of benzene in bedrock is not known, or no longer exists. As noted in Section 4.12.2, former MCW Building 62 is located in the plotted potential bedrock source area (50 feet northwest of MW-26D). The soils along the east side of the Former MCW Building 62 slab were investigated by the USACE in August 1999 as part of the Pilot Demonstration Work Plan (USACE 2000a). Benzene was not detected in the test pit soil samples or shallow groundwater, and was also not detected in other soil boring and Geoprobe® samples collected within or adjacent to the plotted source area. As shown on **Figure 4-20**, benzene was not detected in downgradient overburden wells MISS-6A, MISS-7A and PW-1, and Geoprobe® samples 12b-029 and 12b-009 (**Figure 5-6**). The vertical distribution of benzene in the overburden and bedrock aquifer is shown on **Figure 5-29**.

Although data does not show a current soil and/overburden groundwater source to bedrock, past benzene releases may have occurred and since been attenuated in the soil and shallow groundwater environment. Alternatively, benzene may have been introduced directly into bedrock by piping or well, or from spills in (offsite) areas with shallow bedrock.

The downgradient edge of the plume is plotted SSW of monitoring well MISS-5B, and is shown on **Figures 5-17** and **5-29**. Historical sampling data at downgradient well B38W17B (Grove Ave.) shows intermittent low level benzene exceedances from the start of sampling in 1991, and no detection of benzene at nearby downgradient well B38W15D (from 1989). These data suggests that the benzene plume has been limited in extent and stable due to benzene attenuation in the aquifer. A comparison of MISS bedrock benzene data from the Phase II GWRI sampling event (**Figure 4-42**) and Supplemental Investigation (**Figure 5-17**) show decreasing benzene concentrations in 10 of 12 wells, including well MISS-5B (3500 to 680 µg/L). The overall decrease in MISS benzene groundwater concentrations may be attributed to attenuation. Biogeochemical sampling (Section 4.12.4) data indicates ongoing biodegradation, and shows strongly reduced groundwater conditions, high COD/BOD, and utilization of alternate electron acceptors in benzene impacted wells. These data suggests ongoing anaerobic degradation in plume areas, and probable aerobic degradation along the plume fringe

Groundwater Conditions

The depth to groundwater at bedrock monitoring well MW-26D measured 10.42 feet in December 2001, and the local bedrock groundwater flow direction is west/southwest. Groundwater head measurements at wells B38W25S/D and OVPW-1S/BRPZ-9 (220 feet southwest of MW-26D) show a downward vertical gradient from the overburden aquifer into the bedrock aquifer.

The nearest groundwater receptor is the Saddle River, which is located approximately 2200 feet from well MW-26D.

Planned Remedial Investigations/Actions

Soils within the plotted bedrock source area, Building 76 and surrounding MISS areas are scheduled for excavation as part of the OU1 soil remediation for radiological constituents. All potential benzene sources on the MISS such as buried tanks, drums, pipes, and impacted soils would be removed during the remediation.

5.6.8 AOC 7 – Probable Overburden Benzene Source Area (Former MCW Building 56)

AOC 7 is a potential groundwater source area due to detected benzene exceedances in overburden groundwater and soil exceedances in Test Pit 5 on the MISS. Impacted soils near Building 76 are the likely source of benzene in groundwater.

Background

Test Pit 5 was excavated adjacent (south and west) of Building 76 in 1999, to obtain geotechnical and soil quality samples. Benzene (380 mg/kg) and toluene (90,000 mg/kg) soil exceedances were detected in the subsurface. Geoprobe® boring 12b016 was subsequently installed 50 feet down and cross-gradient from Test Pit 5, and detected 71µg/L benzene in groundwater. Additional Geoprobe® borings were installed in 2001 to delineate the extent of benzene contamination in the overburden aquifer.

Groundwater Constituents of Concern

Benzene was detected at Geoprobe® 12b016 (71 µg/L), and nearby Geoprobe® 12b017 (4 µg/L) and 12b028 (2 µg/L). As shown on **Figure 5-6**, a benzene plume was plotted from the area of boring 12b016, and extends approximately 275 feet west to the 1 µg/L isopleth. Benzene (380 mg/kg) was detected in soils at Test Pit 5 (see **Figure 5-6**), and is the likely source of benzene in overburden groundwater. Toluene was also detected at 90,000 mg/kg; however toluene was not detected in overburden groundwater. Geoprobe® 12b016 is located at the approximate location of former Building 56, a MCW laboratory supply building on the MISS.

Groundwater Conditions

Based upon the July 2001 synoptic gauging round, the direction of overburden groundwater flow in the area of Geoprobe® 12b016 and AOC 7 vary from northwest to west. Based upon the direction of flow, the nearest groundwater receptor would be the Saddle River. The Saddle River is located approximately 2600 feet downgradient from boring 12b016.

Proposed Remedial Investigations or Action in AOC 7

Soils within the plotted bedrock source area, Building 76 and surrounding MISS areas are scheduled for excavation as part of the OU 1 soil remediation for radiological constituents. All potential benzene sources on the MISS such as buried tanks, drums, pipes, and impacted soils would be removed during the remediation.

5.6.9 AOC 8 - Lodi Brook

Surface water and sediment radiological exceedances were detected in Lodi Brook, and is a potential source of surface water and sediment contamination to downstream water bodies. Detected surface water exceedances include total radium and Ra-226 + Th-232 in sediment. Elevated concentrations of

aluminum, arsenic, copper, iron, lead, silver and thallium were detected in surface water, and arsenic, cadmium, chromium, copper, and lead exceedances were detected in Lodi Brook sediments.

Background

Historical photographs and maps indicate that the former course of the Lodi Brook generally coincides with the distribution of downstream radiologically contaminated properties in Lodi. Lodi Brook drained the southern portion of the former MCW, and currently receives drainage from the 149-151 Maywood Ave., residential areas east of Maywood Ave, and parts of the Stepan company. The MISS is not located in the Lodi Brook watershed. Impacted soils and sediments from the former MCW site may have been transported downstream, creating a secondary source of contamination. Contaminated fill from the former MCW was used in the vicinity properties, and may also have been transported to Lodi Brook with runoff. Most of the open stream channel in Lodi Brook was replaced by a subsurface storm drain system in the 1940s, and greatly reduced the volume of impacted soil in direct contact with the brook.

Surface Water and Sediment Constituents of Concern

Total radium exceedances were detected in three Lodi Brook surface water samples at concentrations exceeding the 5 pCi/L Federal Groundwater MCL. As shown on **Figure 5-23**, exceedances ranged from 5.48 to 9.25 pCi/L, with the maximum detected concentration present in sample LB-5. Sediment data obtained from the same locations do not show elevated radiological constituents.

One sediment sample exceedance of Ra-226 + Th-232 was reported in the eastern branch and headwater sample of Lodi Brook (**Figure 5-25**). Sediment sample LB-1 located on the 149-151 Maywood Avenue property contained Ra-226 + Th-232 at 31.89 pCi/g, which exceeds the 5 pCi/g standard.

Detected metal surface water and sediment exceedances are also detected in Lodi Brook, and are probably derived from stormwater runoff, with a lesser fraction potentially derived from discharge of impacted groundwater to Lodi Brook. Runoff from impacted soils on the 149-151 Maywood Ave. and impacted downstream vicinity properties may also contribute metals from runoff. These metals are not derived from MISS stormwater runoff or groundwater contamination, and are not considered FUSRAP wastes.

Surface Water/Groundwater Conditions

Lodi Brook is a continuously fed stream, with an estimated base flow of 0.06 m^3/s (2 cfs). Lodi Brook originates in the low marshy areas on 149-151 Maywood Avenue, and is fed by shallow groundwater at the headwaters and upper reaches on this property (149-151 Maywood Avenue, Maywood). Discharge of impacted groundwater to Lodi Brook may be the source of dissolved total radium in surface water.

Most of the former MCW and fill impacted properties within the Lodi Brook headwaters have been either remediated or developed and paved since the 1970s, and has probably resulted in substantially reduced ongoing contaminant loads into Lodi Brook.

The detection of Ra226 + Th-232 in sediment in the headwaters of Lodi Brook suggests an ongoing source of sediment contamination, which was probably derived from erosion and runoff of soils, upstream sediments, and/or bank deposits in impacted areas on the 149-151 Maywood Avenue property.

Planned Remedial Investigations/Actions in AOC 8

Remediation (excavation) of the Lodi Brook sediments and wetlands are proposed on the 149-151 Maywood Avenue property, 09a, and adjacent properties downstream to the NJ Route 17 culvert. Impacted vicinity properties along Lodi Brook south of the NJ Route 17 culvert (Cluster Nos. 4 and 5)

will also be remediated. Excavation and disposal of impacted soils and sediment in AOC 8 (and AOC 9) is proposed in the OU1 (Soils) ROD (USACE 2003b).

Sediment and surface water sampling is performed annually at Lodi Brook as part of the EMP. Surface water and sediment samples are collected from 10 stations along Lodi Brook within the FMSS and analyzed for radioactive constituents. Sampling results are reported in the Environmental Monitoring Report, which is submitted annually to the EPA and NJDEP.

5.6.10 AOC 9 - Westerly Brook

Surface water radium exceedances were detected at two surface water locations along Westerly Brook, and are probably derived from the infiltration of impacted groundwater on the MISS into the Westerly Brook culvert pipe. Metals surface water exceedances include aluminum, arsenic, iron, silver, lead, thallium and zinc. Sediment metal exceedances include cadmium, chromium, copper, lead, nickel, and zinc. Surface water exceedances were also detected in Westerly Brook. There were no sediment radiological exceedances in Westerly Brook.

Background

Westerly Brook drains an area of approximately 247 acres in Maywood and Rochelle Park, which contains mainly residential and some industrial sites. Westerly Brook begins as a natural channel and flows southward for 3,200 feet before it enters a culvert at the NYSW property and flows 1920 feet beneath the MISS and former Ballod properties. Westerly Brook then surfaces and flows another 600 feet to the confluence with the Saddle River (DOE 1992).

Prior to construction of the underground culvert in the early 1970s, Westerly Brook flowed as an open channel (downstream of the NYSW underground culvert) through the MISS and Ballod properties along the trace of the current day underground culvert. Aerial photos show that Westerly Brook was widened (upstream from the MISS) between West Central Avenue and the NYSW culvert prior to 1961 and again in 1974.

Surface Water/Sediment Constituents of Concern

Surface water exceedances were detected for total radium in Westerly Brook. A total radium exceedance of 5.1 and 5.58 pCi/L were detected in samples obtained from sampling locations WB-1 and WB-2. These concentrations exceed the MCL of 5 pCi/L for total radium (**Figure 5-23**). Metals surface water exceedances include aluminum, arsenic, iron, silver, lead, thallium and zinc, and is shown on **Figures 4-32** and **4-33**. Arsenic, lead, thallium and iron groundwater exceedances are detected on the MISS, and may impact Westerly Brook via a leaking culvert pipe on the MISS. Radium, arsenic, lead, thallium and iron may be derived from the MISS, and are considered potential FUSRAP wastes. There are no reported soil or groundwater aluminum, silver and zinc exceedances on the MISS, and is an unlikely source of surface water contamination for those metals.

Sediment metal exceedances in Westerly Brook include cadmium, chromium, copper, lead, nickel, and zinc. There were no sediment radiological exceedances in Westerly Brook. The majority of metal exceedances and the highest concentration of each metal was detected in samples UD-6 and UD-7, which are located upstream of the MISS. The sediment samples were collected from Westerly Brook and an adjacent drainage ditch located on the north side of the NYSW tracks and drainage culvert. The sampled portions of Westerly Brook and the drainage ditch backup behind the drainage culvert during storms, and presumably deposit stormwater sediment. Westerly Brook drains a mixture of residential, commercial

and light industrial areas upstream of the MISS, and is the probable source of elevated metal concentrations in sediment.

Surface Water/Groundwater Conditions

The video survey conducted of the Westerly Brook culvert pipe under the MISS and former Ballod property found that the pipe was in generally poor condition, and described leaking joints and heavy water infiltration. A section of the Westerly Brook pipe on the MISS (Manhole 1 to 2), and junction/culvert pipe on the NYSW easement, are located adjacent AOC 1 and the plotted overburden lithium and arsenic plumes. Contaminated groundwater may be infiltrating into the Westerly Brook culvert pipe at this and other locations and the transport of radiological constituents and metals from the MISS may be transported off-site via groundwater infiltration into the culvert.

Low background radium and metals concentrations detected in Westerly Brook sediments suggest that sediments are not the source of radium or metals present in surface water. The low concentration of radium detected in upstream surface water and sediment samples also weigh against a likely offsite (upstream) source. Elevated concentrations of lithium (>100 µg/L) were also detected in surface water, but not in Westerly Brook sediments or upstream surface water or sediment samples.

Planned Remedial Investigations/Actions in AOC 9

Arsenic, lead, thallium and iron exceedances detected in the overburden aquifer (from AOC 1) may be the source of those compounds detected in Westerly Brook surface water samples. Although radium was not detected in groundwater samples in AOC 1, groundwater leakage into the culvert is the suspected transport mechanism to explain radium in surface water samples. Excavation of AOC 1, and repair/replacement of the MISS segment of the culvert pipe is proposed as part of the OU1 remediation, and would remove the source of groundwater contamination to Westerly Brook.

Ongoing sediment and surface water sampling is performed annually at Westerly Brook as part of the EMP. Surface water and sediment samples are collected from 4 stations along Westerly Brook within the FMSS and analyzed for radioactive constituents and metals. Sampling results are reported in the Environmental Monitoring Report, which is submitted annually to the EPA and NJDEP.

6.0 FATE AND TRANSPORT OF CONTAMINANTS

6.1 INTRODUCTION

This section describes the processes by which contaminants are transported and/or transformed in groundwater within the FMSS and from the FMSS to the surrounding environments. The discussion is predominantly qualitative with regards to specific radiological and non-radiological contaminants (organic and inorganic materials). Major potential routes of migration are examined and the factors and processes that affect contaminant migration are reviewed. No quantitative modeling was undertaken as part of this analysis. A numerical groundwater fate and transport model will be prepared in support of the Feasibility Study to simulate natural attenuation and other remedial scenarios.

The primary focus of this effort is the activity occurring in the saturated soils and the transport of material by groundwater. The transport processes discussed include: advection, dispersion, sorption, facilitated transport, volatilization, and colloidal transport. Transformation processes include complexation, biodegradation or biotransformation, oxidation-reduction reactions and precipitation. The aforementioned processes range from those with major influences to processes with minimal influence that may be ignored. Their inclusion is for completeness.

6.2 PHYSICAL AND CHEMICAL PROPERTIES OF CONTAMINANTS

The source of the contaminants on the FMSS was discussed in Section 1.2. The primary operations used to recover product (thorium, lithium and REEs) were milling operations. The operations included (for thorium) unloading Monazite ore from railcars, grinding, leaching (digestion in sulfuric acid), separation (evaporation), intermediate (thorium oxalate preparation), purification and finishing. The majority of the waste material from the operations was "tailings" which were deposited within the MCW site within several retention ponds. Contaminants in the tailings, particularly the radiological materials, were subsequently transported from the FMSS to the surrounding environment. The other primary source was ore material spilled during the unloading in the vicinity of the NYSW. The last source discussed was coal, which is assumed to have contributed arsenic, copper, lead, and zinc contained in the bottom ash mixed with site soils.

6.2.1 Inorganics

Inorganic constituents detected in the overburden groundwater (55 wells) that exceeded either the lower of the Federal/State MCL or the NJ GWQC or NJ PQL included arsenic, barium, cadmium, chromium, lead, lithium and thallium. Of these, only arsenic and lithium were detected at a frequency sufficient for inclusion herein. Fourteen (14) arsenic samples with concentrations exceeding the NJ PQL of 8 µg/L and fifteen (15) lithium samples with concentrations exceeding the Region IX PRG Tap Water standard of 730 µg/L were detected. Barium, cadmium, lead and thallium exceeded a groundwater standard in 1 of 58 samples. Chromium (total) exceeded a groundwater standard in 2 of 58 samples. Therefore, only arsenic and lithium will be considered COCs for this discussion. Aluminum, iron, manganese and sodium exceeded the secondary MCL standards and will not be considered further.

Specific REEs were also detected in the overburden groundwater samples, cerium in 1 of 56 overburden groundwater samples, dysprosium in 15 of 56 overburden samples and lanthanum in 2 of 56 overburden groundwater samples. Neodymium and yttrium were detected in 13 and 9 of 56 samples, respectively.

Inorganic constituents detected in the bedrock groundwater (73 samples) that exceeded either the lower of the Federal/State MCL or the NJ GWQC or NJ PQL included arsenic, barium, beryllium, chromium,

nickel, lithium and thallium. Boron and lithium exceeded the Region IX PRG. Of these, only arsenic, chromium and lithium were detected at a frequency sufficient for further consideration. Arsenic was detected in four samples above the NJ PQL of 8 µg/L while chromium was detected in five bedrock groundwater samples above the Federal/State MCL of 100 µg/L. Lithium was found in 32 bedrock groundwater samples at concentrations exceeding the Region IX PRG Tap Water standard of 730 µg/L. Barium, beryllium, lead, and nickel had 1 exceedance in 73 samples; boron and thallium had 2 and 3 exceedances in 73 samples, respectively. Aluminum, iron, manganese and sodium exceeded the secondary MCL standards and were not considered furthered.

6.2.2 Organics

VOCs were detected in both the overburden and bedrock groundwater. These include benzene, toluene, xylene, PCE, TCE, 1,2-DCE (total), VC, 1,1,2-TCA and chloroform. Methylene chloride was also detected; however, this compound may be associated with laboratory contamination.

6.2.3 Radionuclides

The radiological COCs are thorium, uranium and radium. The primary radioactive metals are thorium and uranium, which are the precursors of their respective decay series. The isotopes in the thorium series include Th-232, Ra-228, and Th-228. The isotopes in the uranium series include U-238, U-234, Th-230, and Ra-226. Reference to uranium natural or "U_{nat}" is also found in FMSS literature, which includes U-238, uranium-235 (U-235) and U-234. U-235 is a minor constituent of natural uranium (less than 0.7% by weight) while U-234 is in the U-238 decay chain. These are all isotopes with long half-lives (thousands of years or greater) with the exception of Ra-228 and Th-228. These two isotopes have half-lives of 5.75 and 1.91 years, respectively.

In addition to the elemental radionuclides, other radiological COCs (regulated under the drinking water standards) are the gross alpha and gross beta activity concentrations.

Two gaseous isotopes, Rn-222 and Rn-220 (thoron), are also generated in the soils. These are soluble gases and can be transported by groundwater. Their short half-lives (3.8 days and 55 seconds) allows them to be neglected in this investigation. In addition, radon is typically a problem in closed volumes (buildings) and comes from the decay of Ra-226. Indoor air quality is not within the scope of this report.

The chemical behavior of thorium, uranium and radium is independent of isotope. That is, the transport or transformation of Th-232, Th-230 and Th-228 is the same and governed by its chemical properties. This is repeated in the case of U-238, U-235 and U-234 and the two radium isotopes, Ra-226 and Ra-228.

Of the above constituents, Ra-228, and Th-228 have relatively very short half-lives. In addition, in the original ore, their activity (Ra-228 and Th-228) in pCi/g would be numerically equivalent to the activity of the parent, Th-232, since it is in equilibrium. In the waste material, with a much depleted concentration of Th-232 as that was the product, Ra-228 and Th-228 would decay relatively quickly, on the order of tens of years. Equilibrium would be re-established, that is, the activity concentrations of Ra-228 and Th-228 would be equivalent to the current concentration of Th-232 in the waste. As much of the Th-232 was removed from the ore, the activity concentration of the Th-232 in the waste would also be diminished, as would the concentrations of Ra-228 and Th-228. Typically, in soils, these two radionuclides are inferred from the Th-232 activity concentration than measured. The same condition of equilibrium would occur in groundwater for the Th-232 and Th-228. The groundwater activity concentration of Ra-228, however, could be modified by its chemical properties in water. Due to its solubility, Ra-228 may be found in groundwater as a result of its production from Th-232, which is detected in retention pond sediments. The presence of Th-232 in similar concentrations to Ra-228 in groundwater samples may indicate contamination of samples with particulate Th-232.

Gross Beta

The initial screening level for gross beta is 50 pCi/L, the National Primary Drinking Water Regulations; Radionuclides; Final Rule December 7, 2000 (EPA 2000). The EPA, however, recognized that the primary source of gross beta particles in groundwater is from K-40 and radium-228 (Ra-228) and that K-40 is a naturally constituent of the earth's crust. As such, K-40 is exempted from consideration.

The gross beta activity is then the total gross beta particle activity less the contribution of the K-40 activity. The K-40 activity is calculated by multiplying the elemental potassium concentration (mg/L) by 0.82 (FR-76747) (EPA 2000). Additionally, since K-40 decays by beta emission 88.9% and K-capture/positron emission the remainder of the time, a conservative estimate is to multiply the potassium concentration by 0.73 (0.82 x 88.9%) in order to account for the beta emissions attributable to K-40. If the resultant gross beta particle activity exceeds the screening level (50 pCi/L), an analysis of the sample must be performed to identify the major radioactive constituents in the sample. These will be used to calculate the appropriated doses to assure compliance with the 4 mrem/yr standard. As indicated in **Table 6-1**, if the contribution of K-40, based on the calculation exceeds the reported Gross Beta concentration, then the error associated with the Gross Beta analysis was added to the reported value in order to have a positive "adjusted Gross Beta" result.

Table 6-1
Detected Gross Beta Exceeding Screening Level (50 pCi/L) and Attribution to K-40 in Overburden Monitoring Wells

GWRI Site Name	Well Type	Potassium Result (mg/L)	Results Qualifier	Detected Gross Beta (pCi/L)	Gross Beta Attributable to K-40 (pCi/L)(1,2)	Gross Beta Less K-40 (pCi/L)
PT-2S	Overburden	49.4		52.99	36.06	16.93
Well 1	Overburden	57.9		52.71	42.27	10.45
OVPW-1S	Overburden	83.2(3)		81.98	60.74	21.24
OVPW-1S	Overburden	53.7(3)		62.12	39.20	22.92

Notes:

(1) = Potassium (mg/L) * 0.82 = Gross Beta (pCi/L) FR pg. 72726) (EPA 2000)
(2) = K-40 multiplier subsequently multiplied by 88.9% to conservatively account for beta emissions solely (other 11+% is K-Capture and positron emissions)
(3) = Data obtained during pumping test and is not representative of site conditions

A review of samples from the overburden sampling wells indicates three wells with sample concentrations exceeding the screening level of 50 pCi/L. These are presented in **Table 6-1**. Subtracting the K-40 activity contribution from the gross beta activity for the above samples indicates none of the samples have a gross beta activity exceeding the EPA screening level. As indicated in **Table 6-1**, the samples obtained from OVPW-1S were collected during the performance of a pump test and are not representative of low-flow sampling conditions. The baseline sample obtained prior to the pump test did not report Gross Beta above 50 pCi/L.

Table 6-2
Detected Gross Beta Exceeding Screening Level (50 pCi/L) and Attribution to K-40 in Bedrock Monitoring Wells

GWRI Site Name	Well Type	Potassium Result (mg/L)	Result Qualifier	Detected Gross Beta (pCi/L)	Gross Beta Measurement Error (pCi/L)	Gross Beta Attributable to K-40 (pCi/L) (1,2)	Adjusted Gross Beta (Less K-40) (pCi/L)
BRPZ-2RE	Bedrock	418	J	473.16	39.98	305.14	**168.02**
BRPZ-3RE	Bedrock	78	J	59.44	18.56	56.94	2.50
BRPZ-4	Bedrock	216	J	110.59	36.93	157.68	ND(3)
BRPZ-5 (45'-55')	Bedrock	209	J	205.98	49.22	152.57	**53.41**
BRPZ-5 (102'-112')	Bedrock	84.5	J	68.02	22.57	61.69	6.34
BRPZ-9	Bedrock	664	J	387.99	43.96	61.69	6.34
MW-13D	Bedrock	21.6		84.75	3.56	484.72	ND(3)
MW-19DD	Bedrock	87.9		79.25	3.81	15.77	**68.98**
MW-23D	Bedrock	58.8	J	52.90	7.52	64.17	15.08
MW-25D	Bedrock	103	J	99.00	12	42.92	9.98
MW-26D	Bedrock	813	J	711.00	84	75.19	23.81
MW-3D	Bedrock	227		151.28	21.36	593.49	**117.51**

Note:
(1) Potassium (mg/L) * 0.82 = Gross Beta (pCi/L) FR pg. 72726
(2) K-40 multiplier subsequently multiplied by 88.9% to conservatively account for beta emissions solely (other 11+% is K-Capture and positron emissions)
(3) Measurement error included in adjusted Gross Beta concentration
ND = Not Detected after application of measurement error to reported result

The gross beta concentrations were obtained from **Table 4-43**. Applying the same scheme to remove the K-40 activity concentration to the bedrock wells with elevated gross beta activity concentrations leads to four samples exceeding the screening level. These samples are from wells BRPZ-2RE, BRPZ-5RE (45'-55'), MW-13D, and MW-26D. The maximum detected concentration of Ra-228 (2.08 pCi/L) in sample BRPZ-5 (45'-55') is not sufficient to account for the elevated gross beta activity. Additional analysis may be warranted to determine what additional beta emitters are in the sample would be required, if this were drinking water. It is likely that due to the lack of Ra-228, a radiological analysis for K-40 may be warranted to quantify its presence in these samples.

6.3 TRANSPORT MECHANISMS IN GROUNDWATER

The transport processes discussed include advection, dispersion, attenuation on soils (retardation), facilitated transport, volatilization, and colloidal transport.

6.3.1 Advection

The process by which dissolved contaminants are transported by the bulk motion of the flowing groundwater is known as advection (Freeze and Cherry 1979). Groundwater flow and advective contaminant transport occur in response to hydraulic gradients; with water and contaminants moving from areas of higher hydraulic head to areas with lower hydraulic head. Reactive contaminants (i.e. those that interact with the aquifer materials) usually move at rates slower than the average linear groundwater

velocity. Non-reactive dissolved contaminants are carried at an average rates approximately equal to the average linear velocity of the groundwater flow.

Various flow regimes have been characterized under the FMSS. These include shallow overburden groundwater flow and shallow and deep bedrock groundwater flow. Shallow groundwater flow occurs in unconsolidated sediments. Deep groundwater flow occurs in the fractured bedrock and includes shallow and deep bedrock aquifers. The hydrogeologic characteristics in the unconsolidated sediments (overburden) are as follows:

- Groundwater flow direction is predominantly to the southwest under an average hydraulic gradient of 0.0085 ft/ft.
- The average linear flow velocity is 0.021 ft/day.
- The thickness of the saturated unit at the FMSS averages 9.1 ft ranging from 0.0 ft to 32.6 ft.
- The zone of saturated overburden deposits at the FMSS is transient and fluctuates seasonally.

The bedrock aquifer is characterized as follows:

- Groundwater flow direction is predominantly to the southwest;
- The observed hydraulic gradient is 0.005 ft/ft,
- The effective porosity ranges from 0.01 to 0.05,
- The hydraulic conductivity ranges from 4.27×10^{-4} cm/s, to 3.71×10^{-4} cm/s,
- The average linear flow velocity ranges from 0.14 to 0.71 ft/day.

Local variations in flow direction and velocity occur in the unconsolidated sediments because of seasonal saturation of the overburden sediments, occurrence of bedrock outcrops and spatial variations in hydraulic conductivity. In the site bedrock aquifer, groundwater flow and transport is controlled by a network of interconnected fractures (secondary porosity). The primary rock matrix (unfractured rock) permeability is very low, and the amount of groundwater flow and transport in this media is considered negligible. For this reason, this section shall focus on fracture controlled contaminant fate and transport in the bedrock aquifer. Local variations in the bedrock flow direction and velocity are attributable to spatial variations in fractures and fracture orientation, porosity, and conductivity.

6.3.2 Dispersion

Dissolved contaminants migrating with groundwater tend to spread out from the path that would be expected solely from advective transport. This spreading phenomenon is known as hydrodynamic dispersion. Hydrodynamic dispersion in groundwater systems is caused primarily by mechanical mixing and to a lesser degree by molecular diffusion of solute particles. Variations in void spaces of porous media, variation in fluid velocity within pore spaces, and the tortuosity of the flow paths of fluid particles cause mechanical mixing. Molecular diffusion occurs in response to concentration gradients that cause movement of contaminants from areas of higher concentration to areas of lower concentrations.

Hydrodynamic dispersion occurs both parallel and perpendicular to the direction of advective groundwater flow (i.e., longitudinal and transverse dispersion, respectively). Hydrodynamic dispersion is the process that results in the spreading of contaminant plumes, laterally and vertically with increasing distance from contaminant sources.

6.3.3 Attenuation onto Overburden and Bedrock Aquifer Media (Retardation)

The migration of contaminants in groundwater is typically retarded to various degrees with respect to the advective flow rate. This occurs through interactions between contaminants and aquifer materials that tend to slow the movement of the contaminants (retardation). The primary process influencing retardation is the adsorption/desorption of contaminants from aquifer media.

The contaminant retardation factor (Rf) is the parameter commonly used in transport models to describe the chemical interaction between the contaminant and media (EPA 1999). It includes processes such as surface adsorption/desorption, adsorption onto the sediment structure or bedrock matrix, precipitation, physical filtration of colloids and absorption into the media. Specifically, it describes the rate of movement of groundwater through a controlled volume to the rate of movement of a contaminant through a controlled volume. The retardation factor is directly related to the partition (or distribution) coefficient, Kd. The terms "partition coefficient" and "distribution coefficient" are used interchangeably in the literature. For porous flow with saturated conditions, Rf is defined as:

$$Rf=1+Kd*(\rho/n)$$

Where: ρ= porous media bulk density (mass/ length^3)
n= effective porosity of the media at saturation

The distribution coefficient, Kd, is defined as the ratio of the contaminant concentration associated with the solid (Cs) to the contaminant concentration in the surrounding aqueous solution (Cw) when the system is at equilibrium (Kd=Cs/Cw). The definition used in the DOE's Residual Radioactivity Model (RESRAD model) is the radionuclide equilibrium concentration ratio of the adsorbed radionuclide (in medial) to the desorbed radionuclide (in water) (Argonne National Laboratory [ANL] 2001). The units for Kd are volume per mass (cm^3/g or equivalently mL/g). Literature values of Kds for thorium, uranium, radium, arsenic, chromium, and lithium are presented in the following sections.

Thorium

The partition coefficient for thorium is based on a literature search conducted by EPA leading to the establishment of a look-up table and analytical formulation for Kd versus pH (EPA 1999). Two generalized simplifying assumptions were established:

- Thorium adsorption occurs at concentrations less than 10^{-9} M (where M is the number of moles per liter). The extent of thorium adsorption can be estimated by the soil pH.
- Thorium precipitates at concentrations greater than 10^{-9} M. This concentration is based on the solubility of $Th(OH)_4$ at pH 5.5. Although (co)precipitation is usually quantified with the solubility construct, a very large Kd value is used in the look-up table to approximate thorium behavior in systems with high thorium concentrations (EPA 1999).

A database of literature values were collected and tabulated. The data in the tables included 17 thorium Kd values and were conducted in systems consisting of:

- Low ionic strength (<0.1 M)
- pH values between 4 and 10.5
- Dissolved thorium concentration less than 10^{-9} M
- Low humic material concentrations (<5 mg/L)
- No organic chelates (such as EDTA)

It is assumed that this approximates the environs surrounding the FMSS.

Linear regression was carried out between thorium Kd values and pH for the pH range 4 to 8. The calculated regression equation was:

$$\log (\text{Th Kd}) = -0.13 + 0.69(\text{pH})$$

The statistics for the above coefficients may be found in the EPA (1999). In addition, a look table was developed based on pH and dissolved thorium concentrations. This table is presented as follows:

Table 6-3
Look-Up Table for Thorium Kd

Kd (mL/g)	pH					
	3-5		5-8		8-10	
	Dissolved Th (M)		Dissolved Th (M)		Dissolved Th (M)	
	$<10^{-2.6}$	$>10^{-2.6}$	$<10^{-9}$	$>10^{-9}$	$<10^{-9}$	$>10^{-9}$
Minimum	62	300,000	1,700	300,000	20	300,000
Maximum	6,200	300,000	170,000	300,000	2,000	300,000

The data set used to develop the look-up table may also be found in the EPA (1999). The above look-up values are based on pH and dissolved thorium concentrations.

ANL also developed distribution coefficients for numerous elements for the RESRAD program. These were classified by soil type and are presented in **Table 6-4** below. As presented in the tables, the range of Kd for thorium values is highly variable.

Table 6-4
Geometric Mean Kd Value (cm^3/g) for Soil Types

Element	Sand	Loam	Clay	Organic
Thorium Kd	3,200	3,300	5,800	89,000

Batch sorption tests were conducted to estimate site-specific distribution coefficients from soil samples collected from the MISS. Soil samples used for the tests were classified as sand (1 sample) and silts (4 samples). Description of the soil samples, and batch sorption tests are provided in detail in Appendix R. Average Kd values estimated from the batch sorption tests for thorium was 9230 mL/g. The estimated values appear to be in the range of literature reported values (**Table 6-4**) and within an order of magnitude. The thorium Rf in overburden is estimated at 73,841 based upon the site-specific Kd of 9230 mL/g, soil density of 1.6 gram per cubic centimeter (g/cc), and soil porosity of 0.20. The calculated Rfs indicate that thorium would have low mobility in the overburden aquifer.

Published thorium Kd values were obtained for a fine grained sandstone (at various pH values) including 5000 mL/g at a pH of 4.5, 10,000 mL/g at a pH of 5.8, and 15,000 mL/g at a pH of 7 (EPA 1999). The thorium Rf in bedrock is 780,000, based upon a Kd of 15,000 mL/g, bedrock density of 2.6 gm/cc, and porosity of 0.05. The estimated Rf indicates that thorium would have low mobility in the bedrock aquifer.

Uranium

Numerous investigations of the uranium Kd values have been conducted over the years driven in large part by uranium's commercial use and disposal needs. A review by EPA (1999) of Kd values indicates

that pH and dissolved carbonate concentrations are the two most important factors influencing the adsorptive behavior of uranium (VI). Uranium has a number of valence states, +3, +4, +5, and +6 (III to VI). The speciation of a metal in solution between its different valence states depends on soil geochemistry. Not all valence states are equally important. In the case of uranium it is uranium (VI) that is most mobile. It is implied that while most authors do not distinguish between the uranium (VI) and uranium (IV) states, in most studies it is fair to assume that the study deals with uranium (VI). They also state, however, that some measurements of uranium sorption onto crushed rock materials may have been compromised by reduction of uranium (VI) to uranium (IV).

The Kd values compiled in the EPA reference also show a scatter of 3 to 4 orders of magnitude at any pH value from 4 to 9. This scatter increases from 3 orders of magnitude at pH values below pH 5, to approximately 3 to 4 orders of magnitude from pH 5 to 7, and approximately 4 to 5 orders of magnitude at pH values from pH 7 to 9. It is noted, however, that from a numeric standpoint, at the lowest and highest pH regions, one to two orders of the observed variability actually represent uranium Kd values that are less than 10 mL/g. Similarly at pH values less than 3.5 and greater than 8, this variability includes extremely small Kd values of less than 1 mL/g.

Kd values show a trend as a function of pH. The adsorption of uranium by soils and single-mineral phases is low at pH values less than 3, increases rapidly with increasing pH from pH 3 to 5, reaches a maximum in adsorption in the pH range from pH 5 to 8, and decreases with increasing pH at pH values greater than 8.

The scatter in the pH is a function of mineralogy, dissolved carbonate concentrations (as stated previously), and clay content cation exchange capacity. As no attempt was made to fit the functionality of Kds to these parameters, no further discussion is included herein.

Kd values for uranium in the lookup table are presented in **Table 6-5**. In interpreting this table, EPA notes that given the variability in the Kds, for values at non-integer pH values, especially given the rapid changes in uranium adsorption observed at pH values less than 5 and greater than 8, a linear relationship should be assumed between each adjacent pair of pH-Kd values listed in the table (EPA 1999).

Table 6-5
Look-up Table for Estimated Range of Kd Values for Uranium Based on pH.

Kd (mL/g)	pH							
	3	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Minimum	<1	0.4	25	100	63	0.4	<1	<1
Maximum	32	5,000	160,000	1,000,000	630,000	250,000	7,900	5

The data set used to develop the look-up table is extensive and may also be found in the EPA (1999).

ANL also developed distribution coefficients for numerous elements for the RESRAD program. These were classified by soil type and are presented in **Table 6-6** below.

Table 6-6
Geometric Mean Kd Value (cm^3/g) for Soil Types for Uranium

Element	Sand	Loam	Clay	Organic
Uranium Kd	35	15	1,600	410

As presented in these tables, the range of values is considerable. Additionally, as stated previously, the oxidation state of uranium can be significant. The Kd for U(IV) for example is orders of magnitude larger than U(VI) that is dependent on the pH (EPA 1999).

As in the case of thorium, site-specific Kd values were estimated from soil samples collected from MISS (Appendix R). An average Kd value estimated from the batch sorption tests for uranium was 93 mL/g. For the silty soils Kds ranged from 40 to 250 mL/g. The estimated values appear to be in the range of literature reported values (**Table 6-6**) and within an order of magnitude. The uranium Rf in overburden is estimated at 745, based upon the site-specific Kd value of 93 mL/g, soil density of 1.6 gm/cc, and porosity of 0.20. The calculated Rf indicates that uranium would have medium to low mobility in the overburden aquifer.

Published uranium Kds were reviewed for various bedrock types. Uranium Kd values were compiled by the EPA (1999) and include mudstone (10 mL/g), granite (5 mL/g), basalt (4 mL/g) and tuff (300 mL/g). The estimated uranium Rf in bedrock is 521, based upon the mudstone Kd of 10 mL/g, density of 2.6 gm/cc, and porosity of 0.05. The calculated Rf indicates that uranium would have a medium to low mobility in the bedrock aquifer.

Radium

Radium in groundwater water exists primarily as a divalent ion, and the solubility of radium (as a salt) would increase with pH. Radium has a low solubility (and mobility) in groundwater; however, it may become more mobile under strongly reducing conditions.

While radium is a common contaminant, it was not a contaminant selected for investigation by the EPA in their "first phase" of a major review of Kds as were thorium and uranium previously reported. As such, there is no look-up table. ANL also developed the values presented below for the RESRAD program. These were classified by soil type and are presented in **Table 6-7** below.

Table 6-7
Geometric Mean Kd Value (cm^3/g) for Soil Types for Radium

Element	Sand	Loam	Clay	Organic
Radium Kd	500	36,000	9,100	2,400

The values for sand, loam and clay were obtained from the literature. The last value was calculated from a correlation equation proposed by Sheppard and Thibault (1990) and discussed in the RESRAD manual. The equation is:

$$\ln Kd = a + b\,(\ln Biv)$$

Where: a and b = constants based on the soil type
Biv = the soil to plant concentration ratio for the ith radionuclide.

The value for the coefficient "b" is -0.5 on the basis of experimental data. The value for "a" depends on the soil:

- For sandy soil, a=2.11
- For loamy soil, a= 3.36
- For clayey soil, a=3.78
- For organic soil, a=4.62.

As in the case of thorium and uranium, site-specific Kd values for radium were estimated from soil samples collected from MISS (Appendix R). An average Kd value estimated from the batch sorption tests for radium is 232 mL/g when the high concentration spike was included. If excluded, the average Kd is 230 mL/g. The estimated values appear to be in the range of literature reported values (**Table 6-7**; for sand) and within an order of magnitude for the other soil types (clay and organic material). Therefore, site-specific values were used for the fate and transport analyses of radium that is described later in this section.

Groundwater transport of radionuclides is also reviewed in the High Level Waste Program. In this program, transport modeling was through a "Multimedia Environmental Pollutant Assessment System" developed by Pacific Northwest National Laboratory (Buck, et al. 1995). Kds were determined by soil clay content and are provided below.

Table 6-8
Multimedia Environmental Pollutant Assessment System Default Kds (mL/g) for Soil pH between 5 and 9

Element	Clay Content by Weight		
	< 10 %	10 to 30 %	≥ 30 %
Radium	24	100	124
Thorium	100	500	2,700
Uranium	0	50	500

The data qualitatively indicates that thorium is most adsorbed followed by radium and uranium in the 0-30% clay content range.

The radium Rf in site sediments is estimated at 1841, based upon a site specific radium Kd of 230 mL/g, soil density of 1.6 gm/cc, and effective porosity of 0.20. Based on the calculated Rf, radium would have low mobility in the overburden aquifer.

A published radium Kd of 741 mL/g was obtained for basalt (Walton 1988). The radium Rf in bedrock is estimated at 38,533, using a rock density of 2.6 gm/cc and porosity of 0.05. The calculated Rf indicates that radium would have very low mobility in the bedrock aquifer.

Arsenic

Arsenic (As) exists in aqueous solutions in the As^{3+} (arsenite) and As^{5+} (arsenate) oxidation states. As^{3+} is the reduced state of As that is most likely to be found in anaerobic soils while in an oxidizing environment As^{5+} predominates (McBride 1994). Arsenate forms relatively insoluble precipitates in the aquifer, thereby removing arsenic from groundwater. Arsenite is the reduced form of arsenic, and is more soluble in groundwater. Formation of arsenate is favored with a neutral to acidic groundwater pH, and oxidized (aerobic) aquifer conditions. The more mobile arsenite form predominates at basic groundwater pH, and reduced groundwater conditions.

With high arsenic concentration ranges (10^{-4} to 10^{-7} M), the adsorption of As conforms to single (oxides, sediments) and multiple site (soils) Langmuir adsorption equations. Studies of the retention of As^{5+} in soils have shown that adsorption is controlled to a large extent by hydrous oxides of iron and aluminum. If the adsorption capacity of these is not exhausted, then the movement of As will be strongly retarded because of the high affinity of these surfaces for As. As adsorption on hydrous oxides exhibits marked pH dependency, suggesting high mobility of As under conditions of alkaline pH.

The fate of arsenic in the environment is controlled by complex interactions between geochemical, hydrologic, and biological processes. Arsenic mobility in groundwater and retention in aquifer materials is often linked to oxidation-reduction processes, especially iron and sulfur cycling at oxidation-reduction boundaries. Important processes include adsorption, co-precipitation reactions of arsenate, arsenite, or thioarsenite species with iron (oxy) hydroxides, iron monosulfides, and pyrite. However, geochemical information collected from the overburden groundwater sampling is limited in order to evaluate/predict the fate and transport of arsenic. Literature reported soil Kd values are in the range of 25-31 mL/g, for a pH range 4.9 to 8.0. An Rf of 233 was estimated for arsenic in soil using a Kd of 29 mL/g, porosity (n) = 0.2, and soil-bulk density (ρ) = 1.7 g/cm^3. The estimated Rf value indicates that arsenic would have moderate to low mobility in the overburden aquifer.

Kd values for arsenic in bedrock are assumed to be quite variable. In a New England Study concentrations in bedrock well water was significantly different among six major bedrock lithochemical groups (Ayotte, et al. 1999). Concentration of arsenic was highest in the water from calcareous metasedimentary group than other groups. A single value for Kd in basalt was found in a 1969 reference for the Nevada Test Site from GeoRef database Waterloo Hydrogeologic, 2002, which noted Kd = 1.4 mL/g in basalt (Essington E.H. and W.E. Norik 1969). An arsenic Rf of 73.8 in bedrock was estimated using a (basalt) Kd value of 1.4 mL/g, porosity (n=0.05), and bedrock bulk density (2.6 g/cm^3). The estimated Rf value indicates that arsenic would have moderate mobility in the bedrock aquifer.

Chromium

Chromium exists in two possible oxidation states in soils: the trivalent chromium, Cr(III) and hexavalent chromium Cr(VI). Chromium is found in the environment primarily in the +3 and +6 oxidation states [Chromium (III) and Chromium (VI)]. The geochemical behavior and biological toxicity of chromium in these 2 oxidation states are profoundly different. Chromium (III) tends to precipitate, forms cationic dissolved species, is immobile under moderately alkaline to slightly acidic conditions, and is relatively nontoxic. Concentrations of Chromium (III) in soil solutions are typically controlled by dissolution/precipitation reactions.

Review of chromium Kd data obtained for a number of soils (EPA 1999) indicated that various factors influence the adsorption behavior of chromium. For example:(a) concentrations of Cr(III) in soil solutions are typically controlled by dissolution/precipitation reactions therefore, adsorption reactions are not significant in soil Cr(III) chemistry; (b) increasing pH decreases adsorption of Cr(VI) on minerals and soils; (c) the oxidation-reduction state of the soil affects chromium adsorption; (d) presence of competing anions reduce Cr(VI) adsorption.

Rai et al. (1987) reported that Cr(III) forms hydroxy complexes in natural water. In a study of the relative mobility of metals in soils at pH 5, Cr(III) was found to be the least mobile (Graffin and Shimp 1978). Literature reported values of Kd range from 1,200 to 4,300,000 mL/g for pH of 4.0 to 8.0 (EPA 1996). Rai et al. (1986) estimated Cr(VI) sorption (Kd) for different soil types under varying pH and competing anions. The data show large variability in the estimated Kd (1.0 to 1,729 mL/g), which indicates that Cr(VI) can be highly mobile in soils. This is somewhat contradictory to the EPA findings that indicated a Cr(VI) Kd of 31 mL/g at a pH of 4.9 to a Kd of 14 at a pH of 8.0 (EPA 1996). Kd values for chrome (no speciation) was 1.3, 2.6, and 6.32 mg/L in sand, loam, and clay, respectively (GeoRef database Waterloo Hydrogeologic 2002).

Site-specific Kd values for chromium were obtained from soil samples collected from the MISS (Appendix R). The average Kd value estimated from the batch sorption tests for Cr(III) was 9291 mL/g [Note: chromium detected at FMSS was predominately Cr(III) and batch experiments were conducted using Cr(III)]. The estimated values appear to be in the range of literature reported values.

An Rf of 74,329 was calculated for Cr (III) in soils using the average site-specific Kd of 9291 mL/g from the batch sorption tests. The estimated Rf values indicate that Cr(III) would have low mobility in groundwater. A Rf of 113 was estimated for Cr(VI) using a Kd of 14 and site-specific parameters for overburden porosity (0.2) and density (1.6 g/mL). The Cr(VI) Rf data indicates moderate mobility in groundwater.

A literature review found no Kd data for Cr(III) or Cr(VI) in bedrock.

Lithium

Very little information is available on the fate and transport of lithium in the subsurface. Literature reported values of Kds for lithium in soil indicated a range from 0.084 to 0.32 mL/g (ANL 2000) suggesting lithium is very mobile in the environment. The literature values were for various soils studied by the DOE for the High Level Radioactive Waste Program at Yucca Mountain, Nevada. Site-specific Kd estimated for lithium averaged 0.64 mL/g (Appendix R), which is in agreement with literature reported values. An Rf of 6.1 was calculated using the site-specific Kd value of 0.64 mL/g, soil density of 1.6 gm/cc, and soil porosity of 0.20. The calculated Rf indicates that lithium would have high to medium mobility in the overburden aquifer.

Lithium Kd values in bedrock (tuffs) were published by Anghel, Turin and Reimus (2002). The study reported the following range of lithium Kds: 0.032 to 0.441 mL/g (low spike concentration range), 0.0433 to 1.3 with an average of 0.46 mL/g, and 0.054 to 3.28, average 1.06 mL/g (high spike concentration range). A lithium Rf of 24.9 in bedrock was estimated using the published bedrock Kd value of 0.46 mL/g, porosity (n=0.05), and bedrock bulk density (2.6 gm/cc). Like overburden, the Rf indicates that lithium would have high to medium mobility in bedrock aquifer.

Benzene

The partition coefficient for benzene or other hydrocarbons in groundwater, Kd, is a function of K_{oc}, which is the organic carbon partition coefficient and f_{oc}, the organic carbon content. That is:

$$Kd = f_{oc} * K_{oc}$$

The relationship between Kd and K_{oc} is important because K_{oc} is not soil specific and can be determined for many hydrocarbons. K_{oc} in turn is typically estimated from K_{ow}, the partition coefficient of the concentration between the constituent hydrocarbon in octanol and the constituent hydrocarbon in water. That is, K_{oc} values are correlated to the octanol-water partition coefficient, K_{ow}. For benzene, one of the correlation equations is:

$$\log (K_{oc}) = 0.903 \log (K_{ow}) + 0.094$$

K_{ow}s of many contaminants have been measured and tabulated and are often expressed in log units. A compilation by the California Environmental Protection Agency (RSP 1994) indicates a range of experimental values for K_{ow} for benzene from 103 to 245 with an arithmetic mean of 150. Using the above equation, the range of K_{oc} is from 81 to 178 with a mean of 114. They also present a series of experimental values for K_{oc} ranging from 17 to 124 with a mean of 55. They also note a correlation of K_{oc} is equal to 0.41 * K_{ow} which would provide a range of K_{oc}s from 42 to 100 with a mean of 61.

The site-specific fraction of organic carbon (f_{oc}) for the overburden is estimated at 1.6 % (the average of 5 soil f_{oc} values). The published f_{oc} average for siltstone bedrock is 1.1% (Blatt 1980). The estimated Kds for benzene in the overburden and bedrock aquifer is 1.83 mL/g and 1.26 mL/g, respectively. The estimated Rf for benzene is 15.6 in overburden and 66.2 in bedrock. Although the bedrock Kds are

similar, the higher Rf is driven (in the equation) by the higher bedrock density (2.6 gm/cc) and lower effective porosity (0.05). The Rf data indicates that benzene would have medium mobility in both the overburden and bedrock aquifer.

Chlorinated Volatile Organics

Various chlorinated VOCs were detected in the overburden and bedrock groundwater on the MISS. Distribution coefficients (Kds) for various VOCs were estimated using literature reported partition coefficients (EPA 1998b) and the overburden (1.6%) and bedrock (1.1%) f_{oc}s. **Table 6-9** shows the range of K_{oc} and Kd values for selected chlorinated compounds at FMSS for both overburden and bedrock.

Table 6-9
Calculated Distribution Coefficients Kd for Various Chlorinated VOCs

Compound	K_{oc} (mL/g)	Kd (mL/g) Overburden (f_{oc}=1.6%)	Kd (mL/g) Bedrock (f_{oc}=1.1%)	Rd Overburden ((ρ/n)=8)	Rd Bedrock ((ρ/n)=52)
PCE	209 - 238	3.3 - 3.8	2.3 - 2.6	27.8 – 31.5	120.6 – 137.1.
TCE	87 - 150	1.4 - 2.4	0.96 - 1.65	12.1 – 20.2	50.8 - 86.8
Trans - 1,2-DCE	36 - 80	0.57 - 1.28	0.39 - 0.88	5.6 – 11.2	21.6 - 46.8
Cis- 1,2 - DCE	49 - 80	0.8 - 1.28	0.55 - 0.88	7.2 – 11.2	29.0 - 46.8
VC	0.4 - 2.45	6.4E-2 - 3.9E-2	4.4E-3- 2.7E-2	1.05 – 1.3	1.2 - 2.4

From the table it is evident that PCE transformation products are progressively more mobile than the parent compounds. Cis and Trans 1,2-DCE are isomers, and are degradation productions of TCE. Estimated bedrock Rfs are greater than overburden equivalents due to the effect of the higher rock bulk density and lower effective porosity on the Rf equation. Rf estimates for chlorinated solvents indicating that the compounds would have moderate to high mobility in both the overburden and bedrock aquifer.

6.3.4 Facilitated Transport

Facilitated or anthropogenic transport, while not unique to the FMSS, is also not typical of fate and transport analyses. In the introduction to the PDI for example it was noted that "material was used by residences as fill for foundations and for gardens (the acidic tails)". The notes below were taken from the PDI reports that clustered the various properties.

For Cluster Nos. 1,2,3,4, and 5, a review indicates no records of quantities of material being moved other than that removed in order to put in concrete pipes to channel the Lodi Brook (**Figure 1-1**). These Clusters include the following properties along the Lodi Brook:

- 72 Sidney Street
- 100 Hancock Street
- 80 Hancock Street
- 80 Industrial Rd
- 8 Mill Street
- 170 Gregg Street
- 160/174 Essex Street
- I-80 Westbound Right-of-Way

- 99 Essex Street
- 113 Essex St.
- 200 NJ Route 17 South

Cluster No. 6 is a series of five properties (6A though 6E) along NJ Route 17 North. For three of the properties, 06A (Architectural Windows), 6B (Ramsey Auto Group) and 6C (Sunoco), a swale on the property is assumed to have deposited radioactive material. The swale and previously deposited fill are the primary mechanisms for the radioactive contamination in the areas of these properties. The area of the fourth property, 6D- (Gulf Station), is assumed contaminated from the use of contaminated fill. The last of these Properties, 6E (29 Essex Street) has been demolished and a Duane Reed Pharmaceuticals built in its place.

The 111 Essex St. property, 07A and the Hackensack & Lodi Railroad property, 07B are isolated clusters previously used as a fill area. Facilitated (anthropogenic) transport was the only mechanism bringing contaminated material to these areas. As stated, "prior investigators speculate that process waste or fill was brought to this property" (DOE 1986). There is visible evidence of debris in areas adjacent to the railway. Coles Brook forms the Eastern boundary of the 111 Essex Street property, and serves as a drainage pathway from Essex Street. Coles Brook flows north and east to the Hackensack River. The fate and transport of the material from this property will be unique given the property location to Coles Brook. Transport of material would likely either be by ground or surface water.

As stated in the PDI for the 23 West Howcroft Road property, Property No. 8a, "According to the property owner, during construction (1961), the footprint of the building was excavated to the "hard pan" (approximately 5 to 6 feet) and granite-containing fill was brought in from New York. Trenches along the boundary of this property with 149-151 Maywood Avenue may have been filled in. It was unknown if this fill contained COCs.

The fill material at the 149-151 Maywood Avenue property is well described and documented. The fill and drums of material were transported and dumped and buried prior to the construction of the current building. The area to the east of the 149-151 Maywood Avenue building also forms the headwaters for the Lodi Brook.

The Stepan Company property includes numerous areas that have been contaminated from fill transported in and buried over decades of operation. These areas are better defined in the PDI and can act as origin of contaminants. The Stepan Company property also contains the NRC licensed burial areas.

Three of the properties in the proximity to Stepan Company were investigated for contaminated material (collectively referred to as Cluster No. 11). These were 205 Maywood Ave, a manufacturing and office facility for Myron Manufacturing, Inc., 61 West Hunter, a small building with additional Myron Manufacturing Inc. offices, and 50 West Hunter Ave, a Myron Manufacturing Inc. warehouse. No evidence of major fill activity was noted in prior investigations.

The MISS and the NYSW are defined as Cluster No. 12. The material on the MISS is the subject of the previous RI Report (DOE 1992). The soils along the right-of-way for the NYSW contain material likely spilled from the unloading of ore from the trains. As such, its composition and chemical characteristics should not be the same as the processed wastes on the other portions of the MISS. Conceptually, the fate and transport of material originating from this source should also be different.

In addition to the physical movement of contaminated material by man, facilitated transport is also defined as any process that increases the rate of mobility of a contaminant beyond that expected based solely on idealized Darcian (laminar flow velocity) flow and equilibrium sorptive interactions. It is

caused by the combined effects of two or more physical or chemical processes. This increased rate of mobility may occur when surfactants, co-solvents, or colloidal particles are present in the environment. The last mechanism, colloidal transport is discussed separately. Facilitated transport is most commonly associated with hydrophobic organic compounds such as PCBs, pesticides, polycyclic aromatic hydrocarbons (PAHs) and heavy metal species with a high affinity for surfaces.

Cosolvation is the process where the mobility of one contaminant is increased by the presence of another. This occurs when a miscible organic compound that increases the solubility of a contaminant is present at significant concentrations. That is, the presence of co-solvents decreases entropic forces that favor sorption of hydrophobic organic contaminants by increasing interactions between the solute and the solvent. As many contaminated sites often have multiple contaminant sources, it is not uncommon to find strongly sorbing organic compounds and metals as well as miscible organic compounds. Surfactants, like miscible organic compounds, can also increase the solubility of a contaminant. Surfactants are found naturally occurring in the environment, or they may be introduced and exist coincidentally with the source of contamination. It is noted that the products produced at the Stepan Company facility included lubricants, esters, amides, and specialty products. Surfactants may have been produced in the past.

Still another mechanism resulting in facilitated transport is groundwater pumping that can increase the rate of mobility of a material through a perturbation of the groundwater flow. This, however, typically occurs after contaminants have been distributed.

6.3.5 Volatilization

The volatility of a compound is a measure of the transfer of the compound from an aqueous or solid phase to the vapor phase. The aqueous phase may include a pure liquid compound or compound dissolved in solution. The volatilization of chemicals from a solid phase involves several steps including desorption of the contaminant from the solid, vertical migration to the soil-air interface, and vaporization into the atmosphere. Factors that affect a compound's volatilization include chemical-specific properties such as solubility, vapor pressure, Henry's Law Constant (H), and molecular weight, as well as the physical properties of its environment such as temperature, velocity and turbulence. The vapor pressure of a chemical is directly related to the rate at which it volatilizes. Chemicals with a high vapor pressure (i.e., > 10 millimeters of mercury (mm Hg) at room temperature) tend to volatilize rapidly in an open system (e.g., soils that are exposed to the atmosphere) while chemicals with a low vapor pressure (<1 mm Hg at room temperature) tend to bind to soil or water and are much less likely to vaporize. Henry's Law Constant, which takes into account molecular weight, solubility, and vapor pressure, is useful in characterizing a compounds tendency to volatilize. Compounds with a high H are more volatile than compounds with a low H.

Volatilization is generally observed among VOCs. Certain elemental metals such as mercury, can be volatile under ambient conditions. A number of metals also have greatly increased volatility when in an organic form such as methylated metal species (the transfer of a methyl group (CH_3) to a metal). Metals that have volatile methylated species include arsenic, mercury, lead and tin. Volatilization is not expected to be important with the radiological COCs but can influence the transport of benzene and other light hydrocarbons. Volatilization of radon can, however, influence the concentration of the remainder of the radionuclide decay chain and in a confined area is a concern.

6.3.6 Radon Production and Transport

Radon production and transport by groundwater is similar to volatilization as the phenomena results in a gaseous material released to the soil pore space and eventually the atmosphere. Rn-222 is a chemically inert gas produced from the decay of Ra-226 and has a half-life of 3.8 days. As such, it is part of the

uranium decay chain. Rn-220 is produced from the decay of Ra-228 in the thorium (Th-232) decay chain. The 55.6-second half-life of this isotope of radon (Rn-220) allows it to be neglected, as it typically will decay before participating in any meaningful transport.

In groundwater, radon moves by diffusion and primarily by the mechanical flow of the water. The source of the radon in groundwater is primarily the radium in the soil or waste in contact with the groundwater. The decay of radium results in an alpha particle recoil and radon recoil in the opposite direction. The radon nucleus can recoil into the solid soil particle matrix, the soil pore space or groundwater. Radon solubility in water ranges from 51.0 cm^3 of radon gas (at 0°C, 1 atmosphere) per 100 cm^3 of water at 0°C to 13.0 cm^3 of radon per 100 cm^3 of water at 60°C.

Given the half-life of Rn-222, much of it will decay before it is transported any meaningful distance. That portion which does not decay can diffuse into the soil pore space. The further movement of this soil gas will depend on the soil porosity and the soil radon diffusion coefficient. Additionally, meteorological factors such as precipitation and atmospheric pressure will play a role in the first few meters below the ground surface. Once radon is released to the ambient air, its dispersion is determined by atmospheric stability, including vertical temperature gradient and the effects of wind.

6.3.7 Colloidal Transport

Colloidal transport is a potential mechanism for the movement of contaminated material on the FMSS. The original ore was ball milled prior to leaching by sulfuric acid. Milling would have produced fines. Typically, milled tailings contain material with diameters finer than a 200-mesh sieve and are referred to as slimes, while those having particle diameters greater than a 200-mesh sieve are referred to as sands. A certain percentage of the slimes may have consisted of fines that may have participated in colloidal transport. This transport is further discussed below.

Colloids are particles or organic and mineral matter with diameters in the range 10 E-03 to 10 E-06 mm that can be suspended in water (Freeze and Cherry 1979). Colloidal particles may be mobile in the subsurface environment, potentially moving vertically with infiltrating water through the vadose zone, or laterally by advection with groundwater flow in the saturated zone. Organic colloids may consist of bacteria or spore, humic substances and organic fibers, and non-aqueous phase liquids such as oil droplets and surfactant micelles. Inorganic colloids, which may be naturally occurring or from anthropogenic sources, include clays, metal oxides, and inorganic precipitates. Colloidal particles can adsorb organic and inorganic contaminants. Mobile colloids can therefore transport contaminants, thereby increasing the amount of contaminants that flow with the groundwater. In addition, the velocity of colloids may be faster than the velocity of the bulk fluid since colloids usually follow a more direct path than the fluid. To be mobile over significant horizontal distances, suspended colloidal particles must be stable (resisting aggregation with other like particles), must not settle in groundwater, and must not be filtered when passing through pores. Whether a particle will be stable, aggregated, filtered, or will settle in groundwater depends on a complex combination of particle density, size surface chemistry, water chemistry, and groundwater flow rates. Therefore, it is very difficult to predict or simulate colloidal behavior in subsurface environments (McCarty and Zachara 1989).

6.4 TRANSFORMATION PROCESSES IN GROUNDWATER

6.4.1 Complexation

Complexation is the formation of an ion pair, typically between a metal ion and a ligand. The ligand may be organic or inorganic, and the resulting complex may result in increased or decreased mobility of the metal. The toxicity of the complex may be greater or lesser than the metal ion species alone, primarily

due to the potential change in solubility of the metal. For the FMSS, complexation of uranium is one of the factors that could affect the sorption of uranium on soils particularly in carbonate solutions.

6.4.2 Biodegradation and Biotransformation

Some species of soil and groundwater bacteria have been demonstrated to be capable of utilizing BTEX, PAHs, and phthalates as a sole source of carbon. The biotransformation of BTEX generally involves the incorporation of oxygen into the aromatic ring (particularly those of benzene and toluene). The aromatic ring is destroyed by cleavage, and a new straight-chain (aliphatic) hydrocarbon degradation product is formed. Aromatic hydrocarbons are generally mineralized (degraded) to form carbon dioxide and water. Biodegradation of these constituents can occur under both aerobic (oxic) and anaerobic (anoxic) environmental conditions, but will proceed more rapidly under aerobic environments (Barker et al 1987).

Biogeochemical sampling was performed during the Supplemental Benzene Investigation to characterize bedrock aquifer redox conditions, available electron acceptors, microbial nutrients, BOD and COD, and bacterial populations at wells on the MISS and in downgradient areas. Sampling data presented in Section 4.12.3 show strongly reduced groundwater conditions, high COD/BOD, and utilization of alternate electron acceptors in benzene impacted wells. These data suggests ongoing anaerobic degradation in benzene plume areas, and probable aerobic degradation along the plume fringe. A comparison of MISS bedrock benzene data from the Phase II sampling in 2001 and Supplemental Benzene Investigation sampling in late 2002 show decreasing benzene concentrations in 10 of 12 wells, and may be attributed to attenuation.

The primary mechanisms for biodegradation of chlorinated VOCs are co-metabolism and reductive dehalogenation (dechlorination). In general, these mechanisms are important attenuation processes under aerobic (co-metabolism) and anaerobic (reductive dehalogenation) environmental conditions. Co-metabolism involves the microbial utilization of a primary substrate (organic carbon) and energy source to reduce the halogenated VOCs. Reductive halogenation involves the transfer of electrons from electron donor (carbon sources) to the halogenated VOC (electron acceptor), resulting in the production of transformation (daughter) products.

Some halogenated VOCs (TCE, cis-1,2-DCE and VC) may be transformed by co-metabolic processes. However, in most cases, the environmental conditions for this to occur have to be induced, such as by the addition of nutrients and electron acceptors to the groundwater system.

Most of the halogenated VOCs can undergo reductive halogenation under anoxic conditions. For example, PCE can undergo reductive dehalogenation to form TCE, which in turn is reduced to form 1,1-DCE and 1,2-cis/trans DCE (1,2-DCE). 1,2-DCE can then undergo reductive dehalogenation, forming chloroethane and VC. In addition, 1,2-DCE carbon-carbon double bonds can be "broken" to form 1,2-dichloroethane. **Table 6-10** summarizes biodegradation half-lives for organic constituents detected at the FMSS (Howard et al. 1991).

For halogenated VOCs in groundwater, biodegradation rates are often inhibited by the oxidation state of the environment. Even in anaerobic environments, biodegradation of halogenated VOCs can be slow because of nutrient and/or VOC concentration constraints. In the absence of nutrients, many halogenated VOCs will not biodegrade; that is they can only be “co-metabolized” with other nutrients (Smith and Dragun 1984).

Table 6-10
Biodegradation Half-Life for Various VOCs

Compound	Half-life (days)
Benzene	10 - 370
PCE	365 - 730
TCE	321 - 1,642
Cis- 1,2 - DCE	56 - 2,850
Trans - 1,2 - DCE	100 - 365
VC	10 - 2,000

6.4.3 Oxidation-Reduction Reactions

Oxidation-Reduction reactions are reactions involving electron transfers that greatly affect the mobility and toxicity of metals. Oxidation-reduction reactions may be chemically mediated or biologically mediated as discussed in the section on biodegradation and biotransformation. Among commonly observed chemical oxidation-reduction processes are the oxidation of reduced metal species in anoxic sediments when exposed to air or, conversely, the reduction of oxidized metal species as ORP decreases in a given environment. The Eh-pH conditions on the MISS and downgradient bedrock aquifer were characterized as part of the Supplemental Investigation, and are described in Section 4.12.4. DO, pH and ORP measurements were also taken at all wells during development and sampling during the Phase I and II GWRI Investigation. Reduced groundwater conditions are characterized by very low or absent DO levels, low ORP (<50 mv) or Eh value, and high detected concentrations of reduced electron acceptors including NH_4, iron (Fe^{+2}), manganese (Mn^{+2}), sulfide and CH_4. Reduced groundwater conditions generally result from the ongoing biodegradation of organic compounds in groundwater, and sequentially deplete available oxygen, nitrate, iron, manganese, sulfate and lactate electron acceptors. Reduced groundwater conditions were generally observed in the overburden aquifer on the MISS, Stepan Company Property and 149-151 Maywood Avenue property, Maywood, with less reduced and oxidized conditions detected with distance from those locations. The bedrock aquifer was likewise generally reduced on those properties, with the most highly reduced groundwater (sulfate reduction and methanogenesis) detected in wells within the plotted benzene plume on the MISS. It is noted that the biogeochemical sampling and characterization was limited to the bedrock aquifer on MISS, and that similar reduced conditions may exist elsewhere in the overburden and/or bedrock aquifers on the FMSS.

Radionuclides

In natural waters, the stable species of uranium would have a valence of +4 and +6. U^{+6} typically forms a complex with a wide variety of inorganic anions, and is soluble in groundwater. U^{+6} is the dominant form in oxidized groundwater, and becomes more important (stable at progressively lower EH values) with increasing pH. Under reducing groundwater conditions, Fe^{+2} and/or HS- would reduce U^{+6} to U^{+4}, and precipitate the nearly insoluble mineral uranitite, UO_2. At the site, U^{+4} is expected to be the predominant form in the reduced aquifer areas, with the U^{+6} form more prevalent in the less impacted (reduced) areas downgradient of the MISS.

Thorium only occurs in the +4 valance, and does not undergo oxidation-reduction.

Radium in water exists primarily as a divalent ion, and the solubility of radium (as a salt) increases with pH levels. Radium typically occurs in groundwater as radium sulfate or carbonate, and has a very low solubility. Coprecipitation of radium and barium as Ba/Ra sulfate is an important mechanism controlling radium mobility, and is sensitive to change in redox conditions. Strong reducing conditions may reduce sulfate and cause dissolution of radium, thereby increasing radium mobility in groundwater. Strong

reducing groundwater conditions (sulfate reduction) are probably limited to the bedrock benzene plume on the MISS, and suggest that radium mobility is very low in most areas of the FMSS.

Metals

As discussed in Section 6.3.3, arsenate (As^{5+}) is the predominate form of arsenic at a neutral pH under oxidizing (aerobic) groundwater conditions, whereas arsenite (As^{3+}) predominates under reducing (anaerobic) conditions. The arsenate form of arsenic is less soluble, and readily complexes with metal oxides that are prevalent in oxidizing (aerobic) aquifer conditions. Generally speaking, conditions that reduce Fe^{+3} to Fe^{+2} will make arsenic more mobile in the environment (Fetter, 1993). Accordingly, the more mobile arsenite is expected to be the predominate form of arsenic in reduced areas of the MISS and other properties, with a shift to the arsenate form in oxidized portions of the aquifer.

As noted in Section 6.3.3, chromium in natural waters is expected to be in +3 and +6 valence state, and speciation is governed by pH and Eh. Chromium +3 forms an insoluble precipitate in the aquifer, and is favored under neutral to acidic pH and reduced groundwater conditions. Hexavalent chromium is principally derived from anthropogenic sources, and is mobile in the soil and groundwater environment. Under reduced and neutral to acidic (pH) conditions, Cr^{+6} will react with Fe^{+2} to form an insoluble precipitate of chromous hydroxide (Cr^{+3}). Conversely, reduced Cr^{+3} can be oxidized by manganese oxide (Mn^{+4}) and oxygen under basic groundwater conditions to form Cr^{+6}. The reduced and slightly acidic to neutral groundwater conditions reported at most wells on the FMSS would favor the Cr+3 form of chromium.

The fate and transport of lithium in soil and groundwater is not well documented in the scientific literature, and there is no available Eh-pH diagram for lithium in groundwater.

6.4.4 Precipitation

The opposite of dissolution reactions is precipitation of COCs from an aqueous solution. During precipitation, the least-soluble material at a given pH level is removed from solution. COCs may initially precipitate, and then slowly dissolve later after a remedial effort has reduced the solution concentration.

6.5 PATHWAYS OF CONTAMINANT MIGRATION

This section expands on the nature and extent of contamination described in section 5.

6.5.1 Aromatic VOCs

Overburden Groundwater

As described in Section 5.1.3, benzene appears to be the only aromatic VOC of concern in the overburden groundwater within the FMSS. As shown on **Figure 5-6**, five exceedances were detected in Geoprobe® groundwater samples on MISS. Benzene plume plotted around boring 12b016, extends approximately 300 feet west to 1.0 µg/L isopleth. In addition, two isolated exceedances were detected at Geoprobes® 12b020 and 12b011. As indicated previously (Section 5) the source of contamination for the two plumes has not been conclusively identified. However, potential sources of benzene have been identified and include AOCs 6 and 7 located within the MISS, **Figure 5-26**.

Both plumes are oriented in the direction of groundwater flow (**Figure 5-6**). The fate and transport of benzene in the subsurface environment is influenced by many factors that include: sorption, volatilization, dilution, dispersion, and biodegradation. The plume centered on Geoprobe® 12b016 extends downgradient approximately 300 feet at which point the benzene concentration has decreased by a factor

of 35. This suggests that mechanisms such as dilution and biodegradation may be influencing the fate and transport of benzene in the overburden groundwater.

Bedrock Groundwater

Benzene groundwater exceedances are detected at 14 bedrock wells on the MISS, with concentrations ranging up to 9500 µg/L at well BRPZ-5. The benzene plume extends approximately 1075 feet, and is oriented NNE-SSW along the plume axis. The maximum benzene concentration of 9500 µg/L was detected at bedrock well BRPZ-5, which is located along the centerline of the plume on the MISS. Although the probable bedrock source area is delineated, the primary benzene source (i.e., UST, Former Retention Pond, or soils) has not been determined.

The plotted benzene plume follows the local bedrock groundwater flow direction in the project source area, but appear to deviate from the local bedrock groundwater flow direction with distance from the source (**Figure 5-17**). This may represent preferential SSW transport along the prevailing fractures in bedrock.

Results of the biogeochemical sampling indicate anaerobic groundwater conditions in impacted plume monitoring wells, and aerobic conditions in wells located downgradient from the MISS. Almost all petroleum hydrocarbons are biodegradable under aerobic conditions. Alvarez and Vogel (1991) observed essentially complete removal of mixtures of benzene, toluene, and p-xylene in aquifer slurries. The major limitation on aerobic biodegradation in the subsurface is the low solubility of oxygen in water (10 mg/L). With the depletion of oxygen, anaerobic conditions are established and biodegradation, sequentially utilizing nitrate, manganese (III), iron (III), sulfate, and CO_2 as alternate electron acceptors. Anaerobic conditions are more pronounced at the plume center compared to the edges of the plume that receive oxygen via mixing waters. The rates of anaerobic benzene biodegradation are generally slower than aerobic biodegradation, and is influenced by factors such as availability of electron acceptors, nutrients, and other carbon sources in groundwater.

Bedrock groundwater samples collected within the plotted plume area detected one or more alternate electron acceptors, including nitrate, manganese, iron, sulfate and CO_2. These data suggest that anaerobic benzene degradation is occurring within the benzene plume area, with aerobic degradation limited to the plume fringes.

6.5.2 Chlorinated VOCs

Overburden Groundwater

Chlorinated VOCs were detected in overburden groundwater samples and appear to have been derived from an upgradient source (Dixo Company, Inc., refer to Section 1.8.3). As shown on **Figure 5-7**, a plotted PCE plume extends approximately 2200 feet downgradient from monitoring well MW-7S. TCE and 1,2-DCE (total) plumes were also plotted in the overburden aquifer, and are shown on **Figures 5-8** and **5-9**, respectively. The plotted TCE and 1,2-DCE (total) plumes extend approximately 1200 feet from MW-7S. The plotted PCE, TCE and 1,2-DCE (total) plumes follow the groundwater flow as projected by overburden aquifer groundwater elevation maps. Significant local variations in flow direction are expected in the upgradient portion of the plume due to the pinching out of the overburden aquifer (in the area of former well MW-1S) and apparent groundwater flow barrier formed by the Westerly Brook culvert pipe (see Section 5.1.3).

The presence of PCE daughter products suggests anaerobic reductive dechlorination may be occurring in the overburden. 1,1,2-TCA and chloroform were also detected in the groundwater samples, and are

probably derived from bio-transformation of 1,1,2,2-PCE and carbon tetrachloride respectively (Bouwer and McCarty 1983; EPA 1998b).

Bedrock Groundwater

Low level PCE, TCE and VC exceedances are detected in a number of MISS bedrock wells, and is probably derived from an offsite source. Bedrock PCE, TCE, and 1,2-DCE (total) plumes are plotted elsewhere on the FMSS, with the PCE plume extending approximately 2100 feet downgradient (southwest) from bedrock well MW-7D (**Figure 5-18**). The plotted axis of the PCE, TCE and 1,2-DCE (total) plumes is southwest, and deviates approximately 30 degrees from the flow path projected by bedrock groundwater contours. As noted in Section 6.5.1, this may represent preferential solute (PCE, TCE etc.) transport along the direction of bedrock bedding or strike. Bedrock strike in the FMSS area is approximately 26 degrees, or NNE (see Section 3.3.3).

Bedrock PCE, TCE, and 1,2-DCE (total) plumes are plotted on the FMSS, with the PCE plume extending approximately 2100 feet downgradient (southwest) from bedrock well MW-7D (**Figure 5-18**). The plotted axis of the PCE, TCE and 1,2-DCE (total) plumes is southwest, and deviates approximately 30 degrees from the flow path projected by bedrock groundwater contours. As noted in Section 6.5.1, this may represent preferential solute (PCE, TCE etc.) transport along the direction of bedrock bedding or strike. Bedrock strike in the FMSS area is approximately 26 degrees, or NNE (see Section 3.3.3).

In addition, 1,1-DCE and VC were detected (see **Figures 5-19**, **5-20**, and **5-21**). The presence of TCE, 1,2-DCE (total) and VC in coincident plumes indicates that PCE is being transformed to these daughter products via reductive dechlorination. Field parameters measured at all sampled monitoring wells with the plumes (e.g., MW-7D, MW-2D, MW-8D, MISS-1B) measured low DO concentrations (<0.2 mg/L) and low ORP (negative Eh) in groundwater, indicating reducing aquifer conditions. The presence of PCE daughter products and a reducing environment in the bedrock aquifer suggest that reductive dechlorination is an ongoing process at the FMSS.

6.5.3 Radionuclides

Overburden Groundwater

The two radiological constituents that were measured above the Federal/State MCL were radium and uranium. As described in Section 5.1.1, groundwater samples collected within properties 9a (OBMW10) and 12a (MW-9S) contained exceedances of radium (**Figure 5-1**). The source of contamination at OBMW10 is assumed to be the process waste within NRC Burial Pit 3 and/or fill on the 149-151 Maywood property adjacent to well OBMW10. However, the source of contamination at MW-9S is not clear. Although MW-9S is located hydraulically downgradient of Stepan Company NRC Burial Pit 2, monitoring wells located within or adjacent to the burial pit did not report exceedances of total radium.

The small plotted radium plumes on **Figure 5-1** are consistent with the low compound mobility (Rf = 1841) and low detected concentration at each location.

Two isolated uranium exceedances were identified at wells MISS-5A and Well 5 (**Figure 5-2**). Monitoring well MISS-5A is located adjacent Former Retention Ponds C (AOC 2), and Well 5 is located within NRC Burial Pit 1 (AOC 3) located on the Stepan Company property. Radiological impacted process sludge and fill is the likely source of overburden groundwater contamination at each location. The plotted uranium plumes are limited in aerial extent and are consistent with the low to medium compound mobility (Rf = 745) and low detected concentration at each well location.

There were no thorium exceedances of the gross alpha 15 pCi/L standard. Thorium has a high estimated Rf (73,841), and would have very low mobility in groundwater.

Bedrock Groundwater

One radium groundwater sample collected at bedrock well B38W18D (19.40 pCi/L) exceeded the applicable Federal/State MCL of 5 pCi/L (**Figure 5-10**). The plotted extent of the plume is consistent with the very low mobility (Rf = 38,533) of radium in bedrock and low detected concentration.

Uranium was not detected in concentrations greater than the Federal/State MCL of 30 µg/L.). The maximum concentration was observed at BRMW14 (15.81 pCi/L), which is located on the 149-151 Maywood Avenue Property (**Figure 4-23**). Uranium has an estimated Rf of 521 in bedrock, and would have a low to medium mobility in groundwater.

Total thorium was detected in concentrations exceeding the surrogate standard (15 pCi/L) at bedrock well B38W18D (16.14 pCi/L). As shown on **Figure 5-12**, the total thorium plume is plotted as an isolated exceedance. This is consistent with the low detected thorium concentration and very low mobility (Rf = 780,000) of thorium in bedrock groundwater.

Surface Water

Water samples from Westerly Brook, Lodi Brook, Coles Brook and Saddle River were analyzed for radiological constituents (**Figure 4-31**, AOCs 8 and 9). Radium was the only parameter detected at concentrations above the applicable MCL. However, the samples containing elevated levels of radium in the surface water (LB-3, LB-5, LB-7 and WB-2) were not located in proximity to sediments or groundwater samples containing the presence of elevated radium concentrations (**Figure 4-33**). This suggests that the source of radium in the Lodi and Westerly Brook may not be related to local groundwater infiltration. Gross alpha was below the MCL of 15 pCi/L in each of the surface water samples.

Sediments

Sediment samples were collected from Westerly Brook, Lodi Brook, Coles Brook, Saddle River and unnamed drainage ditch located north of the MISS. Elevated concentrations of Ra-226 and Th-232 were detected in sediment sample LB-1 obtained from Lodi Brook (**Figure 4-33**).

The radiological constituents in the sediment samples may impact groundwater/surface water concentrations. The factors that control the rate and extent of dissolution of radionuclides into the aqueous phase depend on many geochemical factors that were described earlier. Considering the high Kd of these radionuclides, it appears that they may remain immobilized unless geochemical changes can enhance phase transformations.

6.5.4 Arsenic, Lithium, and Chromium

Overburden Groundwater

Elevated concentrations of arsenic were measured on the MISS, and to a lesser extent off-site within the Stepan Company, 149-151 Maywood Avenue, 23 West Howcroft Road, 99 Essex Street, and 29 Essex Street properties. The source of arsenic in the soil and groundwater is probably from leaching of coal ash that was deposited in retention ponds and used as fill on surrounding properties. The highest concentrations of arsenic in groundwater were detected at well MISS-2A (2800 µg/L), which is located on the MISS at Former Retention Pond A (AOC 1). The plotted arsenic plume extends approximately

550 feet downgradient (west) from the area of well MISS-2A on the MISS. The plume is bounded at the MISS (downgradient) boundary by MISS-1AA (**Figure 5-4**).

A second plume was plotted in AOC 3, and extends approximately 270 feet downgradient from Well 2. Seven isolated arsenic exceedances were also plotted at various locations on the MISS and surrounding properties (**Figure 5-4**). The plotted extent of the second plume (AOC 3) and isolated exceedances is consistent with the low detected arsenic concentrations and low to moderate mobility (Rf = 233) of arsenic in the overburden aquifer.

Lithium groundwater exceedances were detected in 15 overburden wells (Section 5.1.2). A total of four lithium plumes were mapped in the FMSS (**Figure 5-5**). One lithium plume was plotted in the area of Former Retention Pond A (AOC-1), and extends approximately 700 feet northwest and downgradient from source area well MISS-2A (10,100 µg/L). A second lithium source was identified at Former Retention Pond C (AOC 2) where a plotted plume extends approximately 900 feet downgradient (west) from source area well(s) MISS-5A (1130 µg/L) and B38W19S (1730 µg/L). The source of contamination at these locations is described in Section 5.1.2. The large plotted lithium plumes are consistent with the solubility and projected high to medium mobility (Rf = 6.12) of lithium in groundwater.

Total chromium was detected at wells B38W14S (200 µg/L) and OBMW15 (104 µg/L), which exceeded the NJDEP GWQC of 100 µg/L. Well B38W14S lies adjacent and downgradient to Former (remediated) Retention Pond D, which is the likely source of chromium in groundwater. Likewise, well OBMW15 is located adjacent Burial Pit 2, another probable chromium source. Total chromium is apparently limited to these two source area wells, and is not expected to be mobile (Rf = 74329) in groundwater.

Bedrock Groundwater

Arsenic, lithium and chromium were detected in the bedrock groundwater samples. Arsenic in the bedrock groundwater was primarily centered on B38W19D (89.1 µg/L) and MISS-7B (72.4 µg/L). A plotted arsenic plume extends approximately 250 feet downgradient (southwest) of well MISS-7B (**Figure 5-14**). It is noted that arsenic detected at well B38W15D (19.1 µg/L) may instead be derived from Former (remediated) Retention Pond E, and the data may be plotted as two separate and smaller plumes. An isolated exceedance was also detected at well B38W18D (12.5 µg/L). The estimated Rf (73.8) indicates that arsenic would be moderately mobile in the bedrock aquifer.

Two lithium plumes were plotted on the FMSS. One lithium plume apparently originates on the MISS at Former Retention Pond A (AOC 1) and C (AOC 2) as shown on **Figure 5-16**. The plotted plume extends approximately 1200 feet downgradient from wells MISS-2B and MW-20D to the 730 µg/L isopleth. The plumes from AOCs 1 and 2 apparently overlap, forming one contiguous plume. The field and Rf (24.92) data indicate that lithium is highly to moderately mobile in the bedrock aquifer.

Chromium (VI) was detected in 1 of 72 groundwater samples, and included MISS bedrock well MISS-5B (38 µg/L). The estimated (overburden aquifer) Rf (113) for chromium (VI) predicts medium to low mobility in groundwater. Total chromium was detected in five offsite wells in excess of the 100 µg/L Federal/NJDEP MCL (**Figure 5-15**). Two total chromium plumes of approximately 800 and 650 feet length were plotted on the Stepan Company, 149-151 Maywood Avenue and 23 West Howcroft Road properties. The two plumes are elongated along the bedrock groundwater flow direction and show declining downgradient concentrations. A third isolated exceedance was plotted at well BRMW9. As discussed in Section 6.3.3, there is no published chromium III Kd values for bedrock. However, the projected overburden aquifer Rf was 74,329, and Cr(III) would have a predicted very low mobility in groundwater. The size of the plotted plumes and apparent mobility of the total chromium in bedrock is greater than that predicted by Cr (III) Rf data. The more mobile chromium (VI) was not detected in the total chromium plume monitoring wells.

Surface Waters

Elevated arsenic concentrations (i.e., above the applicable SWQC) were reported at 11 of 21 surface water localities including Westerly Brook (WB-1 through WB-4), Saddle River (SR-3), and in Lodi Brook (LB-2, and LB-4 through LB-8) (see **Figure 4-32**). As seen in the case with radiological constituents, overburden monitoring wells, and sediment samples at these locations or in the vicinity did not report elevated arsenic concentrations. It is speculated that the source of arsenic in surface water sample, WB-3 (**Figure 5-14**) may be from contaminated groundwater from the MISS infiltrating into the leaky Westerly Brook culvert. Relative to other metals and the radionuclides, arsenic is fairly mobile and can travel downstream with limited retardation.

6.6 WELL SEARCH

A well search was completed as part of a receptor analysis for the Fate and Transport investigation and to satisfy the requirements of NJAC 7:26E-3.7. A file search of the NJDEP - Bureau of Water Resources database was conducted for monitoring wells within a ½-mile radius (centered on the MISS, 111 Essex Street property, and the 8 Mill Street property), and a 5-mile radius for all wells with a water allocation permit. The results of this file search are provided in Appendix D and summarized on **Tables 2-1** and **2-2** and **Figures 2-1** and **2-2**.

The ½-mile radius searches centered on the MISS, 111 Essex Street property, and the 8 Mill Street property resulted in the identification of more than 450 wells. However, the 450 wells are owned by only 37 different individuals/corporations. This is a function of the larger RIs that are present in the area (e.g., Stepan Company, Heritage Remediation, United Technologies, etc.) where multiple monitoring wells have been installed. Of the more than 450 wells identified, 10 were listed as domestic use. The specific location (i.e., address, township) was not provided for 7 of the 10 wells. Further, it is not known if any of these 10 wells is currently in use.

Although a 5-mile radius search for all wells with a water allocation permit was completed, NJAC 7:26E-3.7 requires only a 1-mile radius search. Therefore, only those water allocation permits located within a 1-mile radius are presented in **Table 2-2** and **Figure 2-2**. The results of the file search indicated that only 3 water allocation permits are located within the 1-mile radius. One of these permits is for Stepan Company's surface water withdrawal from the Saddle River. The other two permits are for wells located in the Passaic Formation. The well located at Gibraltar Plastics Corp. in Lodi is 400 feet deep and has a capacity of 110 gpm. This well is located approximately 1 to 2 miles from the nearest FMSS groundwater AOC. Therefore, the well located at the Gibraltar Plastic Corp. property is not considered a potential receptor. The well located at Malt Products Corp. in Maywood is 315 feet deep and has a capacity of 80 gpm. This well is located approximately ½-mile southeast of the MISS. Given the proximity of this well to the MISS and the presence of a groundwater divide east of the MISS as described in the Stepan Company RI (CH_2M Hill 1994a) it is believed that the well located at the Malt Products Corp. property is a potential receptor.

7.0 CONCLUSIONS/RECOMMENDATIONS

7.1 PHYSICAL CHARACTERISTICS

- Five subsurface overburden units were mapped from well and Geoprobe® data. These include the following units: (1) lower undifferentiated clay, gravel and sand at the base; (2) gravel unit; (3) upper differentiated clay, sand and silt unit; (4) sand unit; and (5) fill. Overburden reaches a maximum thickness of 36.0 feet at the southern corner of the FMSS. Overburden locally thins against bedrock highs located along the northeastern boundary of the FMSS, and areas southwest and southeast of the MISS.
- The Passaic Formation is exposed in outcrops along roadways, hillsides and railroad tracks in and around the FMSS. Examination of area outcrops generally reported a dark red-brown, medium to thick-bedded sandstone and siltstone, with occasional thin shale interbeds. Thin bedded, fine grained rocks showed prominent bedding plane partings, and where heavily jointed/fractured. The density of bedding plane partings, joints and other fractures was observed to diminish with increased grain size and bedding thickness. Measured bedding plane strike and dip show a consistent NNE strike direction, with dips ranging from 8 to 14 degrees NW. A prominent set of steeply dipping joints, striking parallel to bedding (NNE direction), were also observed at outcrops.
- Evaluation of bedrock cores show that most fractures are associated with open bedrock bedding planes. The top 10 to 15 feet of cores were highly weathered, and showed decreasing weathering and fracture density with depth. Fracture orientation (and density) was also determined using borehole geophysics. A plot of total well fractures and a plot of water bearing fractures both show a dominant NNE strike and shallow (7-15 degree) NW dip, which is consistent with the bedding plane orientation. Measured fracture density was greatest in the upper 10 feet of borehole, and decreased with depth to 25 feet, below which the fracture density remained the same.
- The technical literature and field observations predominantly support the LMAS bedrock aquifer model (with a weathered shallow zone), with a significant component of the "near vertical joints" model (Michalski and Britton, 1997). A prominent set of high angle, NNE striking joints (fractures) were also observed in outcrop, cores and borehole geophysical logs. Well and borehole logs indicate that these fractures are the principal source of groundwater in deep monitoring wells and piezometers. Fracture density data suggest that the bedrock permeability and amount of groundwater flow along bedding plane fractures would diminish with depth (and degree of weathering), and that a greater proportion or component of flow is expected along the high angle fractures in the deep bedrock aquifer. The shallow and deep bedrock zones would be hydraulically connected by a network of discontinuous, but interconnected bedding plane and high angle joint fractures, and typically show unconfined conditions in overburden and shallow/deep bedrock cluster wells.
- A comprehensive water level measurement round was conducted on July 26, 2001, which included all shallow and deep bedrock wells within the FMSS. Bedrock groundwater flow on the MISS is predominantly west-southwest towards the Saddle River, whereas flow is south-southwest on the 149-151 Maywood Avenue property and in Lodi. The bedrock groundwater contours closely follow the bedrock topography, and indicates that shallow (bedrock) aquifer is under water table conditions.
- A total of 20 bedrock wells were packer tested during the Phase II GWRI program. Two packer tests were performed per hole, with each test centered on a fracture or fractured zone in the upper

and lower half of the borehole. The geometric mean of all shallow wells is 6.9×10^{-4} cm/s. Short-term aquifer tests were performed during development of nine bedrock test wells/piezometers. Wells were pumped at an average rate of 17 gpm, and well specific capacity and transmissivity was estimated for each well using a modification of the Theis equation (Heath 1998). The estimated transmissivity (and hydraulic conductivity) geometric and arithmetic mean for all tested wells is 1300 gpd/ft (1.63×10^{-3} cm/s) and 2580 gpd/ft (1.48×10^{-3} cm/s), respectively.

- The bedrock linear seepage velocity is estimated in the range of 0.43 to 1.01 ft/day, based upon an average FMSS gradient of 0.0109 ft/ft. The calculated range of shallow bedrock velocities is comparable to the 0.3 to 2 ft/day range reported by DOE (DOE 1992).
- Overburden groundwater elevation data shows that groundwater contours bend around the bedrock high near Stepan Company Well 8, with FMSS flow varying northwest to south. Local MISS groundwater flow varies from northwest to southwest, and has an average overburden groundwater gradient of 0.0085 ft/ft. Well and Geoprobe® data was used to map the extent of the overburden aquifer, which underlies the MISS, 149-151 Maywood Avenue Property and parts of the adjacent Stepan Company property. The overburden aquifer is also mapped downgradient of the MISS, and extends west to the Saddle River. The overburden aquifer ranges in thickness from 0 to 32.6 feet, and is absent in a large area of the FMSS.
- In-situ aquifer slug testing was conducted in 35 USACE and Stepan Company overburden monitoring wells to determine the hydraulic conductivity of the overburden aquifer. The geometric mean hydraulic conductivity of the overburden aquifer is 8.7×10^{-4} cm/s. The highest average hydraulic conductivity values were obtained in wells installed in the gravel unit (1.37×10^{-3} cm/s) and lower undifferentiated unit (1.84×10^{-3} cm/s).
- A pumping test was conducted at test well OVPW-1S to further evaluate the hydraulic characteristics of the overburden aquifer on the MISS. Test well PW-1S was pumped at a constant discharge of 3.14 gpm for 72 hours, and was followed by a 72-hour monitored recovery period. The geometric mean of the hydraulic conductivity is 6.48×10^{-3} cm/s. The calculated linear seepage velocity based on the geometric mean is 1 ft/day. The linear seepage velocity estimated at the FMSS is comparable to the 0.55 ft/day velocity reported by DOE (DOE 1992).
- Historical groundwater levels for shallow and overburden well clusters were compared to identify vertical groundwater gradients on the FMSS, including select Stepan Company wells. Most cluster locations on the MISS have downward gradients, whereas other clusters located further downgradient in Rochelle Park and Lodi show net upward gradients. This is consistent with the concept of net groundwater recharge of the bedrock aquifer in an upland MISS and Stepan Company property setting, and net discharge (to the overburden aquifer) at lower elevations. All shallow/deep bedrock clusters (except PT-1DA/PT-1DB) show weak and/or inconsistent gradients.
- A video-inspection survey was completed on portions of the Lodi Brook and Westerly Brook that are routed through subsurface concrete culvert pipes. The survey found that the Westerly Brook pipe leaks heavily at open and cracked joints. Data indicates that most of the pipe lies below the water table, and that groundwater is infiltrating into Westerly Brook through open joints in the culvert pipe.
- The hydrologic data indicates that the headwater wetlands of Lodi Brook are groundwater fed; however, the main channel does not appear to be a major groundwater discharge point. Seasonal groundwater and surface water interaction is expected during prolonged dry and wet periods.

- Six additional bedrock wells were installed as part of the Supplemental Investigation, and specific capacity/permeability tests were conducted at each well. The calculated well hydraulic conductivities ranged from 2.79 x 10^{-3} (MW-27D) to 3.01 x 10^{-2} cm/sec (MW-31D), with a median value of 7.05 x 10^{-3} cm/sec. These values are higher than the reported Phase II median hydraulic conductivity of 1.63 x 10^{-3} cm/s, and may be attributed to the effect of two high yielding wells (MW-31D and MW-32D) on the small (Supplemental Investigation) data set.

7.2 ANALYTICAL RESULTS

- Phase I and Phase II Geoprobe®, overburden and bedrock groundwater samples were analyzed for radiological parameters (Ra-226, Ra-228, Th-228, Th-230, Th-232, U-234, U-235 and U-238), RCRA 8 metals plus lithium, boron, TCL VOCs, and REEs.
- There is no EPA or NJDEP standard for lithium in groundwater (or soil). Lithium groundwater concentrations were compared to the EPA Region IX PRG for tap water, which is 730 µg/L.
- Results of the individual isotopes for radium (Ra-226 and Ra-228) and uranium (U-234, U-235 and U-238) were summed for comparison to the respective total radium and total uranium Federal/State MCL. Although there is no Federal/State MCL for individual thorium isotopes, the isotopes are alpha emitters, and the total thorium results were compared to gross alpha Federal/State MCL.
- As outlined in the GWRIWP, Phase I Geoprobe® radiological samples were not filtered in the field. Geoprobe® groundwater samples reported very high turbidity (>999 NTU) during purging and sampling. A comparison of unfiltered and filtered total radium Geoprobe® data show higher measured activity at 9 of 10 unfiltered samples, where the average unfiltered total radium measurement was 4.65 pCi/L, and filtered data measured 2.16 pCi/L. A similar comparison of unfiltered and filtered total thorium data shows higher measured activity at 7 of 10 unfiltered samples, where the average unfiltered total thorium measurement was 2.11 pCi/L, and filtered measurement was 0.91 pCi/L. These data indicates that the majority of total radium and total thorium activity measured in unfiltered (turbid) Geoprobe® samples may be derived from sediments or colloids entrained in the groundwater sample. A NAD calculation was performed to determine if the differences in activities were attributable to measurement error.
- Gross alpha and gross beta analysis was added to the Phase II sampling program. Filtered radiological samples were also collected during Phase II sampling if well turbidity exceeded 50 NTU during purging. Gross alpha values were adjusted for total uranium activity. Gross beta was adjusted for the detected potassium in each sample, since the Federal MCL does not consider natural K-40 (K-40) activity in the standard.
- Batch sorption (soil distribution) testing was conducted to measure the potential for site radiological constituents (Ra-226, Th-232, and U-238) and metals (arsenic, chromium and lithium) to "sorb" to site soils or leach to groundwater. The batch sorption test was conducted in accordance with ASTM Method D-4646 (ASTM 1999). Average compound distribution coefficients (Kd) include: Ra-226 (400 mL/g), Th-232 (5100 to 7100 mL/g), U-238 (40 to 250 mL/g), lithium (1.5 mL/g) and chromium (9310 mL/g). Arsenic was tested; however, the initial spiking solutions were not high enough to produce reliable results. These data indicates that chromium and Th-232 are tightly sorbed to the soil matrix, and would not be mobile in the environment. U-238 and Ra-226 would be moderately sorbed to soils and somewhat more mobile in the environment. Lithium would sorb weakly to soil and be mobile in the environment.
- Background soil and groundwater benzene data were evaluated as part of the Supplemental Investigation to identify potential benzene source areas. Evaluation of soil sample data found a total 13 soil benzene exceedances from 202 samples, and potential source soil areas were not

identified on the MISS. A number of low level benzene exceedances were detected in overburden groundwater during Phase II sampling; however, detected concentrations are considered too low to constitute a source of benzene to the bedrock aquifer. Evaluation of historical overburden groundwater data also did not show any evidence of a former benzene source to the bedrock aquifer.

- Historical bedrock benzene data were evaluated in the Supplemental Investigation to determine former benzene plume concentrations and dimensions over time. Data shows intermittent benzene exceedances at bedrock wells in the area of the current plotted plume, and indicates the existence of a MISS bedrock benzene plume from the start of sampling in 1985.
- Biogeochemical sampling was conducted during the Supplemental Investigation to characterize the bedrock aquifer redox conditions and microbial activity. Samples were evaluated for field parameters (ORP, DO, pH and conductivity), nutrients (nitrogen and phosphorus), alternate electron acceptors (nitrate/ammonia, Mn_{solid}/Mn_{dis}, Fe_{solid}/Fe_{dis}, sulfate/sulfide, and carbon dioxide/CH_4), nutrients (ammonia, phosphorus, carbon), oxygen demand (COD, BOD), and microbiology (total heterotrophs, BTEX degraders). Biogeochemical sampling data show strongly reduced groundwater conditions, high COD/BOD, and utilization of alternative electron acceptors in benzene impacted wells. These data suggest ongoing anaerobic degradation of benzene in plume areas, and probable aerobic degradation along the plume fringe.
- The QA/QC program included the collection of trip blanks, rinseate/field blanks, field replicates, confirmation samples, and USACE split samples. All data packages were validated in accordance with USACE procedures, while a limited percentage of the packages were validated in accordance with EPA Region II protocol. The GWRI QA/QC program was performed in compliance with the CDQMP (USACE 2002c) and the GWRIWP (USACE 2000b), and met all program objectives.

7.3 NATURE AND EXTENT OF CONTAMINATION

- GWRI Phase II overburden groundwater exceedances include the parameters total radium, total uranium, gross alpha, arsenic, barium, cadmium, chromium, lead, lithium, thallium, benzene, xylene, PCE, TCE, 1,2-DCE and VC. Bedrock groundwater exceedances included total radium, adjusted gross alpha, adjusted gross beta, arsenic, barium, boron, chromium, lithium, thallium, benzene, toluene, PCE, TCE, 1,2-DCE, 1,1-DCE, and VC.
- A low level total radium exceedance (6.58 pCi/L) was detected at overburden well MW-9S, which is located on the NYSW property, adjacent to Maywood Avenue, Maywood. Soil samples collected in proximity to this well (Property 12a) did not report radiological exceedances. Monitoring well MW-9S is located approximately 600 feet from the mapped eastern extent of Burial Pit 2 on the Stepan Property. The source of total radium in groundwater is not known at that locations, and is considered a data gap.
- PCE (and other degradation products) were detected in 12 overburden and 18 bedrock wells in Rochelle Park. PCE was detected in 5 of 55 and 18 of 71 overburden and bedrock groundwater samples at concentrations exceeding the Federal/State MCL. Large overburden and bedrock PCE, TCE and DCE plumes are plotted in Maywood and Rochelle Park, and cut the northwest portion of the MISS. The probable source of both the overburden and bedrock plumes is the 158 West Central Avenue property.
- FMSS cleanup levels in soil have been developed for Ra-226 + Th-232 and U-238. Out of a total 151 soil Geoprobe® and split spoon samples, 35 Ra-226 + Th-232 and 2 U-238 exceedances were detected. Soil metal results were compared to site specific SSLs and found exceedances of antimony (1 exceedance), arsenic (3), cadmium (1), chromium (12), copper (1), lead (2), lithium

(17), mercury (5), nickel (1), selenium (1) and thallium (1). VOC soil exceedances of the EPA Generic SSLs include benzene (2), carbon tetrachloride (1) and methylene chloride (5).

- Twenty-one (21) surface water samples were submitted for radiological and chemical analysis from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. Three total radium surface water exceedances were detected in Lodi Brook. Surface water metals data was compared to the more stringent of the NJDEP SWQC and Federal Freshwater Ambient Water Quality Criteria (both chronic and acute). Low level exceedances were reported for aluminum (5), arsenic (11), copper (10), iron (4), lead (7), silver (2), thallium (2), and zinc (1).
- Twenty-two (22) sediment samples were submitted for radiological and chemical analysis from Westerly Brook, Lodi Brook, Coles Brook, and the Saddle River. There was one Ra-226 + Th-232 exceedance reported at the headwater of Lodi Brook. Sediment metals data was compared to the most stringent of the NJDEP LOEL and EPA Consensus Based TEC. Sediment metal exceedances included arsenic (3), cadmium (5), chromium (7), copper (11), lead (16), nickel (7), and zinc (13). A large majority of sediment metal exceedances fall within the reported range of average metal concentrations for sediments in seven New Jersey watersheds, and probably represents background metal concentrations.
- A total of 16 groundwater, 5 surface water and 1 sediment FUSRAP COPCs are identified on the FMSS (see **Table 5-8**), and will be evaluated as FUSRAP COCs in the Feasibility Study. Principal FUSRAP groundwater COPCs include lithium, arsenic, benzene, total radium, adjusted gross alpha and adjusted gross beta. FUSRAP COPCs were detected in both the overburden and bedrock aquifers.
- Probable FUSRAP AOCs were identified for each of the groundwater, sediment and surface water media. A total of seven groundwater AOCs were identified in the FMSS study area. In addition, one sediment/surface water and one surface water AOC was identified..
- Downward groundwater gradients were identified in all or parts of AOCs 1, 2, 5, and 6, and may account for the migration of contaminants from overburden source materials and aquifer to the underlying bedrock aquifer.
- Elevated concentrations of lithium were detected in soils at AOC 1 and AOC 2, and are the probable source of lithium in overburden and bedrock groundwater at those locations. Overburden and bedrock lithium plumes have been plotted from AOC 1 and AOC 2 source areas, and with the exception of the AOC 1 overburden lithium plume, extend offsite from the MISS. The northern and upgradient extent of the AOC 1 overburden lithium plume is not well defined, and is considered a data gap. Former Retention Pond A and C lithium plumes in overburden and bedrock will be further delineated at a later stage. Two smaller overburden lithium plumes were also plotted on the Stepan Company property and downgradient 149-151 Maywood Avenue Property, however, may be connected and form a contiguous plume. Former Burial Pit 2 is the probable source of the plotted Stepan Company lithium plume. A bedrock lithium plume is also plotted on the Stepan Company and 149-151 Maywood Avenue properties, and may be derived from Former Burial Pit 2.
- Adjusted gross alpha exceedances were detected in AOC 2 bedrock wells BRPZ-5 (57.42 pCi/L) and BRPZ-2 (27 pCi/L). Impacted fill and/or the overburden aquifer in Former Retention Pond C is the probable local source of the bedrock gross alpha exceedance. There is no overburden sampling data in the plotted bedrock plume area to determine if local overburden groundwater is impacted, and is considered a data gap. Well OVPZ-17 is located in the plotted plume area; however, this well was only sampled for VOCs during the Phase II GWRI.
- Two small arsenic plumes were plotted in the overburden aquifer, and are probably derived from AOC 1 and AOC 3. The northern and upgradient extent of the AOC 1 overburden plume is not

well defined, and is considered a data gap. One arsenic plume was plotted in the bedrock aquifer, and probably originates from AOC 2. The downgradient extent of the bedrock arsenic plume in AOC 2 is also not well defined, and is considered a data gap. Arsenic (and lithium) detected in bedrock and overburden downgradient wells B38W15S/D may be in part derived from Former Retention Ponds D or E, which were remediated for radiological constituents in 1994.

- Thick deposits of fly ash were logged in the Former Retention Ponds and Burial Pits, and are the probable source of arsenic in groundwater. Substantial arsenic soil exceedances were likewise detected in samples collected from fly ash deposits on the MISS. The reported widespread use of fly ash as fill may account for the large number of isolated, low level, arsenic groundwater exceedances detected on the MISS, Stepan Company and the 149-151 Maywood Avenue property.
- AOC 5 is located in the area (and upgradient) of bedrock well B38W18D, which detected exceedances of total radium, gross alpha, lithium and arsenic in groundwater. The FUSRAP COPCs in bedrock groundwater are probably derived from the overlying overburden aquifer and impacted fill in the area of the Former Cerium/Thorium Manufacturing Building on the MISS. There is no available overburden groundwater data in AOC 5, and is considered a data gap. The extent of radium in overburden groundwater, if any, will be further investigated at a later stage.
- Benzene bedrock groundwater exceedances were detected in 14 MISS and Stepan Company wells sampled during the Supplemental Investigation. The maximum concentration of benzene (9,500 µg/L) was detected at MISS well BRPZ-5. The plotted benzene plume extends approximately 1,075 feet, and is oriented NNE-SSW along the plume axis. The probable benzene source area was identified by bedrock monitoring wells, and is located within AOC 7. The upgradient extent of the benzene plume is not well defined, and is considered a data gap. Although unlikely, these data indicated a potential upgradient (offsite) benzene source to the MISS.
- The source of benzene in bedrock is not known, or no longer exists. Although data does not show a current soil and/or overburden groundwater source to bedrock, past benzene releases may have occurred and since been attenuated. Alternatively, benzene may have been introduced directly into bedrock by piping or well, or from spills in offsite areas with shallow bedrock. Historical data from downgradient and sidegradient plume wells show that the benzene plume was limited in extent and stable due to benzene attenuation in the aquifer. A comparison of Phase II (2000-2001) and Supplemental Investigation (2002-2003) benzene data show a substantial decline in 10 of 12 bedrock monitoring wells, and may be attributed to attenuation.
- Low level benzene exceedances were detected in three Geoprobe® locations on the MISS. Benzene-impacted soils were detected in a test pit located west of MISS Building 76, and may be the source of benzene in overburden groundwater. This potential source area is designated AOC 5. The projected overburden plume extends approximately 275 feet west to the downgradient MISS boundary. The upgradient extent of the overburden benzene plume is not well defined, and is considered a data gap to be investigated at a later stage.
- One Ra-226 + Th-232 sediment exceedance was detected at the headwater of Lodi Brook, and is a probable FUSRAP waste. Lodi Brook is designated as AOC 8.
- Isolated groundwater (probable FUSRAP) waste exceedances are detected at wells MISS-5A (total uranium), B38W18D (total radium, adjusted gross alpha, and total thorium), Stepan Well 5 (total uranium), and Stepan well OBMW10 (total radium, adjusted gross alpha, arsenic). It is likely that local groundwater contamination extends beyond the immediate plotted well location, and is considered a data gap.

- MISS groundwater leakage (from AOC 1) into the Westerly Brook culvert pipe is the probable source of surface water total radium, iron, lead and thallium exceedances in Westerly Brook. The metals are probably derived from the MISS, and are considered potential FUSRAP wastes. Westerly Brook is designated AOC 9.

- Data generated during these RIs is considered adequate for remedial planning and the evaluation of potential remedial alternatives in the Feasibility Study.

7.4 FATE AND TRANSPORT

- The identified groundwater transport mechanisms include advection, dispersion, retardation, volatilization, radon transport and decay, and colloidal transport. Transformation processes include complexation, biodegradation and biotransformation, oxidation-reduction reactions, and precipitation.
- Colloidal transport should be a major transport mechanism involving radionuclides and selected metals (lead, thallium) due to their high measured distribution coefficients, and tendency to sorb to particulate and colloidal matter in the aquifer.
- Anaerobic conditions were encountered in most MISS bedrock wells, and may have resulted from degradation of BTEX and/or other organic compounds. Geochemical indicators (alternate electron acceptors) suggest ongoing anaerobic degradation in wells impacted by benzene in AOC 6, and probable aerobic degradation along the plume fringe.
- TCE and 1,2-DCE (total) overburden and bedrock groundwater plumes are plotted on the FMSS and are largely coincident with the plotted PCE plume. TCE, DCE (and VC) are degradation products from the reductive dechlorination of PCE, and indicate ongoing degradation of PCE in both aquifers. Affected (solvent) wells are typically anaerobic (and reduced), which is consistent with the process of reductive dechlorination.
- Rf values were calculated for radium, uranium, thorium, arsenic, lithium, benzene and PCE in the overburden and bedrock aquifers. Chromium (III) and chromium (VI) Rf values were only calculated for the overburden aquifer. Overburden aquifer Rf values were calculated for radium (1841), uranium (745), thorium (73,841), lithium (6.12) and trivalent chromium (74,329) based upon site-specific distribution coefficients (Kds), soil density, and fraction of organic carbon data. Other (overburden aquifer) Rfs were estimated from published Kd data for arsenic (233), hexavalent chromium (113), benzene (15.6) and PCE (27.8 – 31.5).
- Rf values in bedrock were estimated for all FUSRAP COPCs based upon published Kd values, rock bulk density and fraction of organic carbon. The estimated Rf values in bedrock include radium (38,533), uranium (521), thorium (780,000), lithium (24.92), arsenic (73.8), benzene (66.2) and PCE (120.5 – 137.1).
- A well search was performed to identify all wells within a 0.5-mile radius, and industrial and public water supply wells within a 1-mile radius of the FMSS. Ten (10) domestic supply wells were identified in the search; however, 7 wells could not be located from the provided well log data. Two wells with water allocation permits (>100,000 gpd) were identified within a 1-mile radius of the FMSS. One well is owned by Malt Products (an industrial user) is located 0.5 mile southeast of the MISS, and is considered a potential groundwater receptor. The second well belongs to Gibraltar Plastics Corp. in Lodi, and is located 0.5 mile from the southern edge of the FMSS, or 1.5 miles from the nearest groundwater AOC (AOC 6). This well is not considered a potential receptor.

7.5 RECOMMENDATIONS

- Due to the demonstrated bias of unfiltered radiological samples, it is recommended that all future groundwater samples be analyzed for both filtered and unfiltered radiological constituents and metals, where measured turbidity (during purging) is 50 NTU or higher.
- Isotopic thorium was evaluated during the Phase I and Phase II GWRI in accordance with the Work Plan. Although there is no Federal/State MCL for individual or total thorium isotopes, total thorium (an alpha emitter) was informally compared to the gross alpha MCL in the Draft RI Report. Due to the limited utility of thorium data, further sampling for thorium in groundwater is not recommended. Groundwater sampling for gross alpha was added during the Phase II GWRI, and is proposed instead of thorium in future (radiological) sampling events.
- For future analyses, it is recommended that total uranium be analyzed by the Kinetic Phosphorescence Analyzer (KPA) method, with results reported in µg/L and not pCi/L. This would be consistent with the Safe Drinking Water Act.
- Since the gross beta MCL excludes naturally occurring beta emitters associated with K-40, it is recommended that K-40 data be obtained from the laboratory in order to correct/adjust the gross beta concentration, and that the K-40 results account for beta emissions solely, if feasible. Presently, a conversion factor is used to determine K-40 from potassium results.
- A low level total radium exceedance was detected at overburden well MW-9S, which is located on the NYSW property, adjacent to Maywood Ave. Soil samples collected in proximity to this well did not report radiological exceedances. Resampling of well MW-9S is recommended to confirm the results of the Phase II activities.
- Adjusted gross alpha exceedances were detected in bedrock wells BRPZ-5 and BRPZ-2 in AOC2. Overburden groundwater radiologic data are needed in the area of those wells to determine the source of the bedrock exceedances. Overburden well OVPZ-17 is located in the plotted plume area, and should be sampled along with the bedrock wells in the next sampling round.
- Low concentrations of benzene are detected at well MW-3D, which is located upgradient from the MISS on the NYSW property. Annual groundwater sampling for VOCs is recommended at well MW-3D, and upgradient MISS bedrock well MW-27D, to monitor for any potential upgradient contribution and/or source of benzene to the MISS.
- Seven domestic wells without addresses were identified in the 0.5-mile FMSS well search. Further investigation is recommended to locate these wells, and determine the status of any potential groundwater receptors.
- Results of the water allocation (permit) well search identified an active (bedrock) industrial well within 0.5 mile of the MISS and AOC 3. Although the well at Malt Products is located sidegradient from the MISS, its proximity and depth suggests further investigation as a potential groundwater receptor.

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Table 1-1
Groundwater Remedial Investigation Chronology
FUSRAP Maywood Superfund Site

APPROXIMATE DATES	ACTIVITY COMPLETED
January 2000	Begin Phase I Field Work
January 2000	Video Inspection of Westerly Brook and Lodi Brook
March 2000	Phase I Monitoring Integrity Survey (slug tests); Phase I groundwater level measurements
March 2000 through May 2000	Geoprobe® investigation; except transects H and I
March 2000 through April 2000	Phase I monitoring well sampling
May 2000	Phase I Borehole Geophysical Survey
August 2000	Resampling of Geoprobe® Transects B, C, and E for VOC analysis; issuance of the Draft Phase I Interim Groundwater RI Report
October 2000	Begin Phase II field work
October 2000 through March 2001	Overburden and bedrock monitoring well installation
November 2000 through April 2001	Bedrock well packer testing program
December 2000	Completion of Geoprobe® Transects H and I
December 2000	Surface Water and Sediment Sampling
February 2001	Issuance of Draft Phase I Groundwater Data Report – Addendum; Issuance of Aquifer Pump Test Work Plan; Stepan monitoring well sampling
February 2001 through April 2001	Phase II monitoring well sampling
April 2001	Phase II Borehole Geophysical Survey
April 2001 through June 2001	Overburden and bedrock pumping test well and piezometers installation and development
May 2001 and July 2001	Phase II slug tests
June 2001	Overburden Aquifer Pumping Test
June 2001 through September 2001 and December 2001	Additional Phase II monitoring well installation, development, and sampling
July 2001 and December 2001	Phase II groundwater level measurements
January 2002	Additional Phase II borehole geophysical survey
March 2002	Well Search

Table 1-2
Analysis of Monazite Sands
FUSRAP Maywood Superfund Site

Constituent	Percentage Range			
	Brazil	India & Ceylon	United States	Malaysia and Australia
ThO_2	1.1- 10.0	7.9-10.8	1.2 – 7.0	3.4 – 8.4
Ce_2O_3	31.2 – 32.5	26.7 – 31. 9	31.4 – 37.3	25.5 – 33.7
P_2O_5	25.5 – 29.3	24.6 – 27.7	18.4 – 29.3	23.7 – 27.9
SiO_2	0-10.1	0.9 – 2.5	0.3 – 6.4	0.9 – 2.2
ZrO_2	0 – 5.7	--	0 – 3.2	--
TiO_2	0 – 2.6	--	0 – 4.7	--
Fe_2O_3	0 – 4.2	0.8 – 1.5	0 – 7.8	0.4 – 2.8
Al_2O_3	0 – 0.8	0.1 – 0.7	0 – 2.5	0.03 – 0.8
$(La,Di)_2O_3$	26.0 – 36.0	28.5 – 33.5	0 – 31.6	30.3 – 35.5
CaO	0 – 1.1	0.1 – 0.8	0 – 1.2	0.2 – 0.9
H_2O	0 – 0.9	0.2 – 2.2	0 – 0.2	0.5 – 1.3
Miscellaneous	0 – 1.2	0 – 2.7	0 – 7.7	--

Source: Cuthbert, 1958

Table 1-3
Chemical Composition of Natural Monazites
FUSRAP Maywood Superfund Site

MINERAL SOURCE	UO_2 (%wt)	ThO_2 (%wt)	Lanthanide Oxides (%wt)	Other Oxides (%wt)	P_2O_5 (%wt)
Piona, Italy	15.64	11.34	35.24	6.76	31.02
Ratunapura, Sri Lanka	0.10	14.32	53.51	5.03	26.84
San Mateo, California (beach sands)	6.95	4.22	N.D.	N.D.	N.D.
Burke County, North Carolina	0	6.49	62.26	1.97	29.28

Source: Cuthbert, 1958

Table 1-4
Chemical Constituents of Bottom Ash and Fly Ash
FUSRAP Maywood Superfund Site

Chemical Constituents	Range (mg/Kg)
Arsenic	0.98 – 1,700
Barium	96.0 – 13,900
Cadmium	0.1 – 250
Chromium	11.0 – 7,400
Copper	2.8 – 3,020
Lead	3.1 – 1,600
Manganese	31.0- 4,400
Mercury	0.01 – 22
Selenium	0.08 - <500
Silver	1.0 – 50
Zinc	14.0 – 13,000

Mg/Kg = Milligrams per Kilogram

Source: Hart, 1978

Table 1-5
Eastern Coal Heating Values
FUSRAP Maywood Superfund Site

State	Heating Value (Btu/lb)
Pennsylvania	12,745
Pennsylvania	12,925
Virginia	11,925
West Virginia	14,715
Pennsylvania	13,800
Pennsylvania	13,720
Pennsylvania	13,800
Pennsylvania	13,325

Source: Babcock & Wilson, 1972

Table 1-6
Comparison of BRA Data to Potential Soil Concentrations from Disposal of MCW Coal Ash at MISS
FUSRAP Maywood Superfund Site

Constituent	BRA MISS Surficial Soils (0-2 ft) - mg/kg	BRA MISS Soils All Horizons - mg/kg	Potential From Coal Ash Disposal at MISS (1) mg/kg
Arsenic	2.30 – 20.8	0.53 – 1060	0.1 – 167
Cobalt	3.1 – 8.8	1.0 - 269	N/A
Copper	15.2 – 173	3.00 – 224	0.3 – 296
Lead	36.3 – 399	2.20 – 580	0.3 – 157
Nickel	7.8 – 83.7	2.8 - 135	N/A
Selenium	0.55 – 1.2	0.41 – 3.4	0.008 – 49
Vanadium	9.8 - 19	1.8 – 30.6	N/A

Mg/Kg – Milligram per Kilogram

N/A – Not available

Note: (1) Values are based on the following (Appendix B):

a. Ash disposal for 50 years of coal firing at the present Stepan capacity.
b. Firing of Eastern Coal with 15% ash content and a heating value equal to 13,000 BTU/lb.
c. Ash quantity is assumed to be only bottom ash (20% of total ash quantity).
d. Metal concentrations in bottom ash utilized from Table 3.
e. Metal concentrations are averaged over a 10-ft depth for entire MISS site (11.7 acres).

Table 1-7
NJDEP 2001 Known Contaminated Sites within the Former Maywood Superfund Site

ID	KNOWN CONTAMINATED SITES	SITE ADDRESS	SITE STATUS	BUREAU (1)
	LODI BOROUGH			
1	39 ROBINSON AVE	39 ROBINSON AVE	PENDING	BFO-CA
2	META LANE REGIONAL FILL CONTAMINATION	META LN	PENDING	BFO-CA
3	MOBIL SERVICE STATION LODI BOROUGH	660 MAIN ST	ACTIVE	BUST
4	INMONT CORPORATION	200 GREGG ST	ACTIVE	BEECRA
5	NAPP CHEMICALS INCORPORATED	199 MAIN ST	ACTIVE	BEECRA
6	FLINT INK CORPORATION	80 INDUSTRIAL RD	ACTIVE	BEECRA
7	INTERPLAST UNIVERSAL INDUSTRIES	199 GARIBALDI AVE	PENDING	BFO-N
8	HOBOKEN PAINTS INCORPORATED	40 INDUSTRIAL RD	ACTIVE	BEECRA
9	KOHL & MADDEN PRINTING INK CORPORATION	130 GREGG ST	ACTIVE	BEECRA
10	HEXCEL CORP INDUSTRIAL CHEMICALS GROUP	205 MAIN ST	ACTIVE	BEECRA
11	HESS SERVICE STATION LODI BOROUGH	110 ESSEX ST	ACTIVE	BUST
12	LAROCHE INDUSTRIES INCORPORATED	20 META LN	ACTIVE	BUST
13	AMOCO SERVICE STATION LODI BOROUGH	80 ESSEX ST	ACTIVE	BUST
14	AIRCO GASES INCORPORATED	80 HANCOCK ST	ACTIVE	BEECRA
15	BERGEN CABLE TECHNOLOGIES INCORPORATED	170 GREGG ST	ACTIVE	BEECRA
16	EXXON SERVICE STATION LODI BOROUGH	460 N MAIN ST	ACTIVE	BUST
17	ROCK OIL COMPANY	58 ESSEX ST	ACTIVE	BCM
18	ONYX CLEANERS	42 ESSEX ST	ACTIVE	BUST
19	VITO STAMATO COMPANY INCORPORATED	76 SIDNEY ST	ACTIVE	BUST
20	416 MAIN ST	416 MAIN ST	ACTIVE	BFO-N
	MAYWOOD BOROUGH			
21	STEPAN COMPANY	100 WEST HUNTER AVE	ACTIVE	BCM
22	SEARS REPAIR CENTER #8154	200 RTE 17 S	ACTIVE	BUST
23	MAGNOLIA AVENUE GROUND WATER CONTAM	MAGNOLIA AVE	ACTIVE	BSM
24	HUNTER DOUGLAS INCORPORATED	87 RTE 17 N	ACTIVE	BEECRA
25	9 BROOK AVENUE	9 BROOK AVE	ACTIVE	BUST
26	MAYWOOD CHEMICAL	WEST HUNTER AVE	ACTIVE	BCM
27	MAYWOOD RETAIL ASSOC	1 MAYWOOD AVE	ACTIVE	CEHA
28	MITSUBISHI MOTORS	137 RTE 17 N	ACTIVE	BUST

Table 1-7
NJDEP 2001 Known Contaminated Sites within the Former Maywood Superfund Site

ID	KNOWN CONTAMINATED SITES	SITE ADDRESS	SITE STATUS	BUREAU (1)
	ROCHELLE PARK TOWNSHIP			
29	CITGO SERVICE STATION ROCHELLE PARK TWP	88 ESSEX ST	PENDING	BFMCR
30	VERIZON COMMUNICATIONS STREET VAULT	CENTRAL & ROCHELLE AVES (MANHOLE 306)	ACTIVE	BUST
31	DIXO COMPANY INCORPORATED	158 CENTRAL AVE	ACTIVE	BCM
32	BERGEN PASSAIC TRANSPORT SERVICE	53 CENTRAL AVE	ACTIVE	BUST
33	PARKWAY GARDEN ASSOCIATES	128 ROCHELLE AVE	ACTIVE	BUST
34	42 PARK WAY	42 PARK WAY	ACTIVE	CEHA
35	MCMANIS TIRE COMPANY	204 RTE 17 N	ACTIVE	BFO-IN
36	159 BECKER AVE	159 BECKER AVE	ACTIVE	CEHA

Notes:
(1) NJDEP Site Remediation Contact Bureaus
BCM: Bureau of Case Management
BEECRA: Bureau of Environmental Evaluation, Cleanup an Responsibility Assessment
BFO-CA: Bureau of Field Operation - Case Assignment Section
BFO-N: Bureau of Field Operation - Northern Field Office
BSM: Bureau of Site Management
BUST: Bureau of Underground Storage Tanks
CEHA: County Environmental Health Act

Table 1-8
Stepan Spill Summary
FUSRAP Maywood Superfund Site

Spill Release/ Discharge Date	Material/Source	Discharge area	Investigating Office
08/30/84	100 lb amine oxide/leak in a heating coil of a reaction vessel	Lodi Brook	NJ Division of Fish, Game & Wildlife
10/15/88	2,000-2,500 gallons of 88% methanol, 12% Methyl ester compound/3,500 gallon tank	Westerly Brook and Storm Sewer	NJDEP Bureau of Emergency Response
04/21/79	During inspection plant personnel were observed washing product-spills into storm sewer	Storm Sewer	NJDEP Division of Water Resources
05/19/83	1,000-2,000 gallons of mostly water and octyl polmitate and poly ethylene glycol distearate	Storm Sewer Lodi Brook	NJDEP Division of Water Resources
09/25/84	Leak in a heat exchanger / a protein hydrolysate	Lodi Brook caused foaming in the Brook.	NJDEP Division of Water Resources

Table 2-1
New Jersey Department of Environmental Protection
1/2 Mile Radius Well Search Results FUSRAP Maywood Superfund Site

INDEX	WELL OWNER	WELL ADDRESS	USE CODE
1	USX AGRI-CHEMICALS	NA	B
2	CURTISS-WRIGHT CORP.		M
3	269 MAIN STREET REALTY	ROUTE 46 AND SADDLE RIVER NJ	B
4	MASTER ETCHING CORP.		I
5	COLLUCCI, AL	LODI BORO, BERGEN COUNTY	M
6	ZUCKERBERG'S INDUSTRY	280 MIDLAND AVENUE SADDLE BROOK NJ	M
7	U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	M
8	NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	M
9	CHARLES F. FIELDS CO.	199 GARIBALDI AVE. LODI NJ	I
9	199 REALTY CORP.	199 GARIBALDI AVE. LODI NJ	M
10	LODI SHOPPING CENTER INC.	ESSEX ST. AND RTE. 17, LODI NJ	H
11	KLEIN, HARRY	60 INDUSTRIAL ROAD LODI NJ	M
12	ESSSEX STREET PROPERTY	149 ENTIN ROAD	M
13	AIRCO GASES INC.	LODI BORO, BERGEN COUNTY	M
14	PUBLIC WORKS DEPT.	LODI BORO, BERGEN COUNTY	P
15	UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	M
16	VISCONTI, NANCY ESTA	150 GREGG STREET	M
17	FRANK DINICO Products	SOUTH OF #17, WEST SIDE OF BLDG.	I
18	VISCONTI, NANCY ESTA	35 INDUSTRIAL AVE LODI NJ	M
19	AMOCO OIL CO.	WISSE CT. AND MCARTHUR	M
20	SHELL OIL COMPANY	ESSEX AND POLIFLY - RIGHT OF WAY	M
21	LODI REALTY CORP.	LODI BORO, BERGEN COUNTY	I
22	AIR-WIN	10 DELL GLEN AVE. LODI NJ	M
23	AMOCO OIL CO.	ESSEX AND SUMMIT ST., HACKENSACK NJ	M
24	NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	Z
25	FINE ORGANICS CORP.	LOT 10 BLOCK 81A	B
26	SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	M
27	ABRAMS, ARTHUR	MAYWOOD NJ	D
28	IIY PROPERTIES	Rt 17N & ESSEX ST.	M
29	MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	M
30	CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK, NJ	M
31	WABC SPORTS	LODI BORO, BERGEN COUNTY	M
32	CROMAN DEVELOPMENT	HACKENSACK NJ	M
33	KAY'S HOME CENTER	LODI BORO, BERGEN COUNTY	M
34	SEARS ROEBUCK	MAYWOOD AVE MAYWOOD NJ	M
35	SEARS ROEBUCK	200 ROUTE 17 SOUTH MAYWOOD NJ	M
36	KIN PROPERTIES	151 MAYWOOD AVE., MAYWOOD NJ (SEARS WAREHOUSE)	M
37	AMERADA HESS CORP.	MAYWOOD NJ	M
38	CUMBERLAND FARMS, INC.	239 N/S RT17 MAYWOOD NJ	M
39	SUN OIL CORP.	167 N/S RT17 MAYWOOD NJ	M
40	KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	M
41	SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	M

Table 2-1
New Jersey Department of Environmental Protection
1/2 Mile Radius Well Search Results FUSRAP Maywood Superfund Site

INDEX	WELL OWNER	WELL ADDRESS	USE CODE
42	FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	M
43	KINGS CUSTOM MOLDING	194 DANIEL ST., HACKENSACK NJ	M
44	STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	M
45	FMRN Realty - CGI Industries Inc.	80 HANCOCK STREET LODI NJ	M
46	GETTY PETROLEUM CORP.	GARFIELD NJ	M
47	EXXON COMPANY, USA	460 NORTH MAIN STREET	M
48	PERGAMENT, MURRAY	40 INDUSTRIAL RD., LODI NJ	M
49	GETTY PETROLEUM CORP.	MAIN ST. AND UNION ST.	M
50	IIY PROPERTIES	27 SOUTH HACKENSACK NJ	M
51	HACKENSACK BOARD OF ED.	HACKENSACK HIGHSCHOOL, FIRST AND BEECH	M
52	TEXACO	68 ESSEX STREET LODI, NJ	M
53	RAIA INDUSTRIES INC.	305 WEST FORT LEE ROAD, BOGOTA NJ	M
54	ACME QUALITY PRODUCT	205 S. NEWMAN ST., HACKENSACK NJ	B
55	KINGCO ASSOCIATES	433 PASSAIC STREET, HACKENSACK NJ	M
56	PARWAY GARDEN ASSOC.	128 ROCHELLE AVE. ROCHELLE PARK NJ	M
57	ALFRED SANZARI ENT.	267 SOUTH SUMMIT ST., HACKENSACK NJ	M
58	D.P.C. REALTY CO.	18 MILL STREET LODI NJ	M
59	SOLAR OIL CO.	ATI SERVICE STATION, 660 MAIN ST., LODI, NJ	M
60	HOLOCARBON PRODUCTS	HACKENSACK NJ	M
61	M.M. WEIL, TRUSTEE	29 ESSEX ST. MAYWOOD NJ	M
62	US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	M
63	SBPC	CENTRAL AVENUE ROCHELLE PARK NJ	M
63	SBPC	CENTRAL AVENUE ROCHELLE PARK NJ	M
64	FARM ROAD REALITY	207 WEST CENTRAL AVE. MAYWOOD, NJ	M
65	AMOCO OIL CO.	BEHIND 445 ROUTE 17 SOUTH HACKENSACK NJ	M
66	SHELL OIL COMPANY	ESSEX AND POLIFLY	M
67	US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	M
68	US ACOE	ROCHELLE PARK NJ	B
69	BERGEN CABLE TECHNOLOGY	170 GREGG STREET	M
70	US ACOE	LODI BORO, BERGEN COUNTY	B
71	FLEXWRAP	40 META LANE LODI NJ	M
72	BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	M
73	COLDELITE CORP.	LODI BORO, BERGEN COUNTY	M
A	LODI BOROUGH	LODI BORO, BERGEN COUNTY	P
B	ALESSO, FRANK AND JOSE	ROCHELLE PARK NJ	D
C	REISCH TRUCKING AND TRANS. CO.	ROUTE 17, LODI NJ	I
D	LODI BOROUGH	KENNEDY PARK, LODI NJ	B
E	ATLANTIC DETROIT	180 ROUTE 17 SOUTH, LODI NJ	M
F	VORNADO REALTY TRUST	ROUTE 17 LODI NJ	B
G	METAL FABRICATOR	WOODLAND AND RTE. 17, ROCHELLE PARK NJ	I
H	BRIZEK, JOSEPH	ROCHELLE PARK NJ	I
I	AQUARIUM INC.	MAYWOOD NJ	I

Table 2-1
New Jersey Department of Environmental Protection
1/2 Mile Radius Well Search Results FUSRAP Maywood Superfund Site

INDEX	WELL OWNER	WELL ADDRESS	USE CODE
J	LAKE DEVELOPERS, INC.	ROUTE 46 AND SADDLE BROOK NJ	D
K	MENZER, HENRY	339 GOLF AVE., MAYWOOD NJ	D
L	SNAPPY CARWASH	107 ESSEX ST., MAYWOOD NJ	I
M	GULF OIL CO.	ROUTE 17 NORTH, MAYWOOD NJ	M
N	MORTON THIOKOL, INC.	355 MCLEAN BLVD. PATERSON, NJ	L
O	GRAMMATICO, EVELYN	26 GROVE ST. MAYWOOD, NJ	M
P	NY SUSQUEHANNA & WEST RAILROAD		M
Q	KIELBASI, TED	MAYWOOD, NJ	M
R	SUN OIL CORP.	167 N/S RT17 MAYWOOD NJ	M
S	US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	M
T	ZEICHMEISTER, WILLIAM	100 WEST MAGNOLIA AVE. MAYWOOD NJ	M
U	INTERCHEMICAL CORP.	LODI BORO, BERGEN COUNTY	I
V	LANG DESIGN SERVICES	HACKENSACK NJ	I
W	JOS MUSCARELLE INC	MAYWOOD NJ	I
X	PLAYERS CLUB	HACKENSACK NJ	B
Y	SCHOLTEN, HENRY		D
Z	NEWHOUSE, MARIE	26 PASSAIC STREET ROCHELLE PARK NJ	D
A1	FAILLA, JAMES V		D
B1	BIGOSS, WILLIAM		D
C1	KOVACS SR., STEPHEN		D
D1	WASHINE CHEMICAL CO.		I

Use Codes:
M=Monitoring
B=Boring
Z=Piezometer
D=Domestic
I=Industrial
P=Public Supply
H=Heat Pump/Geothermal
L=Livestock

Refer to Figure 2-1 for Well Locations (Index).
Refer to Appendix D for Specific Well Information.

Note: Those wells identified with a letter did not have specific well location information.

TABLE 2-2
WATER PURVEYOR AND ALLOCATION PERMIT DATA SUMMARY
FUSRAP Maywood Superfund Site

Number [1]	Name	Latitude	Longitude	Location	Depth (ft)	Capacity (gpm)
10127W	Gibraltar Plastics Corp.	405247	740433	Lodi	400	110
11139W	Malt Products Corp.	405346	740346	Maywood	315	80
4041PS(2)	Stepan Chemical Co.	405355	740447	Rochelle Park	54	2000

NOTES:

(1) Water Allocation Permit, Agricultural Certification, or Registration Number.

(2) Withdrawal point is the Saddle River.

Refer to Figure 2-7 for withdrawal point locations.

Source: NJDEP-BWA, "Preliminary Survey of Water Withdrawal Points - 5/11/02."

Table 2-3
Phase I and II Subsurface Soil and Groundwater Samples

Boring Phase	Boring Count	Geoprobe® Identifier	Transect / Environmental or Other Type Geoprobe®	Groundwater Depth[1]	Geoprobe® Refusal Depth[1]	Historical Contamination Depth[1,2]	Composite Soil Sample Depth Interval[1]	Composite Soil SampleLaboratory Identification	Composite Soil Core Gamma Reading[3]	Composite Soil PID VOC Reading[4]	Depth Interval Screened for Groundwater Sample[1]	Groundwater Sample Laboratory Identification	Date of Geoprobe® Sampling	Miscellaneous Field Notes
Phase I	1	09A007	Transect F	1.60	24.25	8.00	1 to 3 (upper)	09A020566	--	--	20.75 to 24.25	09A020569	4/11/2000	
Phase I	1	09A007	Transect F	1.60	24.25	8.00	3 to 5 (lower)	09A020567	--	--	20.75 to 24.25	09A020569	4/11/2000	
Phase I	2	09A008	Transect F	4.50	17.00	8.00	0 to 2 (upper)	09A020570	5	--	4 to 8 (upper)	09A020572	4/12/2000	
Phase I	2	09A008	Transect F	4.50	17.00	8.00	2 to 4 (lower)	09A020571	--	--	13 to 17 (lower)	09A020573	4/12/2000	
Phase I	3	09A009	Transect F	2.50	13.00	8.00	0 to 2 (upper)	09A020574	4	--	2 to 8 (upper)	09A020576	4/12/2000	
Phase I	3	09A009	Transect F	2.50	13.00	8.00	2 to 4 (lower)	09A020575	--	--	9 to 13 (lower)	09A020577	4/12/2000	
Phase I	4	09A010	Transect F	4.40	15.00	8.00	0 to 2 (upper)	09A020578	3	--	4 to 8 (upper)	09A020580	4/13/2000	
Phase I	4	09A010	Transect F	4.40	15.00	8.00	2 to 4 (lower)	09A020579	--	--	11 to 15 (lower)	09A020581	4/13/2000	
Phase I	5	12B009	Transect E	9.50	14.00	20.00	7 to 9 (upper)	12B020614	2	--	10 to 14	12B020616	4/6/2000	
Phase I	5	12B009	Transect E	9.50	14.00	20.00	9 to 11 (lower)	12B020615	2	--	10 to 14	12B020616	4/6/2000	
Phase I	6	12B010	Transect E	12.20	17.50	20.00	4 to 6 (upper)	12B020618	--	--	13.5 to 17.5	12B020620	4/6/2000	
Phase I	6	12B010	Transect E	12.20	17.50	20.00	10 to 12 (lower)	12B020619	15	--	13.5 to 17.5	12B020620	4/6/2000	
Phase I	7	12B011	Transect E	11	23.00	20.00	Surface to 4 (upper)	12B020622	--	--	10 to 14 (upper)	12B020624	4/7/2000	
Phase I	7	12B011	Transect E	11	23.00	20.00	6 to 8 (lower)	12B020623	--	--	19 to 23 (lower)	12B020625	4/7/2000	
Phase I	8	12B012	Transect E	8.80	23.00	20.00	2 to 4 (upper)	12B020626	--	--	9 to 13 (upper)	12B020628	4/7/2000	
Phase I	8	12B012	Transect E	8.80	23.00	20.00	6 to 8 (lower)	12B020627	--	--	19 to 23 (lower)	12B020629	4/7/2000	
Phase I	9	12B013	Transect E	8.40	23.00	20.00	3 to 5 (upper)	12B020630	30	--	10 to 14 (upper)	12B020632	4/10/2000	
Phase I	9	12B013	Transect E	8.40	23.00	20.00	6 to 8 (lower)	12B020631	10	--	19 to 23 (lower)	12B020633	4/10/2000	
Phase I	10	12B014	Transect E	6.40	19.00	20.00	2 to 4 (upper)	12B020634	--	--	6 to 10 (upper)	12B020636	4/10/2000	
Phase I	10	12B014	Transect E	6.40	19.00	20.00	4 to 6 (lower)	12B020635	--	--	15 to 19 (lower)	12B020637	4/10/2000	
Phase I	11	12B015	Transect A	6	25.00	20.00	0 to 2 (upper)	12B020638	--	--	4 to 8(upper)	12B020640	4/19/2000	
Phase I	11	12B015	Transect A	6	25.00	20.00	2 to 4 (lower)	12B020639	--	--	16 to 20 (lower)	12B020641	4/19/2000	
Phase I	12	12B016	Transect A	3.20	25.00	20.00	1 to 3 (upper)	12B020642	--	--	5 to 9 (upper)	12B020644	4/19/2000	
Phase I	12	12B016	Transect A	3.20	25.00	20.00	5 to 7 (lower)	12B020643	--	--	16 to 20 (lower)	12B020645	4/19/2000	
Phase I	13	12B017	Transect A	12.00	25.00	20.00	0 to 2 (upper)	12B020646	--	--	6 to 10 (upper)	12B020648	4/20/2000	
Phase I	13	12B017	Transect A	12.00	25.00	20.00	2 to 4 (lower)	12B020647	--	--	21 to 25 (lower)	12B020649	4/20/2000	
Phase I	14	12B018	Transect A	4.5 to 8.5	12.50	20.00	0 to 2 (upper)	12B020650	--	--	8.5 to 12.5	12B020652	4/24/2000	
Phase I	14	12B018	Transect A	4.5 to 8.5	12.50	20.00	2 to 4 (lower)	12B020651	--	--	8.5 to 12.5	12B020652	4/24/2000	
Phase I	15	12B019	Transect A	3	7.00	20.00	0 to 2 (upper)	12B020654	--	--	3.5 to 7.5	12B020656	4/24/2000	
Phase I	15	12B019	Transect A	3	7.00	20.00	2 to 4 (lower)	12B020655	--	--	3.5 to 7.5	12B020656	4/24/2000	
Phase I	16	14A001	Transect B	4	9.50	*[8]	NC	NC	--	--	5.5 to 9.5	14A020666	4/25/2000	
Phase I	17	14A002	Transect B	7	13.00	*[8]	NC	NC	--	--	9 to 13	14A020668	4/27/2000	
Phase I	18	14A003	Transect B	surface to 4	8.00	*[8]	NC	NC	--	--	4 to 8	14A020670	4/28/2000	
Phase I	19	15A001	Transect C	6.70	14.00	*[8]	NC	NC	--	--	5 to 9	15A020675	4/13/2000	
Phase I	20	15A002	Transect C	6.50	19.75	*[8]	NC	NC	--	--	6 to 10 (upper)	15A020676	4/14/2000	
Phase I	20	15A002	Transect C	6.50	19.75	*[8]	NC	NC	--	--	15.75 to 19.75 (lower)	15A020677	4/14/2000	
Phase I	21	15A003	Transect C	6 to 10	14.50	*[8]	NC	NC	--	--	10 to 14	15A020678	4/14/2000	
Phase I	22	16A001	Transect D	3.20	10.00	*[8]	NC	NC	--	--	6 to 10	16A020680	4/17/2000	
Phase I	23	16A002	Transect D	9.10	11.00	*[8]	NC	NC	--	--	7 to 11	16A020681	4/17/2000	
Phase I	24	16A003	Transect D	13	18.00	*[8]	NC	NC	--	--	14 to 18	16A020684	4/18/2000	
Phase I	25	16A004	Transect D	10.10	11.10	*[8]	NC	NC	--	--	7.1 to 11.1	16A020686	4/25/2000	
Phase I	26	17A001	Transect G	3.10	6.50	*[8]	NC	NC	--	--	2.5 to 6.5	17A020688	4/18/2000	
Phase I	27	17A002	Transect G	3	15.20	*[8]	NC	NC	--	--	11.2 to 15.2	17A020690	4/25/2000	
Phase I	28	17A003	Transect G	3.70	15.50	*[8]	NC	NC	--	--	11.5 to 15.5	17A020692	4/28/2000	
Phase I	29	17A004	Transect G	8	21.00	*[8]	NC	NC	--	--	8 to 12 (upper)	17A020694	5/1/2000	
Phase I	29	17A004	Transect G	8	21.00	*[8]	NC	NC	--	--	17 to 21 (lower)	17A020695	5/1/2000	
Phase I	30	18A001	Transect J	6.70	19.50	*[8]	2 to 4 (upper)	18A020696	--	--	15.5 to 19.5	18A020698	4/26/2000	

Table 2-3
Phase I and II Subsurface Soil and Groundwater Samples

Boring Phase	Boring Count	Geoprobe® Identifier	Transect / Environmental or Other Type Geoprobe®	Groundwater Depth[1]	Geoprobe® Refusal Depth[1]	Historical Contamination Depth[1,2]	Composite Soil Sample Depth Interval[1]	Composite Soil SampleLaboratory Identification	Composite Soil Core Gamma Reading[3]	Composite Soil PID VOC Reading[4]	Depth Interval Screened for Groundwater Sample[1]	Groundwater Sample Laboratory Identification	Date of Geoprobe® Sampling	Miscellaneous Field Notes
Phase I	30	18A001	Transect J	6.70	19.50	*[8]	8 to 10 (lower)	18A020697	--	--	15.5 to 19.5	18A020698	4/26/2000	
Phase I	31	18A002	Transect J	6.90	17.50	*[8]	0 to 2 (upper)	18A020700	--	--	13.5 to 17.5	18A020702	4/26/2000	
Phase I	31	18A002	Transect J	6.90	17.50	*[8]	2 to 4 (lower)	18A020701	--	--	13.5 to 17.5	18A020702	4/26/2000	
Phase I	32	18A003	Transect J	6.38	25.00*	*[8]	2 to 4 (lower)	18A020705	--	--	21 to 25 (lower)	18A020707	4/26/2000	
Phase I	32	18A003	Transect J	4 to 8	25.00*	*[8]	0 to 2 (upper)	18A020704	--	--	8 to 12 (upper)	18A020706	4/26/2000	
Phase I	33	18A004	Transect J	4.70	16.00	*[8]	0 to 3 (upper)	18A020708	--	--	12 to 16	18A020711	4/27/2000	
Phase I	33	18A004	Transect J	4.70	16.00	*[8]	3 to 6 (lower)	18A020709	--	--	12 to 16	18A020711	4/27/2000	
Phase II	1	13A001	Transect I	9.00	19.50	*[8]	2 to 4	13A021164	--	--	15.5 to19.5	13a020659	12/4/2000	
Phase II	1	13A001	Transect I	9.00	19.50	*[8]	7.5 to 8.5	13A021165	--	--	15.5 to19.5	13a020659	12/4/2000	
Phase II	2	13A002	Transect I	10.00	17.00	*[8]	0 to 1	13A021166	--	--	10 to 14	13A020660	12/4/2000	
Phase II	2	13A002	Transect I	10.00	17.00	*[8]	5 to 6	13A021167	--	--	10 to 14	13A020660	12/4/2000	
Phase II	3	13A003	Transect H	9.50	16.50	*[8]	5.5 to 6.5	13A021168	--	--	10 to 14	13A020662	12/5/2000	
Phase II	3	13A003	Transect H	9.50	16.50	*[8]	7 to 8	13A021169	--	--	10 to 14	13A020662	12/5/2000	
Phase II	4	13A004	Transect H	8.50	16.10	*[8]	4 to 8	13A021171	--	--	8 to 12	13A021196	12/5/2000	
Phase II	4	13A004	Transect H	8.50	16.10	*[8]	8 to 9	13A021170	--	--	8 to 12	13A020664	12/5/2000	
Phase I	1	01A001	E	14	20.30	6.00	surface to 4	01A020500	--	0.3	10 to 14	01A020501	3/15/2000	
Phase I	2	02A001	E	3.50	13.70	6.00	5 to 8	02A20502	2	--	10 to 14	02A20503	3/31/2000	
Phase I	3	02A002	E	5.70	18.00	6.00	5 to 8	02A20504	3	--	14 to 18	02A20505	4/3/2000	pushed to 16 for soils, punched to 18 for water
Phase I	4	02C001	E	8.70	8.00	8.00	surface to 4	02C020510	--	--	12 to 16	02C020511	3/16/2000	pushed to 8 for soils, punched to 16 for water
Phase I	5	02D001	E	4	20.00	2.50	surface to 4	02D020512	--	--	6 to 10	02D020513	3/15/2000	
Phase I	6	02D002	E	6	8.00	2.50	surface to 4	02D020514	--	--	4 to 8	02D020515	3/16/2000	
Phase I	7	02D003	E	4.50	12.00	2.50	surface to 4	02D020516	--	--	8 to 12	02D020517	3/16/2000	
Phase I	8	03A001	E	3	8.00	surface	surface to 4	03A020518	--	--	4 to 8	03A020519	3/16/2000	
Phase I	9	04A001	E	6.05	10.00	3.00	surface to 4	04A020522	--	--	8 to 10	04A020523	3/17/2000	
Phase I	10	04A002	E	8.75	8.00	3.00	surface to 4	04A020520	5	--	10 to 14	04A020521	3/22/2000	pushed to 8 for soils, punched to 12 for water
Phase I	11	04A003	E	5.50	8.00	3.00	surface to 4	04A020524	2	--	8 to 12	04A020525	3/22/2000	pushed to 8 for soils, punched to 12 for water
Phase I	12	05A001	E	5.60	8.00	1.50	surface to 4	05A020526	--	--	8 to 12	05A020527	3/22/2000	pushed to 8 for soils, punched to 12 for water
Phase I	13	05B001	E	6.10	12.00	1.50	surface to 4	05B020528	--	--	12 to 16	05B020529	3/23/2000	pushed to 12 for soils, punched to 16 for water
Phase I	14	05C001	E	4.80	8.00	3.50	surface to 4	05C020530	--	--	7 to 11	05C020531	3/23/2000	pushed to 12 for soils, punched to 16 for water
Phase I	15	06A001	E	3.70	8.00	7.00	surface to 4	06A020532	--	3	4 to 8	06A020533	3/23/2000	
Phase I	16	06B001	E	4.10	10.80	8.00	6 to 8	06B020534	--	--	2 to 6	06B020535	3/24/2000	
Phase I	17	06C001	E	6.10	8.00	5.00	5 to 7	06C020536	--	--	8 to 12	06C020537	3/24/2000	pushed to 8 for soils, punched to 12 for water
Phase I	18	06C002	E	3.50	8.00	5.00	4.5 to 7	06C020538	7	--	6 to 10	06C020539	3/27/2000	
Phase I	19	06D001	E	7.20	11.20	*[8]	6 to 9	06D020540	6	--	5 to 9	06C020541	3/24/2000	
Phase I	20	06E001	E	6.60	12.00	8.00	6 to 9	06E20542	--	--	8 to 12	06E20543	3/28/2000	
Phase I	21	07A001	E	5.10	12.00	8.50	5 to 8	07A020544	15	--	5 to 9	07A020545	3/27/2000	
Phase I	22	08A001	E	1	12.00	11.00	9 to 12	08A20548	--	--	8 to 12	08A20549	3/30/2000	
Phase I	23	08A002	E	5.70	12.00	11.00	1 to 3	08A20550	2	--	8 to 12	08A20551	3/30/2000	
Phase I	24	08A003	E	6.70	12.00	11.00	5 to 8	08A20772	--	--	4 to 8	08A20773	3/30/2000	
Phase I	25	09A001	E	1.10	8.00	8.00	5 to 8	09A020552	--	--	4 to 8	09A020553	3/28/2000	
Phase I	26	09A002	E	2	10.50	8.00	6 to 9	09A020554	--	--	6 to 10	09A020555	3/28/2000	
Phase I	27	09A003	E	1.40	12.00	8.00	6 to 9	09A020556	--	--	6 to 10	09A020557	3/28/2000	
Phase I	28	09A004	E	3.00	9.00	8.00	6 to 9	09A20558	--	--	4 to 9	09A20559	3/31/2000	set 1-in. PVC screen
Phase I	29	09A005	E	0.00	9.00	8.00	6 to 9	09A20560	--	--	4 to 8	09A20561	3/31/2000	
Phase I	30	10A001	E	6.45	11.75	16.50	5 to 8	10A20582	--	--	6 to 10	10A20583	3/29/2000	moved 4 ft east of marked location

Table 2-3
Phase I and II Subsurface Soil and Groundwater Samples

Boring Phase	Boring Count	Geoprobe® Identifier	Transect / Environmental or Other Type Geoprobe®	Groundwater Depth[1]	Geoprobe® Refusal Depth[1]	Historical Contamination Depth[1,2]	Composite Soil Sample Depth Interval[1]	Composite Soil SampleLaboratory Identification	Composite Soil Core Gamma Reading[3]	Composite Soil PID VOC Reading[4]	Depth Interval Screened for Groundwater Sample[1]	Groundwater Sample Laboratory Identification	Date of Geoprobe® Sampling	Miscellaneous Field Notes
Phase I	31	10A002	E	4.50	12.00	16.50	6 to 9	10A20584	2	--	6 to 10	10A20585	3/29/2000	
Phase I	32	10A003	E	*[5]	12.00	16.50	5 to 8	10A20586	2	--	*[5]	dry no sample	3/29/2000	
Phase I	33	10A004	E	10.90	13.00	16.50	10 to 13	10A20588	--	--	*[6]	dry no sample	3/29/2000	
Phase I	34	10A005	E	8.60	9.00	16.50	5 to 9	10A20590	--	--	4 to 9	10A20591	4/3/2000	set 1-in. PVC screen
Phase I	35	10A006	E	8.50	10.00	16.50	5 to 9	10A20592	--	--	5 to 10	10A20593	4/3/2000	
Phase I	36	10A007	E	3.75	5.00	16.50	2 to 5	10A20779	--	--	Surface to 5	10A20780	4/4/2000	set 1-in. PVC screen
Phase I	37	10A008	E	4.50	16.00	16.50	10 to 15	10A20781	3	--	12 to 16	10A20782	4/4/2000	very high PID readings @ 8 ft.
Phase I	38	11A001	E	5.90	8.00	3.00	3 to 6	11A020594	--	--	4 to 8	11A020595	3/27/2000	
Phase I	39	11B001	E	7	8.00	3.00	2 to 5	11B020596	--	--	6 to 10[6]	dry no sample	3/27/2000	pushed to 8 for soils, punched to 10 for water
Phase I	40	12B001	E	6.65	20.00	20.00	16 to 20	12B20598	3	--	16 to 20	12B20599	4/4/2000	
Phase I	41	12B002	E	7.85	14.00	20.00	7 to 10	12B20600	6	--	10 to 14	12B20601	4/4/2000	
Phase I	42	12B003	E	8.80	14.50	20.00	8 to 12	12B020602	--	--	6 to 10	12B020603	4/5/2000	
Phase I	43	12B004	E	17.30	19.00	20.00	8 to 12	12B020604	--	--	16 to 20	12B020605	4/5/2000	pushed to 19 for soils, punched to 20 for water
Phase I	44	12B005	E	10	16.00	20.00	8 to 12	12B020606	--	--	12 to 16	12B020607	4/5/2000	
Phase I	45	12B006	E	5.40	9.00	20.00	4 to 8	12B020608	--	--	5 to 9	12B020609	4/5/2000	
Phase I	46	12B007	E	8.50	8.00	20.00	1 to 3.5	12B020610	--	--	8 to 12	12B020611	4/27/2000	
Phase II	1	02B001	E	9	15.50	6.00	12 to 14	02b020506	--	--	12 to 15.5	02b020507	8/22/2001	
Phase II	2	02B002	E	10	16.00	6.00	6 to 8	02b020508	--	--	12 to 16	02b020509	8/22/2001	
Phase II	3	07A002	Data Gap	7	14.50	*[8]	6.5 to 7.5	07A021153	--	--	10.5 to 14.5	07A02184	11/30/2000	
Phase II	4	07A003	Data Gap	7	15.50	*[8]	5.25 to 5.75	07A021154	--	--	11.5 to 15.5	07A021184	11/30/2000	
Phase II	5	12B020	Data Gap	9	22.00	*[8]	13 to 14	12b021161	--	--	14 to 18	12b021160	12/1/2000	
Phase II	6	12B026	Data Gap	16	18.00	*[8]	8 to 9	12b021155	--	--	18 to 22	12b021155	12/1/2000	
Phase II	7	12B027	Data Gap			20.00	NC	NC	--	--	12.5 to 17.5	12b021625	12/13/2000	
Phase II	8	12B028	Data Gap			20.00	NC	NC	--	--	12.5 to 17.5	12b021626	12/14/2000	
Phase II	9	12B029	Data Gap			20.00	NC	NC	--	--	11 to 16	12b021627	12/13/2000	

Notes:

(**) Geoprobe® location referenced to North American Datum 1927.
(1) Depth measured in feet below ground surface.
(2) Historical contamination depth based on PDI results.
(3) Measured in kC/m above background.
(4) Measured in ppm above background.
(5) No groundwater encountered at location.
(6) Screened Interval screened did not produce sufficient quantity of groundwater to sample.
(7) Not measured due to high LEL.
(8) No data available.
NC = Not collected
-- = Readings not above background.

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
GWRI Phase II Bedrock Pump Test Wells							
BRPW-1D	110.0	56.42	56.30	-33.58	-53.58	90.00	110.00
BRPZ-1	115.0	55.61	55.52	15.61	-59.39	40.00	115.00
BRPZ-2	62.0	55.89	55.74	13.89	-6.11	42.00	62.00
BRPZ-3	57.0	56.92	56.90	19.92	-0.08	37.00	57.00
BRPZ-4	61.0	55.30	55.58	15.30	-5.70	40.00	61.00
BRPZ-5	62.0	55.25	55.37	13.25	-6.75	42.00	62.00
BRPZ-6	120.0	56.83	56.84	25.83	-63.17	31.00	120.00
BRPZ-7	109.0	56.42	56.70	16.42	-52.58	40.00	109.00
BRPZ-8	115.0	54.67	54.50	14.67	-60.33	40.00	115.00
BRPZ-9	56.0	56.07	55.97	24.07	0.07	32.00	56.00
GWRI Phase II Aditional Monitoring Wells							
MW-1D	46.0	52.98	52.98	31.98	6.98	21.00	46.00
MW-2D	48.5	47.16	46.91	25.66	-1.34	21.50	48.50
MW-3D	55.0	55.06	54.77	25.06	0.06	30.00	55.00
MW-4D	43.0	44.04	43.82	26.04	1.04	18.00	43.00
MW-5D	52.0	45.43	45.15	13.43	-6.57	32.00	52.00
MW-6D	54.0	42.84	42.34	13.84	-11.16	29.00	54.00
MW-7D	46.0	53.99	53.73	32.99	7.99	21.00	46.00
MW-8D	52.0	54.34	54.15	27.34	2.34	27.00	52.00
MW-9D	47.0	69.79	69.65	47.79	22.79	22.00	47.00
MW-10D	46.0	62.90	62.56	41.90	16.90	21.00	46.00
MW-12D	53.0	44.85	46.32	16.85	-8.15	28.00	53.00
MW-13D	50.0	46.30	46.12	21.30	-3.70	25.00	50.00
MW-14D	52.0	39.60	39.58	12.60	-12.40	27.00	52.00
MW-15D	61.0	34.56	34.44	-1.44	-26.44	36.00	61.00
MW-16D	73.0	29.36	29.24	-18.64	-43.64	48.00	73.00
MW-17D	46.0	28.16	28.05	7.16	-17.84	21.00	46.00

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
MW-18D	57.0	35.05	34.73	0.05	-21.95	35.00	57.00
MW-19D	42.0	56.17	55.96	39.17	14.17	17.00	42.00
MW-19DD	76.0	56.14	55.81	4.64	-19.86	51.50	76.00
MW-20D	55.0	58.46	58.88	28.46	3.46	30.00	55.00
MW-23D	71.0	56.11	56.19	5.11	-14.89	51.00	71.00
MW-23DD	102.0	56.85	56.98	-25.15	-45.15	82.00	102.00
MW-24D	67.7	55.03	57.28	7.33	-12.67	47.70	67.70
MW-24DD	105.0	55.07	57.08	-24.93	-49.93	80.00	105.00
MW-25D	59.0	56.11	58.13	23.11	-1.89	33.00	58.00
MW-26D	59.0	56.83	60.12	23.33	-1.67	33.50	58.50
MW-1S	8.0	52.65	52.45	49.65	44.65	3.00	8.00
MW-2S	13.0	47.08	46.70	42.08	34.08	5.00	13.00
MW-3S	17.0	55.18	54.86	48.18	38.18	7.00	17.00
MW-4S	9.0	44.10	43.96	39.10	35.10	5.00	9.00
MW-5S	15.0	45.40	45.23	40.40	30.40	5.00	15.00
MW-6S	17.0	43.00	42.68	38.00	26.00	5.00	17.00
MW-7S	15.0	53.81	53.69	48.81	38.81	5.00	15.00
MW-8S	15.0	54.27	54.00	49.27	39.27	5.00	15.00
MW-9S	13.0	69.80	69.56	64.80	56.80	5.00	13.00
MW-10S	10.0	62.56	62.26	57.56	52.56	5.00	10.00
MW-11S	8.5	48.06	47.92	44.56	39.56	3.50	8.50
MW-12S	14.0	44.25	47.63	40.25	30.25	4.00	14.00
MW-13S	11.0	46.27	45.97	42.27	35.27	4.00	11.00
MW-14S	20.0	39.19	39.28	35.19	19.19	4.00	20.00
MW-15S	19.0	34.92	34.97	30.92	15.92	4.00	19.00
MW-16S	14.0	29.12	29.08	25.12	15.12	4.00	14.00
MW-17S	10.0	28.21	28.00	24.21	18.21	4.00	10.00
MW-18S	16.8	35.20	35.07	31.40	18.40	3.80	16.80
MW-19S	12.0	56.26	55.93	51.26	44.26	5.00	12.00

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
MW-20S	15.0	58.54	61.63	53.54	43.54	5.00	15.00
MW-21S	14.0	38.92	38.28	34.92	24.92	4.00	14.00
MW-25S	18.5		58.85	-6.00	-16.00	6.00	16.00
GWRI Phase II Overburden Pump Test Wells							
OBPW-1S	23.5	55.89	55.72	52.39	32.39	3.50	23.50
OVPZ-9	21.0	55.65	55.60	49.65	34.65	6.00	21.00
OVPZ-10	24.0	55.95	55.93	51.95	31.95	4.00	24.00
OVPZ-11	24.5	55.39	55.40	50.89	30.89	4.50	24.50
OVPZ-12	17.5	56.02	56.02	53.02	38.52	3.00	17.50
OVPZ-13	18.0	56.12	56.14	53.12	38.12	3.00	18.00
OVPZ-14	13.0	-	-	-	-	3.00	13.00
OVPZ-15	20.0	55.92	55.91	53.92	35.92	2.00	20.00
OVPZ-16	24.0	55.63	55.60	51.63	31.63	4.00	24.00
OVPZ-17	18.0	55.66	55.65	52.66	37.66	3.00	18.00
Existing Monitoring Wells Installed by DOE / Bechtel							
B38W02D	43.0	74.94	78.04	37.94	32.94	37.00	42.00
B38W03B (1)	40.5	56.93	58.27	27.13	17.43	29.80	39.50
B38W04B	36.3	62.71	65.64	40.01	35.01	22.70	27.70
B38W05B	44.5	68.26	70.98	45.56	35.26	22.70	33.00
B38W06B	36.4	56.16	58.62	40.26	35.26	15.90	20.90
B38W07B	39.2	52.59	54.98	34.09	23.79	18.50	28.80
B38W12B	50.3	47.15	49.64	12.65	2.25	34.50	44.90
B38W14D (1)	51.5	44.16	43.79	-1.84	-7.34	46.00	51.50
B38W15D	46.0	47.47	47.04	6.47	1.47	41.00	46.00
B38W17B(1)	44.4	50.68	53.28	31.98	21.68	18.70	29.00
B38W18D (1)	41.0	58.02	57.85	23.02	18.02	35.00	40.00
B38W19D (1)	47.9	57.49	59.98	35.79	25.59	21.70	31.90
B38W24D (1)	28.0	55.29	54.91	33.29	28.29	22.00	27.00
B38W25D (1)	27.6	55.65	57.66	34.05	29.05	21.60	26.60

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
MISS 1B (1)	53.5	60.42	61.98	37.42	6.92	23.00	53.50
MISS 3B (1)	50.0	56.78	57.66	36.78	6.78	20.00	50.00
MISS 4B (1)	47.0	55.38	56.79	38.38	8.38	17.00	47.00
MISS 5B (1)	55.0	58.09	59.76	33.09	3.09	25.00	55.00
MISS 7B (1)	49.0	53.99	55.77	34.99	4.99	19.00	49.00
B38W01S	23.0	53.92	56.57	36.92	31.92	17.0	22.0
B38W12A	14.8	47.20	49.96	39.80	34.80	7.4	12.4
B38W14S (1)	14.0	44.18	43.89	36.18	31.18	8.0	13.0
B38W15S	16.5	47.40	46.75	36.90	31.90	10.5	15.5
B38W17A	14.1	50.70	53.24	43.10	38.10	7.6	12.6
B38W19S (1)	15.8	57.48	59.91	44.58	42.58	12.9	14.9
B38W24S (1)	15.6	55.38	55.04	44.98	40.18	10.4	15.2
B38W25S	12.7	55.65	57.50	48.95	43.95	6.7	11.7
MISS 1AA	19.0	60.50	62.70	47.50	42.50	13.0	18.0
MISS 2A	18.9	60.56	61.47	53.66	43.66	6.9	16.9
MISS 3A	12.7	56.56	58.52	49.86	43.86	6.7	12.7
MISS 4A	9.7	55.36	57.17	50.66	45.66	4.7	9.7
MISS 5A	14.8	57.86	58.65	46.96	43.06	10.9	14.8
MISS 6A	15.2	57.07	58.26	49.87	43.87	7.2	13.2
MISS 7A	9.6	53.52	55.60	48.92	43.92	4.6	9.6
Existing Monitoring Wells Owned by Stepan Chemical Company							
BRMW1	47.0	49.35	49.06	12.35	2.35	37.00	47.00
BRTW2 (1)	62.0	48.44	47.94	-	-	-	-
BRMW2 (1)	41.5	54.90	54.61	23.4	13.40	31.50	41.50
BRMW3 (1)	30.0	46.93	46.67	26.93	16.93	20.00	30.00
BRMW4 (1)	36.0	46.60	46.33	20.6	10.60	26.00	36.00
BRMW5	29.0	46.38	45.97	27.38	17.38	19.00	29.00
BRMW6	27.0	49.25	49.07	32.25	22.25	17.00	27.00
BRMW7 (1)	38.0	45.60	45.11	17.6	7.60	28.00	38.00

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
BRMW8	42.0	45.63	45.18	13.63	3.63	32.00	42.00
BRMW10	40.0	59.78	59.33	29.78	19.78	30.00	40.00
BRMW11	33.0	45.71	47.89	22.71	12.71	23.00	33.00
BRMW12	48.0	47.67	47.33	9.67	-0.33	38.00	48.00
BRMW13	33.0	47.69	47.25	24.69	14.69	23.00	33.00
BRMW14	37.0	46.50	46.20	19.5	9.50	27.00	37.00
BRMW15	30.0	70.31	71.63	50.31	40.31	20.00	30.00
BRMW16	30.0	67.60	67.94	47.6	37.60	20.00	30.00
BRMW17	35.0	60.49	62.02	35.49	25.49	25.00	35.00
PT-1DA	13.0	56.26	55.92	27.26	17.26	29.00	39.00
PT-1DB	13.0	56.26	55.79	4.26	-5.74	52.00	62.00
OBMW-1	10.0	49.28	48.77	46.28	39.28	3.00	10.00
OBMW-2	13.0	55.92	56.29	-	-	-	-
OBMW-3	12.0	47.13	46.88	42.13	35.13	5.00	12.00
OBMW-4 (1)	14.0	46.46	45.99	42.46	32.46	4.00	14.00
OBMW-5	10.0	46.37	46.20	43.37	36.37	3.00	10.00
OBMW-6	8.0	48.71	48.95	45.71	40.71	3.00	8.00
OBMW-7 (1)	15.0	45.47	45.66	40.47	30.47	5.00	15.00
OBMW-8	12.5	45.67	45.63	40.17	33.17	5.50	12.50
OBMW-10	8.0	48.47	48.03	45.47	40.47	3.00	8.00
OBMW-11	10.0	45.77	48.28	40.77	35.77	5.00	10.00
OBMW-12	15.0	47.61	47.39	42.61	32.61	5.00	15.00
OBMW-13	14.0	47.69	47.35	43.69	33.69	4.00	14.00
OBMW-14	14.0	46.46	45.98	42.46	32.46	4.00	14.00
OBMW-15	17.0	70.19	72.26	58.19	53.19	12.00	17.00
OBMW-17	15.0	60.75	62.74	55.75	45.75	5.00	15.00
OBMW-18	10.7	62.61	64.64	56.61	51.91	6.00	10.70
OBMW-19	15.0	57.28	59.46	49.18	42.28	8.10	15.00
Well 1	16.0	58.30	58.83	53.3	43.30	5.00	15.00
Well 2	20.0	58.38	59.22	49.38	39.38	9.00	19.00

TABLE 2-4
MONITORING WELL CONSTRUCTION SUMMARY
FUSRAP MAYWOOD SUPERFUND SITE

Well ID	Total Well Depth (ft bgs)	Ground Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Screen Interval (ft MSL)		Screen Interval (ft bgs)	
				top	bottom	top	bottom
Well 5	13.0	62.35	62.20	57.35	50.35	5.00	12.00
PT-2S	13.0	55.56	56.07	50.56	40.86	5.00	14.70
MW-1	-	65.39	64.99	-	-	-	-

Notes:

(1) - Data from July 2001 survey

Table 2-5A
Monitoring Well Field Parameters - Overburden Wells
FUSRAP Maywood Superfund Site

Well ID	Temperature	Specific Conductivity	pH	Eh	DO	Turbidity	Date
	(^{o}C)	(mS/cm)	(S.U)	(mv)	(mg/L)	(NTU)	
B38W01S	13.4	2.15	6.85	-35.0	1.40	34.0	4/14/2000
B38W01S	13.4	2.11	6.70	-67.6	1.16	**424.0**	11/8/2000
B38W14S	14.3	0.740	6.40	56.4	0.56	25.3	11/16/2000
B38W15S	15.8	2.12	7.26	-49.9	0.54	**1315.0**	11/9/2000
B38W19S	14.0	2.57	7.13	-86.0	0.19	**87.0**	4/10/2000
B38W19S	13.5	2.39	7.21	-11.3	1.23	7.9	11/7/2000
B38W24S	17.6	0.561	6.04	29.0	0.14	16.0	4/7/2000
B38W24S	19.6	0.537	5.94	17.2	0.75	45.4	11/15/2000
B38W25S	12.3	1.24	6.87	-79.0	0.06	34.0	4/13/2000
MISS 1AA	8.6	2.40	7.02	18.0	1.86	32.0	4/11/2000
MISS 1AA	11.8	2.35	6.96	159.4	4.83	6.5	11/20/2000
MISS 1AA	12.2	2.30	7.04	57.0	2.27	1.0	12/21/2000
MISS 2A	9.6	3.35	6.52	211.0	3.04	4.0	4/10/2000
MISS 2A	11.4	3.59	6.95	-131.8	1.34	11.4	11/21/2000
MISS 3A	11.4	0.659	6.16	-63.0	-0.04	**86.0**	4/5/2000
MISS 3A	14.1	0.741	6.24	-66.9	1.03	33.1	11/15/2000
MISS 3A	17.3	0.536	6.28	-75.0	1.91	39.6	7/12/2001
MISS 4A	18.0	1.09	4.22	327.0	3.28	5.0	4/7/2000
MISS 4A	13.8	1.14	4.14	223.2	5.60	**909.1**	11/14/2000
MISS 5A	14.5	2.64	6.43	159.0	0.90	**65.0**	4/7/2000
MISS 5A	16.0	2.55	6.76	17.2	5.70	**74.5**	11/6/2000
MISS 6A	14.1	1.21	6.73	52.0	1.35	17.0	4/13/2000
MISS 6A	14.8	0.958	6.88	123.6	3.93	6.6	11/20/2000
MISS 6A	8.5	0.83	6.95	61.0	4.20	19.0	12/21/2000
MISS 7A	-	-	-	-	-	-	3/29/2000
MISS 7A	-	-	-	-	-	-	11/27/2000
MISS 7A	8.0	0.208	6.96	129.0	8.99	40.0	3/12/2001
MW-10S	14.3	82.4	6.45	228.0	17.4	0.0	2/19/2001
MW-10S	9.1	2.06	6.53	168.0	2.70	17.4	2/26/2001
MW-11S	6.6	0.905	6.57	156.0	3.54	-	2/12/2001
MW-12S	9.7	5.47	6.93	-53.0	0.82	21.4	2/22/2001
MW-13S	12.1	3.51	7.04	-97.0	1.81	4.0	4/19/2001

Table 2-5A
Monitoring Well Field Parameters - Overburden Wells
FUSRAP Maywood Superfund Site

Well ID	Temperature	Specific Conductivity	pH	Eh	DO	Turbidity	Date
	(^{o}C)	(mS/cm)	(S.U)	(mv)	(mg/L)	(NTU)	
MW-14S	11.6	3.46	6.97	122.0	2.83	26.3	2/27/2001
MW-15S	7.7	0.295	5.81	-	-	14.0	2/9/2001
MW-15S	7.8	0.356	5.66	47.0	0.50	0.0	2/19/2001
MW-16S	10.6	0.764	6.37	76.0	1.50	0.0	2/19/2001
MW-17S	11.6	0.525	7.15	-	2.21	2.0	2/9/2001
MW-17S	10.7	0.673	6.87	39.0	3.60	10.3	2/21/2001
MW-17S	13.3	2.45	7.39	-51.0	1.31	37.3	2/22/2001
MW-18S	13.1	0.621	6.79	335.0	38.5	3.9	2/15/2001
MW-19S	28.9	1.24	6.70	-27.0	4.72	**840.0**	7/23/2001
MW-20S	9.1	2.79	7.05	-106.0	3.03	**397.0**	3/15/2001
MW-21S	16.7	1.65	7.43	-130.0	1.59	43.1	7/11/2001
MW-22S	21.1	1.37	7.08	16.0	4.04	4.0	7/24/2001
MW-25S	12.3	0.577	5.98	224.0	1.31	36.0	1/3/2002
MW-2S	9.4	1.30	7.09	-2.0	0.90	3.1	2/21/2001
MW-3S	11.6	1.76	6.61	-68.0	1.64	1.0	3/15/2001
MW-4S	10.8	0.712	7.08	161.0	5.89	34.1	2/20/2001
MW-5S	11.3	0.960	7.29	245.0	2.87	29.2	3/12/2001
MW-6S	9.7	1.61	7.06	-78.0	0.29	9.0	2/21/2001
MW-7S	9.2	0.888	6.08	162.0	2.70	1.0	2/28/2001
MW-8S	10.3	0.987	6.67	56.0	0.77	1.0	3/1/2001
MW-9S	10.1	0.481	6.21	343.0	5.98	6.9	3/19/2001
OBMW1	8.8	1.32	6.49	118.0	1.22	-4.3	2/8/2001
OBMW3	10.7	0.776	6.68	129.0	4.70	6.4	2/15/2001
OBMW7	13.2	1.17	6.85	25.0	0.80	1.7	2/13/2001
OBMW8	11.2	0.562	6.34	109.0	1.50	30.1	2/13/2001
OBMW10	7.4	1.85 (1)	6.64	-4.0	2.00	0.0	2/20/2001
OBMW11	12.3	0.722	6.83	-42.0	0.71	17.0	2/13/2001

Table 2-5A
Monitoring Well Field Parameters - Overburden Wells
FUSRAP Maywood Superfund Site

Well ID	Temperature	Specific Conductivity	pH	Eh	DO	Turbidity	Date
	(^{o}C)	(mS/cm)	(S.U)	(mv)	(mg/L)	(NTU)	
OBMW12	9.2	0.970	6.60	-68.0	1.20	10.0	2/12/2001
OBMW13	14.9	2.88	6.77	-149.0	0.20	45.4	2/7/2001
OBMW14	12.4	2.47	6.96	-129.0	8.23	-	2/12/2001
OBMW15	15.3	0.549	6.89	84.0	7.00	0.0	2/7/2001
OBMW19	5.6	0.693	6.19	-25.0	0.89	16.0	2/6/2001
OBMW17	10.8	0.54	6.22	121.0	1.80	1.1	2/7/2001
OBMW18	11.1	0.933	6.90	-137.0	0.90	3.4	2/12/2001
PT-2S	11.4	1.78	6.16	-88.0	1.50	19.1	2/27/2001
WELL 1	12.6	0.878	6.89	-101.0	0.80	10.5	2/20/2001
WELL 2	17.2	1.81	6.88	-147.0	0.25	8.0	2/14/2001
WELL 5	13.7	1.36	6.86	-89.0	0.50	4.1	2/8/2001
WELL 8	9.6	0.294	6.09	169.0	9.78	0.0	2/14/2001
OVPW-1S	-	-	-	-	-	-	6/28/2001

Notes
Bolded values denote turbidity measurements in excess of 50 NTU
- = No data collected.
(1) No Value for this interval; used previous interval

Table 2-5B
Monitoring Well Field Parameters/Target Sample Zone For Bedrock Wells
FUSRAP Maywood Superfund Site

Well ID	Temp (deg. C)	Specific Conductivity (uS/cm)	pH (S.U.)	Eh (mv)	DO (mg/L)	Turbidity (NTU)	Screen/Open Interval (ft bgs)	Target Sample Zone	Date
B38W02D	10.6	0.392	6.47	132.0	2.35	13.0	37-42	OI	4/14/2000
B38W02D	15.2	0.570	6.70	112.0	1.93	**1584.8**	37-42	OI	11/8/2000
B38W03B	11.1	2.25	6.33	-2.3	2.51	8.9	29.8-39.5	OI	11/16/2000
B38W03B	12.3	2.21	6.31	-47.0	0.80	0.0	29.8-39.5	OI	2/12/2001
B38W04B	17.6	0.833	6.76	-63.0	23.4	13.7	22.7-27.7	OI	11/17/2000
B38W04B	11.8	0.820	7.05	-157.0	0.70	2.2	22.7-27.7	OI	2/21/2001
B38W05B	16.7	0.428	6.76	160.0	2.62	45.0	22.7-33	OI	4/6/2000
B38W05B	18.0	0.395	6.54	59.5	2.71	43.2	22.7-33	OI	11/17/2000
B38W06B	15.6	1.31	6.70	-50.6	3.72	9.8	34.6-39.6	OI	11/29/2000
B38W07B	13.6	0.102	6.17	316.0	8.06	0.0	18.5-28.8	OI	3/30/2000
B38W07B	15.2	0.464	7.36	18.9	0.35	**125.1**	18.5-28.8	OI	11/7/2000
B38W12B	13.5	1.20	7.34	264.0	6.03	10.0	34.5-44.9	OI	3/28/2000
B38W12B	15.3	0.775	7.34	77.7	2.92	13.6	34.5-44.9	OI	11/2/2000
B38W14D	14.1	0.932	7.12	28.1	1.39	4.8	46-51.5	OI	11/16/2000
B38W15D	16.6	1.68	7.47	-40.5	0.29	**76.4**	40-45	OI	11/9/2000
B38W17B	10.6	2.61	6.87	-43.0	0.98	12.0	18.7-29	OI	4/18/2000
B38W17B	17.9	2.32	7.07	-90.1	0.92	**150.1**	18.7-29	OI	11/1/2000
B38W18D	15.6	0.867	5.85	172.0	1.48	**160.0**	35-40	OI	4/6/2000
B38W18D	17.8	0.654	6.14	57.2	0.40	32.5	35-40	OI	11/13/2000
B38W19D	13.5	5.90	6.74	116.0	1.03	0.0	21.7-31.9	OI	3/29/2000
B38W19D	15.1	3.96	6.91	-42.9	1.29	**1587.4**	21.7-31.9	OI	11/7/2000
B38W24D	17.0	0.735	6.20	-52.0	0.03	27.0	22-27	OI	4/7/2000
B38W24D	20.3	0.817	6.29	-78.3	0.36	**1604.9**	22-27	OI	11/15/2000
B38W25D	14	0.930	6.86	-77.0	0.54	6.0	21.6-26.6	OI	4/13/2000
MISS 1B	12.0	0.704	7.08	76.0	0.24	**315.0**	23-53.5	OI	4/18/2000
MISS 1B	14.1	0.951	7.19	-76.1	1.56	**108.5**	23-53.5	OI	11/20/2000
MISS 1B	13.5	0.832	7.26	55.0	0.45	18.0	23-53.5	OI	12/21/2000
MISS 2B	12.3	5.80	6.93	-32.0	0.05	48.0	28.5-55.5	OI	4/10/2000
MISS 2B	12.7	4.79	7.96	-253.3	3.14	12.0	28.5-55.5	OI	11/21/2000
MISS 3B	12.6	1.32	6.09	31.0	0.03	24.0	20-50	OI	4/5/2000
MISS 3B	14.5	1.24	6.42	2.0	1.82	**70.9**	20-50	OI	11/13/2000
MISS 3B	17.4	1.17	6.26	-35.0	0.80	37.0	20-50	OI	7/12/2001
MISS 4B	13.7	1.60	6.43	8.5	0.04	23.0	17-47	OI	4/5/2000
MISS 4B	14.3	1.55	6.78	-81.3	1.40	44.6	17-47	OI	11/14/2000
MISS 5B	12.8	10.2	6.25	-248.0	0.16	10.0	25-55	OI	3/30/2000
MISS 5B	15.3	18.4	6.38	-93.4	0.16	**1587.0**	25-55	OI	11/6/2000
MISS 7B	13.2	5.01	7.22	208.0	2.15	31.0	19-49	OI	3/29/2000
MISS 7B	14.8	6.24	7.17	-23.2	1.19	**555.0**	19-49	OI	11/6/2000
MW-10D	10.5	0.741	7.97	44.0	2.61	9.0	21-46	OI	2/21/2001
MW-12D	12.6	0.758	7.53	-191.0	2.36	46.1	28-53	OI	3/13/2001
MW-13D	15.5	0.965	7.36	-135.0	1.79	5.8	25-50	OI	4/19/2001
MW-14D	14	0.862	7.60	-152.0	0.70	**110.0**	27-52	OI	2/27/2001
MW-15D	13.3	1.12	7.15	-95.0	0.60	29.1	36-61	OI	2/19/2001
MW-16D	12.4	0.728	7.89	-204.0	1.30	**67.1**	48-73	OI	2/21/2001
MW-17D	15.0	0.587	7.27	-1.0	4.90	**100.0**	21-46	OI	2/21/2001
MW-18D	11.5	0.682	7.64	149.0	20.6	44.8	35-57	OI	2/19/2001
MW-19D	15.6	0.922	6.50	-29.0	0.80	**76.1**	17-42	OI	2/28/2001
MW-19DD	10.6	0.974	11.4	-273.0	1.50	16.2	51.5-76	OI	3/1/2001
MW-1D	13.8	0.651	6.86	8 (1)	1.70	46.2	21-46	OI	2/26/2001
MW-20D	11.9	5.82	7.34	-188.0	0.14	1.0	30-55	OI	3/14/2001
MW-23D	20.7	2.17	6.86	55.0	1.21	45.0	51-71	OI	7/9/2001

Table 2-5B
Monitoring Well Field Parameters/Target Sample Zone For Bedrock Wells
FUSRAP Maywood Superfund Site

Well ID	Temp (deg. C)	Specific Conductivity (uS/cm)	pH (S.U.)	Eh (mv)	DO (mg/L)	Turbidity (NTU)	Screen/Open Interval (ft bgs)	Target Sample Zone	Date
MW-23DD	21.8	3.94	7.20	96.0	0.86	29.7	82-102	OI	7/9/2001
MW-24D	20.3	3.55	6.77	-12.0	2.90	40.0	47.7-67.7	OI	9/6/2001
MW-24DD	21.4	3.62	7.43	-206.0	0.71	46.0	80-105	OI	9/6/2001
MW-25D	13.8	2.35	8.08	-184.0	0.35	4.0	33-58	OI	1/3/2002
MW-26D	12.2	7.98	6.76	-384.0	1	3.0	33.5-58.5	OI	1/3/2002
MW-2D	14.3	1.44	7.87	-25.0	0.80	5.7	21.5-48.5	OI	2/14/2001
MW-4D	12.45	0.47	7.13	237.0	8.20	45	18-43	OI	2/20/2001
MW-5D	14.7	0.543	7.41	-40.0	3.30	49.6	32-52	OI	2/15/2001
MW-6D	12.7	0.723	7.62	-122.0	0.37	46.0	29-54	OI	2/21/2001
MW-7D	14.0	1.01	6.63	-56.0	1.20	22.7	21-46	OI	2/28/2001
MW-8D	12.9	1.07	6.93	-125.0	0.80	48.8	27-52	OI	3/1/2001
MW-9D	12.9	0.583	7.11	81.0	3.06	6.0	22-47	OI	3/13/2001
BRMW1	13.0	2.40	6.96	-21.0	5.31	6.5	37-47	OI	2/7/2001
BRMW3	13.5	0.615	7.40	191.0	1.20	0.0	20-30	OI	2/15/2001
BRMW6	11.9	1.08	6.95	77.0	4.11	1.08	17-27	OI	2/8/2001
BRMW8	14.7	1.18	7.01	53.0	0.80	0.0	32-42	OI	2/13/2001
BRMW9	16	1.06	7.02	18.0	5.90	0.0	13.5-23.5	OI	2/8/2001
BRMW10	16.5	0.873	7.07	70.0	1.30	0.0	30-40	OI	2/14/2001
BRMW11	14.9	0.561	6.92	66.0	0.63	1.0	23-33	OI	2/13/2001
BRMW12	13.4	0.723	7.25	73.0	6.50	0.0	38-48	OI	2/12/2001
BRMW13	17.2	0.883	7.50	18.0	0.65	1.0	23-33	OI	2/8/2001
BRMW14	12.2	3.23	7.21	139.0	4.11	-	27-37	OI	2/12/2001
BRMW15	15.6	0.571	6.89	110.0	7.20	17.7	20-30	OI	2/7/2001
BRMW16	16.1	0.930	6.71	125.0	1.30	1.2	20-30	OI	2/6/2001
BRMW17	14.6	0.542	6.81	119.0	6.00	20.0	25-35	OI	2/6/2001
PT-1DA	15.5	1.43	6.83	-103.0	0.19	1.15	29-39	OI	2/6/2001
PT-1DB	15.5	1.31	6.78	-106.0	0.53	7.6	52-62	OI	2/5/2001
BRPW-1D	14.8	5.37	6.81	-46.0	3.19	21.2	90-110	FZ	5/29/2001
BRPZ-4	16.1	7.72	7.10	-145.0	0.53	29.0	40-61	FZ	7/19/2001
BRPZ-5 (45-56.5)	16.7	24.5	6.25	-	2.96	**163.0**	45-56.5	FZ	6/19/2001
BRPZ-5 (67.5-79)	15.4	5.02	6.40	-	0.01	15.0	67.5-79	FZ	6/19/2001
BRPZ-5 (101-112.5)	14.7	6.69	6.26	-	-	17.0	101-112.5	FZ	6/19/2001
BRPZ-9	18.3	11.0	6.80	-112.0	0.65	29.0	32-56	FZ	7/19/2001

Notes
Bolded values denote turbidity measurements in excess of 50 NTU
- = No data collected.
OI = Open Interval
FZ = Fracture Zone

Table 2-6
Surface Water Field Parameters

FUSRAP Maywood Superfund Site

Sample Location	S&W Lab Sample ID	Temperature (C)	Specific Conductivity (uS/cm)	pH (SU)	Eh (mv)	DO (mg/L)	Turbidity (NTU)	Sample Date
CB-1	25a-020922	12.5	0.782	7.26	80	7.9	0	10/31/00
CB-2	25a-020926	8.5	0.522	7.51	79	10.55	2	10/31/00
LB-2	22a-020886	14.9	0.719	7.53	74	11.34	9	10/19/00
LB-3	22a-020888	14.7	0.805	7.94	54	7.69	6	10/23/00
LB-4	22a-020890	19.7	0.711	7.93	138	8.76	10	10/19/00
LB-5	22a-020894	21.2	0.699	7.5	152	7.5	13	10/19/00
LB-6	22a-020896	19	0.718	7.72	152	7.9	11	10/19/00
LB-7	22a-020898	17.6	0.709	7.48	162	8.54	10	10/19/00
LB-8	22a-020900	17.5	0.757	7.28	166	8.95	9	10/19/00
SR-2	24a-020872	13.9	0.813	7.26	107	10.94	2	10/25/00
SR-3	24a-020874	16.8	1.09	7.24	103	11.6	33	10/25/00
SR-4	24a-020876	12.9	0.834	7.15	108	11.31	**78**	10/25/00
SR-6	24a-020880	12.5	0.835	6.93	113	10.8	4	10/25/00
SR-7	24a-020882	12.3	0.857	6.56	103	10.57	2	10/25/00
WB-1	23a-020902	12.2	1.1	8	58	10	2	10/23/00
WB-2	23a-020904	13.6	1.12	7.98	56	9.52	2	10/23/00
WB-3	23a-020908	14.2	1.05	7.06	87	10.44	12	10/26/00
WB-4	23a-020906	12.2	0.715	8.09	56	11.56	6	10/23/00
WB-5	23a-020910	10.7	0.7	8.06	52	10.75	1	10/24/00

Notes

C - Centigrade
uS/cm - Microsiemens per centimeter
mv - Millivolts
Eh - Oxidation Reduction Potential
DO - Dissolved Oxygen
NTU - Nephlometric Turbidity Units

Table 2-7

Well Survey Data Table
Supplemental Investigation

FUSRAP Maywood Superfund Site, Maywood, NJ

Site Name	Surveyor	Northing	Easting	Ground Surface Elv. (NGVD)	Top of Inner Casing, where Applicable (NGVD)	Top of Outer Protective Casing (NGVD)	Survey Date
MW-27D	Garden State Surveyors	752837.122	2164483.608	62.68	N/A	65.16	6/25/2003
MW-28D	Garden State Surveyors	752687.422	2164516.466	61.90	N/A	64.50	6/25/2003
MW-31D	Garden State Surveyors	752208.120	2163533.829	49.08	48.62	49.08	6/25/2003
MW-32D	Garden State Surveyors	752117.873	2163781.760	49.18	48.83	49.18	6/25/2003
MW-33D	Garden State Surveyors	752771.805	2164339.602	59.44	62.00	62.24	6/25/2003
MW-34D	Garden State Surveyors	752623.464	2164426.546	58.35	N/A	60.63	6/25/2003

NGVD = National Geodetic Vertical Datum, 1929

N/A = Not Applicable

Table 2-8
Monitoring Well Field Parameters/Target Sample Zone for Bedrock Wells - Supplemental Investigation
FUSRAP Maywood Superfund Site, Maywood, NJ

No. of Groundwater Samples	Well	Sample Time	pH (S.U.)	Temp (deg. C)	Specific Conductivity (uS/cm)	Eh (mv)	DO (mg/L)	Field Qualifier	Turbidity (NTU)	Screen/Open Interval (ft bgs)	Target Sample Zone	Sample Date
1	B38W02D	9:55	6.70	15.40	534.00	113.90	0.30		2.60	37-42	OI	7/17/2002
2	B38W07B	13:35	6.59	15.57	427.00	133.40	0.32		2.20	18.5-28.8	OI	7/25/2002
3	B38W14D	14:00	6.90	18.01	1228.00	-19.40	0.31		4.90	46-51.5	OI	7/24/2002
4	B38W15D	12:55	7.43	13.95	2050.00	218.30	0.04		0.00	40-45	OI	3/18/2003
5	B38W17B	10:35	6.87	17.24	2796.00	-82.80	0.22		-0.30	18.7-29	OI	7/2/2002
6	B38W18D	9:15	5.54	19.39	724.00	332.60	0.50		10.90	35-40	OI	7/18/2002
7	B38W19D	13:35	6.30	17.02	3749.00	1.30	12.90	R	0.00	21.7-31.9	OI	7/9/2002
8	B38W24D	10:45	5.96	19.64	717.00	-15.40	0.28		2.20	22-27	OI	7/15/2002
9	B38W25D	11:20	6.33	16.91	1160.00	-15.80	15.50	R	-1.20	21.6-26.6	OI	7/10/2002
10	BRPW-1DRE	15:05	6.68	16.16	3027.00	-254.70	0.64		25.20	90-110	FZ	8/13/2002
11	BRPZ-3RE	10:55	6.14	18.05	6685.00	-578.00	0.48		43.20	37-57	OI	8/13/2002
12	BRPZ-4	11:05	6.01	15.64	14309.00	-55.40	0.04		NR	40-61	FZ	8/6/2002
13	BRPZ-5RE	17:30	5.69	18.63	21948.00	-332.60	1.58		21.00	42-62	FZ	8/7/2002
14	BRPZ-9	10:25	6.26	15.84	10839.00	-72.80	0.07		NR	32-56	FZ	8/7/2002
15	MISS-02B	14:10	6.64	16.10	4889.00	-20.10	11.67	R	8.80	28.5-55.5	OI	7/8/2002
16	MISS03B	9:45	6.25	16.46	1364.00	-3.80	0.30		11.80	20-50	OI	7/29/2002
17	MISS04B	11:05	6.58	16.73	1553.00	-70.80	0.31		37.00	17-47	OI	7/29/2002
18	MISS05B	11:45	6.18	16.57	13128.00	-88.90	1.16		31.60	25-55	OI	7/31/2002
19	MISS07B	14:00	6.91	17.70	7785.00	-40.90	0.26		29.10	19-49	OI	7/11/2002
20	MISS01B	14:55	7.28	20.68	682.00	136.00	2.24		87.70	23-53.5	OI	7/18/2002
21	MW-20D	14:45	6.81	15.89	4184.00	-72.30	0.11		NR	30-55	OI	8/5/2002
22	MW-23D	13:00	6.58	17.02	2230.00	-10.30	0.46		24.90	51-71	OI	7/26/2002
23	MW-24D	9:35	6.47	15.74	4835.00	-39.70	0.34		1.20	47.7-67.7	OI	7/25/2002
24	MW-24DD	10:25	6.94	15.77	3685.00	-103.80	0.77		17.60	80-105	OI	7/25/2002
25	MW-25D	10:35	7.49	15.48	2305.00	-212.80	0.18		35.20	33-58	OI	7/26/2002
26	MW-26D	13:25	6.90	19.60	8858.00	-626.30	1.67		3.20	33.5-58.5	OI	8/15/2002
27	MW-27D	16:15	6.84	16.38	3870.00	-64.40	0.92		7.30	33.5-58.5	OI	10/14/2002
28	MW-28D	10:55	6.75	15.70	2980.00	-71.10	0.73		7.70	32-57	OI	10/15/2002
29	MW-2D	15:00	7.33	20.37	1831.00	-74.20	0.20		31.10	21.5-48.5	OI	7/30/2002
30	MW-31D	12:15	6.75	13.97	2940.00	-71.40	0.02		38.40	20-45	FZ	3/13/2003
31	MW-32D	12:00	7.37	14.60	3460.00	-68.30	0.05		14.20	32-57	FZ	5/28/2003
32	MW-33D	14:10	6.49	14.76	8110.00	-47.20	0.80		1.00	45.5-65.5	OI	10/15/2002
33	MW-34D	16:30	6.66	16.20	4110.00	-71.30	0.59		1.70	28-53	OI	10/15/2002
34	MW-3D	15:30	6.37	14.86	8458.00	-31.70	0.52		9.90	30-55	OI	8/8/2002
35	MW-4D	15:25	6.99	18.34	587.00	-40.10	0.66		55.10	18-43	OI	8/1/2002
36	MW-5D	13:30	7.30	20.49	572.00	149.30	4.02		12.60	32-52	OI	8/2/2002
37	MW-6D	14:30	7.21	20.59	819.00	-164.70	0.56		660.90	29-54	OI	8/14/2002
38	MW-7D	10:45	6.72	16.69	1422.00	-85.80	0.08		NR	21-46	OI	8/5/2002

Legend
S.U. = Standard Units
Temp = Temperature
deg. C = Degrees Centigrade
uS/cm = Microsiemens per centimeter
Eh = Oxidation-Reduction Potential
mv = Millivolts
DO = Dissolved Oxygen
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Unit
R = Data was rejected since reported result exceeded theoretical limit of dissolved oxygen in groundwater
NR = Not Recorded
ft bgs - Feet below ground surface
OI = Open Interval
FZ = Fracture Zone

Table 3-1
Soil Characteristics Geotechnical-California Tube Results

Well ID	Sample ID	Sample Date	Sample Depth (ft)	Specific Gravity	Moisture Content (%)	Wet Density (PCF)	Dry Density (PCF)	Cation Exchange Capacity (meq/100g)
MW-5S	23d020959	11/7/2000	14.0-15.0	2.78	11.8	143.2	128.1	3.22
MW-16D (pilot)	01a020981	11/8/2000	14.5-16.0	2.67	20.8	128.4	106.3	2.10
MW-15S	02d020979	11/17/2000	*10.0-12.0*	2.73	22.7	130.4	106.3	2.37
MW-14S	02a020977	11/13/2000	21.0-22.0	2.71	9.8	116.8	106.4	3.13
MW-20S	12a020989	11/22/2000	*10.5-12.0*	2.69	17.0	133.7	114.3	3.90
MW-18S	22b020985	11/20/2000	20.0-21.0	2.63	12.4	137.3	122.1	4.80
MW-3D (pilot)	12a020955	11/3/2000	*14.0-15.5*	2.70	21.6	124.7	102.5	0.92
MW-6S	23b020961	10/27/2000	17.0-18.0	2.73	9.1	137.6	126.1	3.01
MW-2D (pilot)	23b020953	10/23/2000	11.0-13.0'	2.66	10.1	135.6	123.2	6.85
MW-8S	23b020965	11/30/2000	14.0-16.0	2.69	9.3	143.9	131.7	3.18
MW-1S	23b020951	12/8/2000	10.0-10.5	2.71	17.3	112.2	95.7	10.4
MW-11S	09a020971	11/28/2000	10.0-10.5	2.71	20.5	131.3	108.9	3.54
MW-7S	23b020963	12/4/2000	15.0-16.0	2.67	12.0	132.0	117.8	4.45
MW-12S	08a020973	11/29/2000	*8.5-10.0*	2.67	9.5	142.8	130.5	2.40
MW-13S	05a020975	12/5/2000	7.5-9.0	2.81	10.8	132.4	119.5	2.65

Notes:
Bold = Listed as MW-5S in one of the results pages.
Italics = another depth is indicated in one of the results pages.

Table 3-2
Hydrometer Analysis with Mechanical Grain Size Analysis Results

Well ID	Sample ID	Sample Date	Sample Depth (ft)	Soil Classification	Description	Field Description (1)
MW-5S	23b020959	11/7/2000	14.0-15.0	Silty SAND with Gravel (SM)	45.8% Coarse to fine sand, 30% fines, 24.2% coarse to fine gravel	SM
MW-16D (pilot)	01a020981	11/8/2000	14.5-16.0	Sandy SILT(ML)	53.6% Fines, 46.4% coarse to medium sand	SW
MW-15S	02d020979	11/17/2000	*10.0-12.0*	SILT with Sand (ML)	85.0% Fines, 15.0% fine sand	SC
MW-14S	02a020977	11/13/2000	21.0-22.0	Silty SAND with Gravel (SM)	42.5% Coarse to fine sand, 41.5% coarse fine gravel, 16% fines	SM
MW-20S	12a020989	11/22/2000	*10.5-12.0*	Silty SAND (SM)	61.1% Fine sand, 38.8% fines, 0.1% fine gravel	SC
MW-18S	22b020985	11/20/2000	20.0-21.0	Silty SAND with Gravel (SM)	49.2% Medium to fine sand, 31.0% coarse to fine gravel, 19.8% fines	SP
MW-3D (pilot)	12a020955	11/3/2000	*14.0-15.5*	Poorly Graded SAND with Silt (SP-SM)	93.3% Medium to fine sand, 6.5% fines, 0.2% fine gravel	SW
MW-6S	23b020961	10/27/2000	17.0-18.0	Silty SAND with Gravel (SM)	41.9% coarse to fine sand, 37.2% coarse to fine gravel, 20.9% fines	SM;GP
MW-2D (pilot)	23b020953	10/23/2000	11.0-12.0 (from log)	Silty GRAVEL with Sand (GM)	51.1% Coarse to fine gravel, 34.5% coarse to fine sand, 14.4% fines	SM
MW-8S	23b020965	11/30/2000	14.0-16.0	Silty SAND with Gravel (SM)	45.1% Coarse to fine sand, 32.0% fines, 22.9% coarse to fine gravel	SM
MW-1S	23b020951	12/8/2000	10.0-10.5	Silty SAND (SM)	55.1% Medium to fine sand, 39.7% fines, 5.2% fine gravel	SM
MW-11S	09a020971	11/28/2000	10.0-10.5	Silty GRAVEL with Sand (GM)	35.3% Coarse to fine gravel, 33.8% fines, 30.9% coarse to fine sand	GC
MW-7S	23b020963	12/4/2000	15.0-16.0	Silty SAND with Gravel (SM)	54.5% Coarse to fine sand, 23.0% fines, 22.5% fine gravel	SM
MW-12S	08a020973	11/29/2000	*8.5-10.0*	Silty SAND with Gravel (SM)	42.6% Coarse to fine sand, 36.6% coarse to fine gravel, 20.8% fines	SM
MW-13S	05a020975	12/5/2000	7.5-9.0	Silty GRAVEL with Sand (GM)	45.8% Coarse to fine gravel, 33.3% coarse to fine sand, 20.9% fines	GC

Notes:
Bold = listed as MW-5S in one of the results pages
Italics = another depth is indicated in one of the results pages.
(1) = Field Descriptions taken from borehole interval immediately above the California tube sample interval.

Table 3-3
Summary of Borehole Geophysical Analyses
FUSRAP Maywood Superfund Site

WELL ID	Observations based on Geophysical Analyses
MISS-1B	Obstruction in the well prevented the logging of this well.
MISS-2B	A large fracture observed at 31 ft bgs. Groundwater enters the well near 31 ft bgs. Other fractures observed at 41, 44 and 46 ft bgs.
MISS-3B	Water observed to flow through an open fracture near 24 ft bgs. Other fractures observed at 27.5 and 31 ft bgs.
MISS-4B	Water bearing fractures observed at 20, 21, 28, 29, 35, 36, and 43 ft bgs. Downward water flow measured at 25 and 32 ft bgs. Water may enter the well at 20 ft bgs and exit the well near 35 ft bgs.
MISS-5B	Water bearing fractures observed near 31.5 and 44.5 ft bgs. Possible fractures observed near 29 and 30 ft bgs. Water flow observed to enter the well at 32 and exit at 25-29 ft bgs. Water was also observed to enter the well at 43 ft bgs and flow upward.
MISS-7B	Borehole is highly fractured with fractures observed at 23, 25-26, 28, 29.5, 31, 32, 36, 38, 39, 41, 42, 43, 46 and 47 ft bgs. Water flow was indicated near 20, 30, 33.5 and 40 ft bgs. Flowmeter results indicate upward flow at 37 ft bgs with water entering the well at a slightly deeper depth and exiting at 22 ft bgs.
MW-1D	Most observed features dip towards the northwest at relatively low angles.
MW-2D	The largest zone of water inflow while pumping was observed near the casing bottom at 21.7 ft bgs, possibly at a gap immediately below the steel casing bottom.
MW-3D	A gap where two casing segments are joined together is indicated near 21.6 ft bgs. Most open fractures dip down toward the northwest or west-northwest.
MW-4D	Most open fractures dip toward the east-southeast to south-southeast. Less-open fractures dip mostly toward the west-southwest. A distinctly steep-dipping fracture occurs at 34 ft bgs (dipping approximately 70 degrees down towards the southeast).
MW-5D	Most water inflow into the well while pumping was observed near the casing bottom immediately below the steel casing near 33.5 ft bgs.
MW-6D	A prominent enlargement was observed below the casing bottom. Less-open and open fractures dip primarily towards the northwest.
MW-7D	The second largest zone of water inflow into the well while pumping was observed near the casing bottom at 21.7 ft bgs at a gap observed below the steel casing. Open fractures dip toward the west, and less-open features dip towards the northwest.
MW-8D	Most water inflow into the well while pumping was observed at a loose joint in the casing observed near 21.8 ft bgs. Open fractures dip towards the north-northeast and the northwest.
MW-9D	An enlargement was observed below the casing bottom but only minor inflow of water into the well observed while pumping. Open and less-open fractures dip towards the west.
MW-10D	A gap was observed below the casing bottom but only minor water inflow into the well observed while pumping. Most less-open fractures dip towards the west northwest to northwest. Open fractures dip towards the northwest and east-northeast.
MW-12D	A high natural gamma count indicates potential presence of radionuclide material in overburden to a depth of 4 or 5 ft bgs. A possible leak in the steel casing evidenced by fluid temperature and fluid resistivity anomalies near 26.5 ft bgs. Open fractures dip towards the north-northwest and north-northeast.
MW-13D	Most water inflow into the well occurs just above the casing bottom through potential open fractures, or coarse-grained rock as evidenced on the ATV log plot. No preferential fracture-dip direction evident.

Table 3-3
Summary of Borehole Geophysical Analyses
FUSRAP Maywood Superfund Site

WELL ID	Observations based on Geophysical Analyses
MW-14D	A high natural gamma count indicates potential presence of radionuclide materials in overburden to a depth of 5 or 6 ft bgs. Most water inflow into the well while pumping occurs slightly below the casing bottom probably through open fractures as evidenced on the ATV log plot. Open fractures dip primarily to the north.
MW-15D	Most water inflow into the well while pumping was observed near the casing bottom near 33.5 ft bgs. Open fractures dip towards the west.
MW-16D	A high natural gamma count indicates potential presence of radionuclide materials in overburden to a depth of between 4 and 6.5 ft bgs. Two potential casing-joint gaps are evident on the ATV log plots near 22 and 43 ft bgs. Most water inflow into the well while pumping occurs slightly below the casing bottom, at a large gap evidenced on the caliper and ATV log plots. Open fractures dip primarily to the north and northwest.
MW-17D	Open fractures dip toward the northwest, west, and north-northwest.
MW-18D	Ambient flowmeter tests indicate that ambient water flow into the well was observed to be upwards, exiting out through the top of the well.
MW-19D	Most water inflow into the well was observed between 30 ft bgs and the casing bottom, through a combination of a gap near the casing bottom and numerous fractures. Open and less-open fractures both dip towards the northwest.
MW-19DD	Most water into the well appears to occur at a gap just below the casing bottom near 52 ft bgs. Open fractures were observed to dip primarily towards the southeast. Less-open fractures do not have a predominant dip direction.
MW-20D	Fluid resistivity and fluid temperature log plot inflections near 12.5 and 17 ft bgs suggest possible casing leaks. Steep-dipping open fractures were observed near 36 and 44 ft bgs. Most open fractures dip towards the southeast.
BRPW-1D	Pebbly and coarse-grained materials evidenced on the ATV and OBI logs near 87.5 ft bgs. A steep-dipping fracture was observed on both the OBI and ATV log plots at 91 ft bgs. Open and less-open fractures both dip primarily towards the west-northwest and west.
BRPZ-4	High gamma counts may represent a clayey overburden soil layer between 7.5 and 12.5 ft. bgs. Ambient flowmeter tests indicate that ambient water flow into the well was observed to be upwards. The “zero” flow measurement near 48 ft bgs. May be due to leakage around the probe baffles at the irregular borehole wall. Minor upward flow was also observed greater than 55.5 ft bgs. Most pumping inflow occurred between 45 and 48 ft bgs. (probably at northwest and east-northeast-dipping fractures near 47 ft bgs). Steeply dipping fractures near the bottom of BRPZ-9 and near 50.5 ft. bgs in BRPZ-4 may represent the same fracture extending between both boreholes. Relatively few fractures identified in borehole. Observed fractures dip primarily towards the west-northwest, northwest, and southeast.
BRPZ-9	Ambient flowmeter tests indicate that ambient water enters the borehole greater than 52 ft bgs, flowing upward and exits the borehole between 43.8 and 48.5 ft bgs. Pumping flow tests showed water entering the borehole between the bottom of casing and 33.5 ft bgs, between 43.8 and 48.3 ft bgs, between 48.3 and 52 ft bgs and greater than 52 ft bgs. Steeply dipping fractures near the bottom of BRPZ-9 and near 50.5 ft. bgs in BRPZ-4 may represent the same fracture extending between both boreholes. Measured down-dip fracture azimuths appear to span a broad range, but the most common down-dip directions are approximately towards the west, west-southwest, and west-northwest.

Table 3-3
Summary of Borehole Geophysical Analyses
FUSRAP Maywood Superfund Site

WELL ID	Observations based on Geophysical Analyses
MW-25D	Ambient flowmeter data indicates water entering below 54.5 ft. bgs, flowing upward, and exiting the well between 36.5 and 34.5 ft bgs although rough borehole wall may have caused leakage at casing bottom. Minor upflow originating deeper than 54.5 ft. bgs was also observed on the pumping flow tests (probably through the west or northwest-dipping fractures at 56 ft. bgs. A small increase in upward flow was observed between 46 and 51.5 ft. bgs, probably via a west-northwest dipping small fracture. Most inflow during pumping flowmeter tests occurred between 42 and 46 ft. bgs. Only one significant north-northwest dipping fracture was detected between 42 and 46 ft. bgs, near 43.5 ft. bgs. All inferred down-dip fracture azimuths range betwenwest and north-northwest at this borehole.
MW-26D	High natural gamma counts may represent a thick clayey soil layer less than 7 ft. bgs. Ambient flow tests indicate minor upward flow at most test depths below the casing bottom. The “zero” ambient flow measurement near 46 ft. bgs may be due to leakage around the probe’s rubber baffles at the rough borehole wall. Pumping flow measurements show inflow beginning between 50.5 and 56.5 feet bgs (possibly via fractures identified near 51 ft bgs that dip gently towards the northwest). The upward flow rate increased between 35 and 40 ft bgs, probably due to additional inflow through fractures gently dipping to the north-northeast and south. Most fractures observed in this borehole dip towards the west-northwest and northwest.

Table 3-4a
Groundwater Elevations -Existing Bedrock Wells Synoptic Rounds - June 6, 1999 to December 20, 2001

	GROUNDWATER ELEVATION (FT MSL)												
Monitoring Well	**6-Jun-99**	**10-Aug-99**	**19-Jan-00**	**22-Feb-00**	**27-Mar-00**	**12-Jun-00**	**29-Sep-00**	**29-Nov-00**	**7-Feb-01**	**30-Apr-01**	**26-Jul-01**	**20-Dec-01**	**Average**
B38W02D	59.04	54.63	62.49	63.77	63.36	63.42	61.19	61.19	63.29	62.12	57.69	56.05	53.83
B38W03B	47.62	44.91	48.93	49.39	49.52	49.42	48.47	48.07	49.55	49.01	47.06	46.53	42.24
B38W04B	55.16	52.18	55.94	56.64	56.74	56.94	55.49	54.04	56.39	56.36	54.43	52.48	48.21
B38W05B	57.58	53.03	59.51	60.70	61.25	60.78	58.23	55.87	not measured	61.32	56.65	52.50	50.13
B38W06B	not measured	not measured	not measured	not measured	not measured	49.22	48.08	47.93	49.10	48.68	47.15	47.09	38.71
B38W07B	44.45	42.51	46.26	46.04	46.95	46.38	45.48	45.16	47.33	46.49	44.07	44.26	39.84
B38W12B	42.90	39.55	44.34	44.83	44.82	44.80	43.89	43.25	44.89	44.74	42.57	not measured	37.28
B38W14D	38.58	not measured	not measured	not measured	not measured	39.79	40.11	not measured	39.39	41.20	39.76	39.59	30.57
B38W15D	not measured	not measured	not measured	not measured	not measured	42.37	42.24	42.24	43.15	42.68	41.34	40.88	32.73
B38W17B	43.28	41.29	44.53	44.93	45.20	44.96	44.18	44.18	45.41	44.97	43.06	42.58	38.60
B38W18D	53.55	51.65	53.90	54.91	54.44	54.45	52.87	52.87	54.71	54.23	52.91	51.35	45.97
B38W19D	43.42	41.50	44.40	44.82	45.08	44.74	44.18	44.18	45.08	44.89	43.24	42.70	39.61
B38W24D	45.01	43.41	46.36	46.81	46.98	46.46	45.87	45.87	47.29	46.69	44.56	44.56	40.10
B38W25D	49.31	46.11	49.76	50.98	51.28	51.26	51.06	51.06	51.42	51.06	49.06	48.61	43.32
MISS 1B	45.18	43.19	45.95	47.78	45.85	46.21	45.59	45.29	46.73	46.40	45.18	43.98	41.05
MISS 2B	49.79	47.59	50.74	51.30	51.14	50.87	50.30	52.16	51.31	50.77	49.12	49.15	44.32
MISS 3B	47.06	44.85	48.36	49.06	48.84	48.76	47.96	47.60	49.04	51.45	46.61	46.09	41.82
MISS 4B	45.25	43.43	not measured	46.98	47.03	46.74	45.99	45.73	47.12	46.48	44.69	44.73	39.94
MISS 5B	43.44	41.81	44.56	44.98	45.10	44.86	44.21	43.67	45.30	45.02	43.16	42.65	39.60
MISS 7B	44.27	42.62	45.22	45.44	45.59	45.55	44.87	44.55	45.87	45.47	44.05	43.62	39.50
BRMW1	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	42.52	42.53	42.53
BRTW2	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	47.94	not measured	-
BRMW2	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured
BRMW3	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	41.72	not measured	-
BRMW4	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured
BRMW5	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured
BRMW6	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	44.12	not measured	-
BRMW7	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured
BRMW8	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	39.47	not measured	-
BRMW9	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	37.50	not measured	-
BRMW10	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	50.56	49.24	-
BRMW11	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	44.19	not measured	-
BRMW12	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	41.42	not measured	-
BRMW13	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	42.43	not measured	-
BRMW14	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	40.89	not measured	-
BRMW15	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	57.01	53.47	-
BRMW16	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	56.04	52.23	-
BRMW17	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	54.30	50.91	-
PT-1DA	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	45.29	45.12	-
PT-1DB	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	45.10	44.86	-

Table 3-4b
Groundwater Elevations
Phase II GWRI Bedrock Wells
Synoptic Rounds - July 26, 2001 and December 20, 2001

Monitoring Well	Groundwater Elevation (ft MSL) July 26, 2001	Groundwater Elevation (ft MSL) December 20, 2001
MW-1D	41.38	40.69
MW-2D	40.01	39.62
MW-3D	46.57	46.54
MW-4D	38.31	not measured
MW-5D	36.45	35.95
MW-6D	35.79	35.46
MW-7D	not measured	43.20
MW-8D	46.02	45.60
MW-9D	54.95	not measured
MW-10D	52.90	not measured
MW-12D	41.12	not measured
MW-13D	39.92	not measured
MW-14D	not measured	not measured
MW-15D	32.41	not measured
MW-16D	25.68	not measured
MW-17D	22.45	not measured
MW-18D	31.88	not measured
MW-19D	45.60	not measured
MW-19DD	45.66	44.54
MW-20D	49.08	48.50
MW-23D	44.97	44.71
MW-23DD	44.96	44.85
MW-24D	43.73	44.26
MW-24DD	not measured	44.44
MW-25D	not measured	44.82
MW-26D	not measured	47.56
BRPW-1D	45.00	44.38
BRPZ-1	44.45	44.45
BRPZ-2	45.08	44.96
BRPZ-3	45.10	44.94
BRPZ-4	44.40	44.39
BRPZ-5	44.97	44.39
BRPZ-6	44.28	not measured
BRPZ-7	44.49	not measured
BRPZ-8	44.50	not measured
BRPZ-9	44.22	44.20

Table 3-5
Hydraulic Conductivity - Packer Test Results

Well I.D.	Test Interval		Test Interval	Comments
	Top (ft)	Base (ft)	Bulk K (cm/sec)	
MW-1D	23	34.5	3.23E-03	Fracture Influenced
MW-1D	34	40.3	2.91E-05	Unfractured Zone
MW-2D (pilot)	26.5	31	1.13E-03	Fracture Influenced
MW-2D (pilot)	33	37.5	1.49E-03	Fracture Influenced
MW-3D (pilot)	29	34	4.18E-04	Fracture Influenced
MW-3D (pilot)	37	41.5	8.50E-05	Fracture Influenced
MW-4D (pilot)	13.25	17.75	1.32E-03	Fracture Influenced
MW-4D (pilot)	31.5	36	7.58E-04	Fracture Influenced
MW-5D	35	41.3	6.32E-04	Fracture Influenced
MW-5D	42.7	49	1.62E-04	Fracture Influenced
MW-6D (pilot)	30.5	35	3.24E-04	Fracture Influenced
MW-6D (pilot)	39.5	44	1.49E-04	Fracture Influenced
MW-7D	23.5	28.5	1.34E-05	Fracture Influenced
MW-7D	37.6	42.6	1.29E-05	Fracture Influenced
MW-8D	41	47.3	5.85E-05	Fracture Influenced
MW-8D	31	37.3	1.18E-04	Fracture Influenced
MW-9D (pilot)	19.5	24	1.54E-03	Fracture Influenced
MW-9D (pilot)	28	32.5	5.00E-04	Fracture Influenced
MW-10D (pilot)	18.5	23	2.34E-04	Fracture Influenced
MW-10D (pilot)	29	33.5	1.00E-03	Fracture Influenced

Well I.D.	Test Interval		Test Interval	Comments
	Top (ft)	Base (ft)	Bulk K (cm/sec)	
MW-12D	39	45.3	3.47E-04	Fracture Influenced
MW-12D	45.7	52	1.97E-02	Fracture Influenced
MW-13D	28	34.6	8.40E-04	Fracture Influenced
MW-13D	33	39.3	6.02E-05	Fracture Influenced
MW-14D	29.5	41	6.47E-03	Fracture Influenced
MW-14D	30.5	42	2.28E-04	Fracture Influenced
MW-14D	42.9	49.2	Refusal	Unfractured Zone
MW-15D	40	46.3	1.77E-03	Fracture Influenced
MW-15D	51.7	58	1.63E-04	Fracture Influenced
MW-16D (pilot)	43	47.5	3.94E-04	Fracture Influenced
MW-16D (pilot)	48	50	1.87E-04	Fracture Influenced
MW-17D	28	39.5	1.86E-03	Fracture Influenced
MW-18D	35	46.5	9.20E-05	Fracture Influenced
MW-18D	47	53.3	9.46E-05	Fracture Influenced
MW-19D	20	26.3	2.00E-03	Fracture Influenced
MW-19D	31.7	38	1.99E-04	Fracture Influenced
MW-19DD	54.7	61	1.97E-05	Unfractured Zone
MW-19DD	62	68.3	5.79E-05	Unfractured Zone
MW-20D	33	39.3	2.49E-03	Fracture Influenced
MW-20D	43	49.3	1.62E-03	Fracture Influenced

Note: Test intervals in feet below ground surface.
Packer spacings (test interval lengths) were 5 feet or 10 feet.

Table 3-6
Specific Capacity Test Results
GWRI Phase II Bedrock Wells

Bedrock Monitoring Well	Water Producing Fracture Depth (ft bgs)	Pump Discharge Rate (gpm)	Duration of Specific Capacity Test (minutes)	Estimated Driller's Yield (gpm)	Specific Capacity [2] (gpm/ft)	Estimated Aquifer Transmissivity [4] (gpd/ft)	Saturated Thickness (ft)	Estimated Aquifer Hydraulic Conductivity (cm/sec)
BRPW-1D	96	30	176	30	2.08 [5]	4160	90.0	2.18×10^{-3}
BRPZ-1	not apparent	20	105	2.3	0.3 [3]	600	93.0	3.04×10^{-4}
BRPZ-2 [1]	80	1.25	192	6	0.4	800	92.0	4.10×10^{-4}
BRPZ-3	88	12	30	32	1.25	2500	87.5	1.35×10^{-3}
BRPZ-4	50	12	115	not measured	0.65	1300	37.5	1.63×10^{-3}
BRPZ-5	106	12	115	not measured	0.16 [3]	320	88.5	1.71×10^{-4}
BRPZ-6	115	not measured	not measured	13	not measured	not measured	75.7	not measured
BRPZ-7	90	30	180	61	4.3	8600	89.0	4.56×10^{-3}
BRPZ-8	82	43	150	40	2.42	4840	91.0	2.51×10^{-3}
BRPZ-9	51	2.5	120	1	0.07	140	34.0	1.94×10^{-4}

Notes:

(1) Test conducted using Whale pump.

(2) Determined via the short-term yield per unit drawdown method.

(3) Stable drawdown not chieved.

(4) Determined via the modified Theis equation (Heath, R.C., 1983).

(5) Average of 3 tests.

Table 3-7a
Groundwater Elevations - Existing Overburden Wells
Synoptic Rounds - June 06, 1999 to December 20, 2001

	GROUNDWATER ELEVATION (FT MSL)												
Monitoring Well	22-Jun-99	10-Aug-99	19-Jan-00	22-Feb-00	27-Mar-00	12-Jun-00	29-Sep-00	29-Nov-00	7-Feb-01	30-Apr-01	26-Jul-01	20-Dec-01	Average
B38W01S	49.66	47.46	50.71	51.26	51.06	50.91	50.37	50.34	51.02	50.71	48.97	48.90	50.11
B38W12A	42.65	39.50	44.18	44.65	44.63	44.52	43.71	43.32	44.81	44.45	42.28	not measured	43.52
B38W14S	not measured	38.68	not measured	not measured	not measured	39.44	39.00	not measured	39.51	39.35	38.51	38.41	38.99
B38W15S	not measured	not measured	not measured	not measured	not measured	41.45	40.95	40.95	41.90	41.36	40.15	39.95	40.96
B38W17A	43.26	41.25	44.59	45.06	45.28	44.98	44.17	44.17	45.31	45.06	42.99	42.57	44.06
B38W19S	43.53	42.17	44.61	43.97	45.17	44.89	44.31	44.31	45.24	45.08	43.33	42.79	44.12
B38W24S	44.69	43.54	45.89	46.27	47.39	46.02	45.53	45.53	47.05	46.61	44.67	44.54	45.64
B38W25S	49.37	46.40	50.50	51.00	51.54	51.58	51.49	51.49	51.56	51.40	49.15	48.63	50.34
MISS 1AA	45.45	43.49	not measured	47.23	48.19	48.34	47.78	45.92	47.60	47.89	44.76	44.09	46.43
MISS 2A	51.07	48.09	53.17	54.95	54.14	52.82	51.77	51.77	53.98	53.40	50.47	49.78	52.12
MISS 3A	48.84	not measured	51.12	51.37	51.67	51.12	50.20	49.46	52.20	51.29	48.46	47.04	50.25
MISS 4A	46.77	not measured	49.35	50.12	45.70	48.72	47.62	46.76	50.52	49.06	46.27	-	48.09
MISS 5A	44.60	42.78	48.33	47.00	47.22	46.41	45.65	44.79	47.41	47.43	44.26	43.41	45.77
MISS 6A	46.56	44.46	47.93	49.63	49.99	48.49	50.21	50.02	48.76	47.90	45.24	45.49	47.89
MISS 7A	46.35	46.05	47.10	48.34	47.45	47.20	46.89	47.40	48.48	46.87	46.37	46.82	47.11
OBMW-1	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	42.37	42.45	-
OBMW-2	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	48.70	not measured	-
OBMW-3	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	41.31	not measured	-
OBMW-4	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	-
OBMW-5	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	-
OBMW-6	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	44.12	not measured	-
OBMW-7	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	41.99	not measured	-
OBMW-8	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	39.49	not measured	-
OBMW-10	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	47.13	not measured	-
OBMW-11	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	44.75	not measured	-
OBMW-12	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	39.80	not measured	-
OBMW-13	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	42.43	not measured	-
OBMW-14	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	42.17	not measured	-
OBMW-15	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	56.93	53.45	-
OBMW-17	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	54.26	51.17	-
OBMW-18	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	55.11	53.07	-
OBMW-19	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	47.01	48.26	-
Well 1	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	49.24	not measured	-
Well 2	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	48.23	not measured	-
Well 5	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	55.83	52.01	-
Well 8	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	61.25	59.25	-
PT-2S	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	49.31	49.11	-
MW-1	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	56.13	53.54	-

Table 3-7b
Grounwater Elevations - Phase II GWRI Overburden Wells
Synoptic Rounds - July 26, 2001 and December 20, 2001

Monitoring Well	Groundwater Elevation (ft MSL) July 26, 2001	Groundwater Elevation (ft MSL) December 20, 2001
MW-1S	-	-
MW-2S	40.08	39.7
MW-3S	46.44	46.48
MW-4S	38.24	not measured
MW-5S	33.53	33.38
MW-6S	35.57	35.53
MW-7S	-	43.23
MW-8S	46.2	45.75
MW-9S	dry	not measured
MW-10S	53.28	not measured
MW-11S	44.04	not measured
MW-12S	42.12	not measured
MW-13S	40.46	not measured
MW-14S	34.03	not measured
MW-15S	32.37	not measured
MW-16S	25	not measured
MW-17S	22.32	not measured
MW-18S	28.83	not measured
MW-19S	44.79	not measured
MW-20S	49.85	49.84
MW-21S	32.96	not measured
MW-22S	41.49	not measured
MW-25S	not measured	46.43
OBPW-1S	45.65	45.21
OVPZ-9	46.12	not measured
OVPZ-10	45.62	not measured
OVPZ-11	45.29	not measured
OVPZ-12	45.62	not measured
OVPZ-13	45.35	not measured
OVPZ-14	-	not measured
OVPZ-15	45.76	not measured
OVPZ-16	45.68	not measured
OVPZ-17	45.05	44.26

Table 3-8
Summary of Hydraulic Conductivities - Slug Test Results Overburden Wells

Well ID	Type of Test	Hydraulic Conductivity (cm/sec)
OBMW1	Falling Head	6.64×10^{-3}
OBMW1	Rising Head	8.19×10^{-3}
OBMW2	Falling Head	1.16×10^{-3}
OBMW2	Rising Head	1.23×10^{-3}
OBMW3	Falling Head	9.80×10^{-4}
OBMW3	Rising Head	8.17×10^{-4}
OBMW4	Falling Head	6.99×10^{-4}
OBMW4	Rising Head	7.41×10^{-4}
OBMW5	Falling Head	6.87×10^{-4}
OBMW5	Rising Head	1.18×10^{-3}
OBMW6	Falling Head	2.59×10^{-3}
OBMW6	Rising Head	1.24×10^{-3}
OBMW7	Falling Head	2.46×10^{-4}
OBMW7	Rising Head	2.41×10^{-4}
OBMW8	Falling Head	9.79×10^{-4}
OBMW8	Rising Head	1.02×10^{-3}
OBMW11	Falling Head	2.85×10^{-4}
OBMW11	Rising Head	2.74×10^{-4}
OBMW12	Falling Head	1.87×10^{-3}
OBMW12	Rising Head	1.14×10^{-2}
OBMW13	Falling Head	3.85×10^{-3}
OBMW13	Rising Head	3.70×10^{-3}
OBMW14	Falling Head	4.00×10^{-4}
OBMW14	Rising Head	4.99×10^{-4}
OBMW15	Falling Head	3.92×10^{-4}
OBMW17	Falling Head	1.04×10^{-2}
OBMW17	Rising Head	1.05×10^{-2}
MW1S	Falling Head	N/A
MW2S	Falling Head	9.98×10^{-4}
MW2S	Rising Head	2.05×10^{-3}
MW3S	Falling Head	8.55 x 10-^{4}
MW3S	Rising Head	6.84×10^{-4}
MW4S	Falling Head	2.22×10^{-4}
MW4S	Rising Head	3.06×10^{-4}
MW5S	Rising Head	1.53×10^{-4}
MW6S	Falling Head	(1)
MW6S	Rising Head	2.26×10^{-4}
MW7S	Falling Head	(1)
MW7S	Rising Head	9.27×10^{-4}
MW8S	Falling Head	(1)
MW8S	Rising Head	7.45×10^{-4}
MW9S	Falling Head	(1)
MW10S	Falling Head	2.25 x 10-4
MW10S	Rising Head	2.49×10^{-4}
MW11S	Falling Head	3.39×10^{-4}
MW11S	Rising Head	(2)
MW12S	Falling Head	3.37×10^{-4}
MW12S	Rising Head	1.07 x 10-^{3}
MW13S	Rising Head	2.25 x 10-4
MW14S	Falling Head	7.80×10^{-4}
MW14S	Rising Head	7.25×10^{-4}
MW15S	Falling Head	1.23×10^{-3}
MW15S	Rising Head	4.71×10^{-4}
MW16S	Falling Head	2.06×10^{-3}
MW16S	Rising Head	2.96×10^{-3}
MW17S	Falling Head	(1)
MW17S	Rising Head	1.88×10^{-3}
MW18S	Falling Head	(3)
MW18S	Rising Head	(3)
MW20S	Falling Head	(1)
MW20S	Rising Head	6.19×10^{-4}
MW21S	Rising Head	1.18×10^{-3}
MW22S	Rising Head	1.09×10^{-3}

Notes:
(1) - Static water level was below top of screen.
(2) -Data could not be analyzed.
(3) - Slug test could not be performed due to vary high water levels in well

Table 3-9
Comparison Of Aquifer Parameters,
From PW-1S Step Rate, Constant Rate and Recovery Tests Program
and Stepan Overburden Pump Test
FUSRAP Maywood Superfund Site

Transmissivity (T)			**Hydraulic Conductivity (K)**				
(ft^2/day)			**(cm/s)**				
PW-1S		**Stepan (OBTW-1)**	**PW-1S**		**Stepan (OBTW-1)**	**Overburden**	
North-South Array	East-West Array		North-South Array	East-West Array		**Phase II In-Situ**	
Range	*Range*	*Range*	*Range*	*Range*	*Range*	**Permeability**	
153 to 463	153 to 481	42 to 67	$4.0x10^{-3}$ to $1.6x10^{-2}$	$4.0x10^{-3}$ to $1.1x10^{-2}$	$2.5x10^{-3}$ to $3.6x10^{-3}$	**Tests**	
Geometric Mean	*Geometric Mean*		*Geometric Mean*	*Geometric Mean*		*Geometric Mean*	
242	224		$6.48x10^{-3}$	$6.48x10^{-3}$		$8.7x10^{-4}$	
					Note: Stepan 'K'		
					is based on a 6.5 ft		
					saturated thickness		

Hydraulic Conductivity (K)			**Storativity (S)**			**Specific Yield (Sy) (Neuman Late-Time Data Only)**		
(ft/day)								
PW-1S		**Stepan (OBTW-1)**	**PW-1S**		**Stepan (OBTW-1)**	**PW-1S**		**Stepan (OBTW-1)**
North-South Array	East-West Array		North-South Array	East-West Array		North-South Array	East-West Array	
Range	*Range*	*Range*	*Range*	*Range*		*Range*	*Range*	
12 to 45	12 to 30	6.5 to 10.3	$8.47x10^{-5}$ to $2.51x10^{-3}$	$7.6x10^{-4}$ to $6.85x10^{-3}$		0.0111 to 0.051	0.03394 to 0.0468	
Geometric Mean	*Geometric Mean*		*Geometric Mean*	*Geometric Mean*		*Geometric Mean*	*Geometric Mean*	
19	18		$4.3x10^{-4}$	$2.0x10^{-3}$	0.0005	0.0298	0.0398	0.05
		Note: Stepan 'K'						
		is based on a 6.5 ft						
		saturated thickness						

Table 3-10a
Vertical Hydraulic Gradients Observed within Existing Well Clusters

Well Cluster	6-Jun-99	10-Aug-99	19-Jan-00	22-Feb-00	27-Mar-00	12-Jun-00	29-Sep-00	29-Nov-00	7-Feb-01	30-Apr-01	26-Jul-01	20-Dec-01	AVERAGE
MISS01AA - Groundwater Elevation (ft MSL)	45.45	43.49	not measured	47.23	48.19	48.34	47.78	45.92	47.60	47.89	44.76	44.09	46.43
MISS01B - Groundwater Elevation (ft MSL)	45.18	43.19	45.95	47.78	45.85	46.21	45.59	45.29	46.73	46.40	45.18	43.98	45.61
Hydraulic Head Difference (ft)	0.27	0.30	--	-0.55	2.34	2.13	2.19	0.63	0.87	1.49	-0.42	0.11	0.85
Vertical Hydraulic Gradient (ft/ft)	0.012	0.014	--	-0.024	0.102	0.093	0.096	0.029	0.038	0.065	-0.020	0.005	0.037
Direction of Vertical Flow	Downward	Downward	--	Upward	Downward	Downward	Downward	Downward	Downward	Downward	Upward	Downward	Downward
MISS02A - Groundwater Elevation (ft MSL)	51.07	48.09	53.17	54.95	54.14	52.82	51.77	51.77	53.98	53.40	50.47	49.78	52.12
MISS02B - Groundwater Elevation (ft MSL)	49.79	47.59	50.74	51.30	51.14	50.87	50.30	52.16	51.31	50.77	49.12	49.15	50.35
Hydraulic Head Difference (ft)	1.28	0.50	2.43	3.65	3.00	1.95	1.47	-0.39	2.67	2.63	1.35	0.63	1.76
Vertical Hydraulic Gradient (ft/ft)	0.043	0.018	0.079	0.118	0.097	0.064	0.049	-0.013	0.086	0.085	0.046	0.022	0.058
Direction of Vertical Flow	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Upward	Downward	Downward	Downward	Downward	Downward
MISS03A - Groundwater Elevation (ft MSL)	48.84	not measured	51.12	51.37	51.67	51.12	50.20	49.46	52.20	51.29	48.46	47.04	50.25
MISS03B - Groundwater Elevation (ft MSL)	47.06	44.85	48.36	49.06	48.84	48.76	47.96	47.60	49.04	51.45	46.61	46.09	47.97
Hydraulic Head Difference (ft)	1.78	--	2.76	2.31	2.83	2.36	2.24	1.86	3.16	-0.16	1.85	0.95	1.99
Vertical Hydraulic Gradient (ft/ft)	0.072	--	0.110	0.092	0.113	0.094	0.089	0.075	0.126	-0.006	0.076	0.040	0.080
Direction of Vertical Flow	Downward	--	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Upward	Downward	Downward	Downward
MISS04A - Groundwater Elevation (ft MSL)	46.77	not measured	49.35	50.12	45.70	48.72	47.62	46.76	50.52	49.06	46.27	--	48.09
MISS04B - Groundwater Elevation (ft MSL)	45.25	43.43	not measured	46.98	47.03	46.74	45.99	45.73	47.12	46.48	44.69	44.73	45.83
Hydraulic Head Difference (ft)	1.52	--	--	3.14	-1.33	1.98	1.63	1.03	3.40	2.58	1.58	--	1.73
Vertical Hydraulic Gradient (ft/ft)	0.067	--	--	0.128	-0.060	0.083	0.070	0.045	0.138	0.108	0.070	--	0.072
Direction of Vertical Flow	Downward	--	--	Downward	Upward	Downward	Downward	Downward	Downward	Downward	Downward	--	Downward
MISS05A - Groundwater Elevation (ft MSL)	44.60	42.78	48.33	47.00	47.22	46.41	45.65	44.79	47.41	47.43	44.26	43.41	45.77
MISS05B - Groundwater Elevation (ft MSL)	43.44	41.81	44.56	44.98	45.10	44.86	44.21	43.67	45.30	45.02	43.16	42.65	44.06
Hydraulic Head Difference (ft)	1.16	0.97	3.77	2.02	2.12	1.55	1.44	1.12	2.11	2.41	1.10	0.76	1.71
Vertical Hydraulic Gradient (ft/ft)	0.046	0.039	0.140	0.08	0.079	0.058	0.055	0.043	0.078	0.090	0.043	0.030	0.065
Direction of Vertical Flow	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward
MISS07A - Groundwater Elevation (ft MSL)	46.35	46.05	47.10	48.34	47.45	47.20	46.89	47.40	48.48	46.87	46.37	46.82	47.11
MISS07B - Groundwater Elevation (ft MSL)	44.27	42.62	45.22	45.44	45.59	45.55	44.87	44.55	45.87	45.47	44.05	43.62	44.76
Hydraulic Head Difference (ft)	2.08	3.43	1.88	2.90	1.86	1.65	2.02	2.85	2.61	1.40	2.32	3.20	2.35
Vertical Hydraulic Gradient (ft/ft)	0.083	0.137	0.074	0.110	0.072	0.065	0.079	0.111	0.100	0.055	0.092	0.126	0.092
Direction of Vertical Flow	Downward	Downward	Downward	Downward	Upward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward
OBMW18 - Groundwater Elevation (ft MSL)	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	not measured	55.11	53.07	54.09
B38W04B - Groundwater Elevation (ft MSL)	55.16	52.18	55.94	56.64	56.74	56.94	55.49	54.04	56.39	56.36	54.43	52.48	55.23
Hydraulic Head Difference (ft)	--	--	--	--	--	--	--	--	--	--	0.68	0.59	-1.14
Vertical Hydraulic Gradient (ft/ft)	--	--	--	--	--	--	--	--	--	--	0.013	0.011	0.012
Direction of Vertical Flow	--	--	--	--	--	--	--	--	--	--	Downward	Downward	Downward
B38W12A - Groundwater Elevation (ft MSL)	42.65	39.50	44.18	44.65	44.63	44.52	43.71	43.32	44.81	44.45	42.28	not measured	43.52
B38W12B - Groundwater Elevation (ft MSL)	42.90	39.55	44.34	44.83	44.82	44.80	43.89	43.25	44.89	44.74	42.57	not measured	43.69
Hydraulic Head Difference (ft)	-0.25	-0.05	-0.16	-0.18	-0.19	-0.28	-0.18	0.07	-0.08	-0.29	-0.29	--	-0.17
Vertical Hydraulic Gradient (ft/ft)	-0.008	-0.002	-0.005	-0.006	-0.006	-0.009	-0.006	0.002	-0.003	-0.010	-0.010	--	-0.006
Direction of Vertical Flow	Upward	Upward	Upward	Upward	Upward	Upward	Upward	Downward	Upward	Upward	Upward	--	Upward
B38W14S - Groundwater Elevation (ft MSL)	not measured	38.68	not measured	not measured	not measured	39.44	39.00	not measured	39.51	39.35	38.51	38.41	38.99
B38W14D - Groundwater Elevation (ft MSL)	38.58	not measured	not measured	not measured	not measured	39.79	40.11	not measured	39.39	41.20	39.76	39.59	39.77
Hydraulic Head Difference (ft)	--	--	--	--	--	-0.35	-1.11	--	0.12	-1.85	-1.25	-1.18	-0.94
Vertical Hydraulic Gradient (ft/ft)	--	--	--	--	--	-0.009	-0.029	--	0.003	-0.048	-0.033	-0.031	-0.024
Direction of Vertical Flow	--	--	--	--	--	Upward	Upward	--	Downward	Upward	Upward	Upward	Upward
B38W15S - Groundwater Elevation (ft MSL)	not measured	not measured	not measured	not measured	not measured	41.45	40.95	40.95	41.90	41.36	40.15	39.95	40.96
B38W15D - Groundwater Elevation (ft MSL)	not measured	not measured	not measured	not measured	not measured	42.37	42.24	42.24	43.15	42.68	41.34	40.88	42.13
Hydraulic Head Difference (ft)	--	--	--	--	--	-0.92	-1.29	-1.29	-1.25	-1.32	-1.19	-0.93	-1.17
Vertical Hydraulic Gradient (ft/ft)	--	--	--	--	--	-0.030	-0.042	-0.042	-0.041	-0.043	-0.039	-0.031	-0.038
Direction of Vertical Flow	--	--	--	--	--	Upward	Upward	Upward	Upward	Upward	Upward	Upward	Upward
B38W17A - Groundwater Elevation (ft MSL)	43.26	41.25	44.59	45.06	45.28	44.98	44.17	44.17	45.31	45.06	42.99	42.57	44.06

Table 3-10a
Vertical Hydraulic Gradients Observed within Existing Well Clusters

Well Cluster	6-Jun-99	10-Aug-99	19-Jan-00	22-Feb-00	27-Mar-00	12-Jun-00	29-Sep-00	29-Nov-00	7-Feb-01	30-Apr-01	26-Jul-01	20-Dec-01	AVERAGE
B38W17B - Groundwater Elevation (ft MSL)	43.28	41.29	44.53	44.93	45.20	44.96	44.18	44.18	45.41	44.97	43.06	42.58	44.05
Hydraulic Head Difference (ft)	-0.02	-0.04	0.06	0.13	0.08	0.02	-0.01	-0.01	-0.10	0.09	-0.07	-0.01	0.01
Vertical Hydraulic Gradient (ft/ft)	-0.001	-0.003	0.004	0.009	0.006	0.001	-0.001	-0.001	-0.007	0.007	-0.005	-0.001	0.001
Direction of Vertical Flow	Upward	Upward	Downward	Downward	Downward	Downward	Upward	Upward	Upward	Downward	Upward	Upward	Downward
B38W19S - Groundwater Elevation (ft MSL)	43.53	42.17	44.61	43.97	45.17	44.89	44.31	44.31	45.24	45.08	43.33	42.79	44.12
B38W19D - Groundwater Elevation (ft MSL)	43.42	41.50	44.40	44.82	45.08	44.74	44.18	44.18	45.08	44.89	43.24	42.70	44.02
Hydraulic Head Difference (ft)	0.11	--	0.21	-0.85	0.09	0.15	0.13	0.13	0.16	0.19	0.09	0.09	0.05
Vertical Hydraulic Gradient (ft/ft)	0.009	0.057	0.016	-0.068	0.007	0.012	0.010	0.010	0.012	0.015	0.007	0.008	0.008
Direction of Vertical Flow	Downward	Downward	Downward	Upward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward
B38W24S - Groundwater Elevation (ft MSL)	44.69	43.54	45.89	46.27	47.39	46.02	45.53	45.53	47.05	46.61	44.67	44.54	45.64
B38W24D - Groundwater Elevation (ft MSL)	45.01	43.41	46.36	46.81	46.98	46.46	45.87	45.87	47.29	46.69	44.56	44.56	45.82
Hydraulic Head Difference (ft)	-0.32	0.13	-0.47	-0.54	0.41	-0.44	-0.34	-0.34	-0.24	-0.08	0.11	-0.02	-0.18
Vertical Hydraulic Gradient (ft/ft)	-0.027	0.012	-0.040	-0.05	0.035	-0.037	-0.029	-0.029	-0.020	-0.007	0.009	-0.002	-0.015
Direction of Vertical Flow	Upward	Downward	Upward	Downward	Downward	Upward	Upward	Upward	Upward	Upward	Downward	Upward	Upward
B38W25S - Groundwater Elevation (ft MSL)	49.37	46.40	50.50	51.00	51.54	51.58	51.49	51.49	51.56	51.40	49.15	48.63	50.34
B38W25D - Groundwater Elevation (ft MSL)	49.31	46.11	49.76	50.98	51.28	51.26	51.06	51.06	51.42	51.06	49.06	48.61	50.08
Hydraulic Head Difference (ft)	0.06	0.29	0.74	0.02	0.26	0.32	0.43	0.43	0.14	0.34	0.09	0.02	0.26
Vertical Hydraulic Gradient (ft/ft)	0.004	0.019	0.050	0.001	0.017	0.021	0.029	0.029	0.009	0.023	0.006	0.001	0.018
Direction of Vertical Flow	Downward	Downward	Downward	Upward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward	Downward

Table 3-10b
Vertical Hydraulic Gradients within Existing Stepan Chemical Company Monitoring Well Clusters

Well Cluster	Synoptic Groundwater Elevation Measurement Event July 26, 2001	Synoptic Groundwater Elevation Measurement Event December 20, 2001
OBMW1 - Groundwater Elevation (ft MSL)	42.37	42.45
BRMW1 - Groundwater Elevation (ft MSL)	42.52	42.53
Hydraulic Head Difference (ft)	-0.15	-0.08
Vertical Gradient	-0.004	-0.002
Direction of Vertical Flow	Upward	Upward
OBMW3 - Groundwater Elevation (ft MSL)	41.31	not measured
BRMW3 - Groundwater Elevation (ft MSL)	41.72	not measured
Hydraulic Head Difference (ft)	-0.41	--
Vertical Gradient	-0.025	--
Direction of Vertical Flow	Upward	--
OBMW6 - Groundwater Elevation (ft MSL)	44.12	not measured
BRMW6 - Groundwater Elevation (ft MSL)	44.12	not measured
Hydraulic Head Difference (ft)	0.00	--
Vertical Gradient	0.000	--
Direction of Vertical Flow	Downward	--
OBMW7 - Groundwater Elevation (ft MSL)	41.99	not measured
BRMW7 - Groundwater Elevation (ft MSL)	not measured	not measured
Hydraulic Head Difference (ft)	--	--
Vertical Gradient	--	--
Direction of Vertical Flow	--	--
OBMW8 - Groundwater Elevation (ft MSL)	39.49	
BRMW8 - Groundwater Elevation (ft MSL)	39.47	not measured
Hydraulic Head Difference (ft)	0.02	--
Vertical Gradient	0.001	--
Direction of Vertical Flow	Downward	--
OBMW10 - Groundwater Elevation (ft MSL)	47.13	not measured
BRMW10 - Groundwater Elevation (ft MSL)	50.56	49.24
Hydraulic Head Difference (ft)	-3.43	--
Vertical Gradient	-0.189	--
Direction of Vertical Flow	Upward	--
OBMW11 - Groundwater Elevation (ft MSL)	44.75	not measured
BRMW11 - Groundwater Elevation (ft MSL)	44.19	not measured
Hydraulic Head Difference (ft)	0.56	--
Vertical Gradient	0.027	--
Direction of Vertical Flow	Downward	--
OBMW12 - Groundwater Elevation (ft MSL)	39.80	not measured
BRMW12 - Groundwater Elevation (ft MSL)	41.42	not measured
Hydraulic Head Difference (ft)	-1.62	--
Vertical Gradient	-0.051	--
Direction of Vertical Flow	Upward	--
OBMW13 - Groundwater Elevation (ft MSL)	42.43	not measured
BRMW13 - Groundwater Elevation (ft MSL)	42.43	not measured
Hydraulic Head Difference (ft)	0.00	--
Vertical Gradient	0.000	--
Direction of Vertical Flow	--	--
OBMW14 - Groundwater Elevation (ft MSL)	42.17	not measured
BRMW14 - Groundwater Elevation (ft MSL)	40.89	not measured
Hydraulic Head Difference (ft)	1.28	--
Vertical Gradient	0.056	--
Direction of Vertical Flow	Downward	--
OBMW15 - Groundwater Elevation (ft MSL)	56.93	53.45
BRMW15 - Groundwater Elevation (ft MSL)	57.01	53.47
Hydraulic Head Difference (ft)	-0.08	-0.02
Vertical Gradient	-0.008	-0.002
Direction of Vertical Flow	Upward	Upward
OBMW17 - Groundwater Elevation (ft MSL)	54.26	51.17
BRMW17 - Groundwater Elevation (ft MSL)	54.30	50.91
Hydraulic Head Difference (ft)	-0.04	0.26
Vertical Gradient	-0.002	0.014
Direction of Vertical Flow	Upward	Downward
PT-2S - Groundwater Elevation (ft MSL)	40.9	49.11
PT-1DA - Groundwater Elevation (ft MSL)	45.29	45.12
Hydraulic Head Difference (ft)	-4.39	3.99
Vertical Gradient	-0.236	0.176

Table 3-10b
Vertical Hydraulic Gradients within Existing Stepan Chemical Company Monitoring Well Clusters

Well Cluster	Synoptic Groundwater Elevation Measurement Event July 26, 2001	Synoptic Groundwater Elevation Measurement Event December 20, 2001
Direction of Vertical Flow	Upward	Downward
PT-1DA - Groundwater Elevation (ft MSL)	45.29	45.12
PT-1DB - Groundwater Elevation (ft MSL)	45.1	44.86
Hydraulic Head Difference (ft)	0.19	0.26
Vertical Gradient	0.008	0.011
Direction of Vertical Flow	Downward	Downward

Table 3-10c
Vertical Hydraulic Gradients within Phase II GWRI
Monitoring Well Clusters

Well Cluster	Synoptic Groundwater Elevation Measurement Event July 26, 2001	Synoptic Groundwater Elevation Measurement Event December 20, 2001
MW-1S - Groundwater Elevation (ft MSL)	Dry	--
MW-1D - Groundwater Elevation (ft MSL)	41.38	40.69
Hydraulic Head Difference (ft)	--	--
Vertical Gradient	--	--
Direction of Vertical Flow	--	--
MW-2S - Groundwater Elevation (ft MSL)	40.08	39.7
MW-2D - Groundwater Elevation (ft MSL)	40.01	39.62
Hydraulic Head Difference (ft)	0.07	0.08
Vertical Gradient	0.003	0.0032
Direction of Vertical Flow	Downward	Downward
MW-3S - Groundwater Elevation (ft MSL)	46.44	46.48
MW-3D - Groundwater Elevation (ft MSL)	46.57	46.54
Hydraulic Head Difference (ft)	-0.13	-0.06
Vertical Gradient	-0.004	-0.0020
Direction of Vertical Flow	Upward	Upward
MW-4S - Groundwater Elevation (ft MSL)	38.24	not measured
MW-4D - Groundwater Elevation (ft MSL)	38.31	not measured
Hydraulic Head Difference (ft)	-0.07	--
Vertical Gradient	-0.003	--
Direction of Vertical Flow	Upward	--
MW-5S - Groundwater Elevation (ft MSL)	33.53	33.38
MW-5D - Groundwater Elevation (ft MSL)	36.45	35.95
Hydraulic Head Difference (ft)	-2.92	-2.57
Vertical Gradient	-0.102	-0.0903
Direction of Vertical Flow	Upward	Upward
MW-6S - Groundwater Elevation (ft MSL)	35.57	35.53
MW-6D - Groundwater Elevation (ft MSL)	35.79	35.46
Hydraulic Head Difference (ft)	-0.22	0.07
Vertical Gradient	-0.007	0.0024
Direction of Vertical Flow	Upward	Downward
MW-7S - Groundwater Elevation (ft MSL)	not measured	43.23
MW-7D - Groundwater Elevation (ft MSL)	not measured	43.20
Hydraulic Head Difference (ft)	--	0.03
Vertical Gradient	--	0.0008
Direction of Vertical Flow	--	Downward
MW-8S - Groundwater Elevation (ft MSL)	46.20	45.75
MW-8D - Groundwater Elevation (ft MSL)	46.02	45.60
Hydraulic Head Difference (ft)	0.18	0.15
Vertical Gradient	0.006	0.0054
Direction of Vertical Flow	Downward	Downward
MW-9S - Groundwater Elevation (ft MSL)	Dry	not measured
MW-9D - Groundwater Elevation (ft MSL)	54.95	not measured
Hydraulic Head Difference (ft)	--	--
Vertical Gradient	--	--
Direction of Vertical Flow	--	--
MW-10S - Groundwater Elevation (ft MSL)	53.28	not measured
MW-10D - Groundwater Elevation (ft MSL)	52.90	not measured
Hydraulic Head Difference (ft)	0.38	--
Vertical Gradient	0.016	--
Direction of Vertical Flow	Downward	--

Table 3-10c
Vertical Hydraulic Gradients within Phase II GWRI
Monitoring Well Clusters

Well Cluster	Synoptic Groundwater Elevation Measurement Event July 26, 2001	Synoptic Groundwater Elevation Measurement Event December 20, 2001
MW-11S - Groundwater Elevation (ft MSL)		not measured
BR-MW6 - Groundwater Elevation (ft MSL)		not measured
Hydraulic Head Difference (ft)		--
Vertical Gradient		--
Direction of Vertical Flow		--
MW-12S - Groundwater Elevation (ft MSL)	42.14	not measured
MW-12D - Groundwater Elevation (ft MSL)	41.12	not measured
Hydraulic Head Difference (ft)	1.02	--
Vertical Gradient	0.033	--
Direction of Vertical Flow	Downward	--
MW-13S - Groundwater Elevation (ft MSL)	40.46	not measured
MW-13D - Groundwater Elevation (ft MSL)	39.92	not measured
Hydraulic Head Difference (ft)	0.54	--
Vertical Gradient	0.019	--
Direction of Vertical Flow	Downward	--
MW-14S - Groundwater Elevation (ft MSL)	34.03	not measured
MW-14D - Groundwater Elevation (ft MSL)	not measured	not measured
Hydraulic Head Difference (ft)	--	--
Vertical Gradient	--	--
Direction of Vertical Flow	--	--
MW-15S - Groundwater Elevation (ft MSL)	32.37	not measured
MW-15D - Groundwater Elevation (ft MSL)	32.41	not measured
Hydraulic Head Difference (ft)	-0.04	--
Vertical Gradient	-0.001	--
Direction of Vertical Flow	Upward	--
MW-16S - Groundwater Elevation (ft MSL)	25.00	not measured
MW-16D - Groundwater Elevation (ft MSL)	25.68	not measured
Hydraulic Head Difference (ft)	-0.68	--
Vertical Gradient	-0.013	--
Direction of Vertical Flow	Upward	--
MW-17S - Groundwater Elevation (ft MSL)	22.32	not measured
MW-17D - Groundwater Elevation (ft MSL)	22.45	not measured
Hydraulic Head Difference (ft)	-0.13	--
Vertical Gradient	-0.005	--
Direction of Vertical Flow	Upward	--
MW-18S - Groundwater Elevation (ft MSL)	28.83	not measured
MW-18D - Groundwater Elevation (ft MSL)	31.88	not measured
Hydraulic Head Difference (ft)	-3.05	--
Vertical Gradient	-0.088	--
Direction of Vertical Flow	Upward	--
MW-19S - Groundwater Elevation (ft MSL)	44.79	not measured
MW-19D - Groundwater Elevation (ft MSL)	45.60	not measured
Hydraulic Head Difference (ft)	-0.81	--
Vertical Gradient	-0.045	--
Direction of Vertical Flow	Upward	--
MW-19D - Groundwater Elevation (ft MSL)	45.60	not measured
MW-19DD - Groundwater Elevation (ft MSL)	45.66	44.54
Hydraulic Head Difference (ft)	-0.06	--
Vertical Gradient	-0.006	--
Direction of Vertical Flow	Upward	--
MW-20S - Groundwater Elevation (ft MSL)	49.85	49.84
MW-20D - Groundwater Elevation (ft MSL)	49.08	48.50

Table 3-10c
Vertical Hydraulic Gradients within Phase II GWRI
Monitoring Well Clusters

Well Cluster	Synoptic Groundwater Elevation Measurement Event July 26, 2001	Synoptic Groundwater Elevation Measurement Event December 20, 2001
Hydraulic Head Difference (ft)	0.77	1.34
Vertical Gradient	0.025	0.0436
Direction of Vertical Flow	Downward	Downward
MW-23D - Groundwater Elevation (ft MSL)	44.97	44.71
MW-23DD - Groundwater Elevation (ft MSL)	44.96	44.85
Hydraulic Head Difference (ft)	0.01	-0.14
Vertical Gradient	0.000	-0.0046
Direction of Vertical Flow	Downward	Upward
MW-25S - Groundwater Elevation (ft MSL)	not measured	46.43
MW-25D - Groundwater Elevation (ft MSL)	not measured	44.82
Hydraulic Head Difference (ft)	--	1.61
Vertical Gradient	--	0.0491
Direction of Vertical Flow	--	Downward

Table 3-11
Ambient / Background Groundwater Data - Metals

Well ID or Reference	Aquifer	Inclusive Sampling Dates	Number of Well in Study		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Copper	Lead	Lithium	Mercury	Nickel	Thallium	Zinc
Wells in Passaic Formation, Newark Basin, NJ (1)	Bedrock	1983-1988	150	Number of samples	39	118	118	N/A	161	39	151	161	117	39	N/A	N/A	162
Average Concentration					3.10	160.20	0.50	N/A	1.20	1.41	10.91	8.76 (10)	24.10	0.12	N/A	N/A	73.51
Range of detected concentrations					1-19	2-1200	0.5-1	N/A	1-10	1-5	1-200	2-16	4-100	0.1-0.3	N/A	N/A	3-1100
Wells in the Passaic Formation, Bergen County, NJ - USGS (2)	Bedrock	1959-1995	65	Number of samples	28	56	56	N/A	64	54	64	64	56	8	N/A	N/A	64
Average Concentration					2.64	137.34	0.56	N/A	1.08	7.00	11.16	11.41	11.61	0.10	N/A	N/A	35.58
Range of Detected Concentrations					1-10	2-440	0-1.5	N/A	1-3	1-20	1-50	5-40	4-41	0.1	N/A	N/A	3-770
Background Well B38W02D (3)	Bedrock	1990-2002	N/A	Number of samples	9	14	8	10	3	12	6	10	11	3	13	7	10
Average Concentration					2.30	359.57	0.77	66.70	0.67	56.57	11.85	3.56	47.22	0.13	21.05	5.79 (8)	50.64
Range of Detected Concentrations					0.61-7	253-561	0.2-1.3	19.7-125	0.3-1.3	3-371	1.4-26	1.3-7.6	11.7-100	0.10.18	5.7-41.6	2U-16.1U	3.2-289
				Number of samples													
Background Well MW-10D	Bedrock	02/21/01	N/A	1	3.2U (4)	152.00	0.16	26.80	0.3U	13.50	0.94	2.2U	23.20	0.1U	12.30	3U	3.2U
Background Well MW-17D	Bedrock	02/22/01	N/A	1	3.2U	131.00	0.1U	54.00	0.3U	0.7U	0.77	2.2U	5.40	0.1UJ	1.70	3U	3.1U
Background Well MW-18D	Bedrock	02/19/01	N/A	1	3.2U	453.00	0.10	33.90	0.3U	9.6U	1.6U	2.2U	4.80	0.1U	9.6U	3U	9.1U
Wells in Stratified Drift Deposits within Bergen County, USGS (2)	Overburden	1959-1993	30	Number of samples	2	30	29	2	30	31	30	30	29	6	1	N/A	30
Average Concentration					1.00	34.40	0.48	70.00	1.00	9.87	13.93	11.70	6.31	0.10	10U	N/A	11.10
Range of Concentrations					1	9-170	0-1	60-80	1	1-20	8-80	1-50	4-26	0.1	10U	N/A	3-41
				Number of samples													
MW-10S	Overburden	2/26/2001	N/A	1	3.2U	160	0.1U	136	0.3U	0.7U	1.3	2.2U	1	0.1UJ	1.5	3U	6.9
MW-17S	Overburden	2/21/2001	N/A	1	3.8	69.8	0.22	48.2	0.3U	1.5	1.6	2.2U	0.82	0.1U	1.3	3U	4.4U
MW-18S	Overburden	2/15/2001	N/A	1	3.2U	110	0.1U	45.1	0.3U	24.3	2.5U	2.2U	3.2	0.1U	18.3	3U	3.3U
Federal MCL					50	2000	4	3300 (9)	5	100	1300 - MCLG (6)	15 -AL (7)	730 (9)	N/A	N/A	2	N/A
NJDEP GWQC					8	2000	20	N/A	4	100	1000	10	N/A	2	100	10	5000

Legend:
1- From New Jersey Geological Survey DGS96-3 Ambient Groundwater Quality of the New Jersey Part of the Newark Basin (Serfes, M. 1994)

2 - USGS National Water Information System (NWIS) Database
3- Draft Environmental Monitoring Report (USACE 2001)
4 - U = Non-Detect
5 - N/A - Not Available
6 - MCLG - Maximum Contaminant Level Goal
7 - AL - Action Level
8 - Elevated Cadmium and Thallium Reporting Limit Noted
9 - Region IX PRG for Lithium - Tap Water
10 - Elevated Reporting Limits were noted for Lead

Table 3-12
Ambient / Background Groundwater Quality Data - Radiological Constituents

Well ID or Reference	Aquifer	Inclusive Sampling Dates	Number of Well in Study		Ra-226	Ra-228	U-234	U-235	U-238	Total Uranium	Gross Alpha	Gross Beta
Wells in Passaic Formation, Newark Basin, NJ (1)	Bedrock	1983-1988	150	Number of samples	N/A (4)	N/A	N/A	N/A	N/A	94	N/A	N/A
Average Concentration					N/A	N/A	N/A	N/A	N/A	4.4	N/A	N/A
Range of detected concentrations					N/A	N/A	N/A	N/A	N/A	0.4-49	N/A	N/A
Wells in the Passaic Formation, Bergen County, NJ - USGS (2)	Bedrock	1986-1989	65	Number of samples	31	23	N/A	N/A	N/A	4	36	44
Average Concentration					0.46	0.95	N/A	N/A	N/A	84.43 (6)	12.69 (7)	12.25
Range of Detected Concentrations					0.2-0.89	0.5-2.9	N/A	N/A	N/A	0.7-220	1-120	1-120
Background Well B38W02D (3)	Bedrock	1986-2002	N/A	Number of samples	8	5	3	3	3	6	3	3
Average Concentration					0.48	1.08	0.20	0.02	0.17	1.73	2.85	4.27
Range of Detected Concentrations					0.16-1.3	0.06-2.3	0.15-0.24	0.00-0.040	0.15-0.22	0.3-5	1.20-5.2	2.6-7
				Number of samples								
Background Well MW-10D	Bedrock	02/21/01	N/A	1	1.25	1.03	1.06	0.10	0.72	2.82	0.62	1.03
Background Well MW-17D	Bedrock	02/22/01	N/A	1	0.51	0.93	0.90	0.26	0.63	2.69	0.15	0.79
Background Well MW-18D	Bedrock	02/19/01	N/A	1	0.34	0.51	1.20	0.51	0.59	3.45	0.17	4.12
Wells in Stratified Drift Deposits within Bergen County, USGS (2)	Overburden	1983-1989	24	Number of samples	1	1	N/A	N/A	N/A	1	1	3
Average Concentration					0.20	0.50	N/A	N/A	N/A	0.60	15.30	3.27
Range of Concentrations					N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.1-7.2
				Number of samples								
MW-10S	Overburden	2/26/2001	N/A	1	0.37	0.72	0.57	0.62	0.27	2.19	2.53	0.47
MW-17S	Overburden	2/21/2001	N/A	1	0.28	1.19	1.00	0.73	0.30	3.05	ND	0.82
MW-18S	Overburden	2/15/2001	N/A	1	0.37	0.14	0.53	0.10	0.34	1.46	0.61	1.96
Federal MCL/NJ GWQC					Combined 5 pCi/L		Combined 20 pCi/L			30	15	50 (5)

Legend:

1- From New Jersey Geological Survey DGS96-3 Ambient Groundwater Quality of the New Jersey Part of the Newark Basin (Serfes, M. 1994)

2 - USGS National Water Information System (NWIS) Database

3- Draft Environmental Monitoring Report (USACE 2001)

4 - N/A - Not Available

5 - Screening Level - MCL is a dose based calculation

6 - Two of 4 samples exceeded 100 ug/L in the study

7 - 10 of 36 samples exceeded 10 pCi/L

Table 3-13
Ambient / Background Groundwater Quality Data - VOCs

Well ID or Reference	Aquifer	Inclusive Sampling Dates		Benzene	PCE	TCE	1,2-DCE	1,1-DCE	VC
Background Well B38W02D (1)	Bedrock	2000-2002	Frequency of Detection	0/3	0/3	0/3	0/3	0/3	0/3
			Maximum Detected Concentration	ND (2)	ND	ND	ND	ND	ND
			Number of samples						
Background Well MW-10D	Bedrock	02/21/01	1	ND	ND	ND	ND	ND	ND
Background Well MW-17D	Bedrock	02/22/01	1	N/A (3)	N/A	N/A	N/A	N/A	N/A
Background Well MW-18D	Bedrock	02/19/01	1	N/A	N/A	N/A	N/A	N/A	N/A
			Number of samples						
MW-10S	Overburden	2/26/2001	1	ND	ND	0.3J (4)	ND	ND	ND
MW-17S	Overburden	2/21/2001	1	N/A	N/A	N/A	N/A	N/A	N/A
MW-18S	Overburden	2/15/2001	1	N/A	N/A	N/A	N/A	N/A	N/A
Federal MCL				5	5	5	70 (5)	7	2
NJDEP GWQC				1	1	1	10*(5)	2	5

Legend:
1- Draft Environmental Monitoring Report (USACE 2001)
2 - ND - Non-Detect
3 - N/A - Not Available
4 - J - Estimated Concentration
5 - MCL/NJ GWQC is identified for cis-1,2-dichloroethene

Table 3-14

Synoptic Water Level Measurements For Bedrock Monitoring Wells - Supplemental Investigation
FUSRAP Maywood Superfund Site, Maywood, NJ

GWRI Site Name	Well Type	Top of Measuring Point, ft NGVD	Water Level, ft BTOMP	GW Elv. NGVD	Top of Screen, ft NGVD	Bottom of Screen, ft. NGVD	Top of Screen, ft BGS	Bottom of Screen, ft BGS	Well Depth (ft BGS)	MeasurementDate
B38W02D	Bedrock	78.04	13.01	65.03	37.94	32.94	37.00	42.00	43	6/23/2003
B38W03B	Bedrock	58.27	7.4	50.87	27.13	17.43	29.80	39.50	40.5	6/23/2003
B38W04B	Bedrock	65.64	8.02	57.62	40.01	35.01	22.70	27.70	36.3	6/23/2003
B38W05B	Bedrock	70.98	7.6	63.38	45.56	35.26	22.70	33.00	44.5	6/23/2003
B38W07B	Bedrock	54.98	6.04	48.94	34.09	23.79	18.50	28.80	39.2	6/23/2003
B38W14D	Bedrock	43.79	0	43.79	-1.84	-7.34	46.00	51.50	51.5	6/23/2003
B38W15D	Bedrock	47.04	3.12	43.92	6.47	1.47	41.00	46.00	46	6/24/2003
B38W17B	Bedrock	53.28	6.43	46.85	31.98	21.68	18.70	29.00	44.4	6/23/2003
B38W18D	Bedrock	57.85	2.46	55.39	23.02	18.02	35.00	40.00	41	6/23/2003
B38W19D	Bedrock	59.98	13.4	46.58	35.79	25.59	21.70	31.90	47.9	6/23/2003
B38W24D	Bedrock	54.91	6.05	48.86	33.29	28.29	22.00	27.00	28	6/23/2003
B38W25D	Bedrock	57.66	4.65	53.01	34.05	29.05	21.60	26.60	27.6	6/23/2003
BRMW1	Bedrock	49.06	4.31	44.75	12.35	2.35	37.00	47.00	47	6/24/2003
BRMW10	Bedrock	59.33	7.82	51.51	29.78	19.78	30.00	40.00	40	6/23/2003
BRMW14	Bedrock	46.20	3.14	43.06	19.50	9.50	27.00	37.00	37	6/24/2003
BRMW15	Bedrock	71.63	7.4	64.23	50.31	40.31	20.00	30.00	30	6/23/2003
BRMW16	Bedrock	67.94	6.82	61.12	47.60	37.60	20.00	30.00	30	6/23/2003
BRMW17	Bedrock	62.02	3.6	58.42	35.49	25.49	25.00	35.00	35	6/23/2003
BRPW-1DRE	Bedrock	56.30	8.4	47.90	-33.58	-53.58	90.00	110.00	110	6/23/2003
BRPZ-2RE	Bedrock	55.74	7.02	48.72	13.89	-6.11	42.00	62.00	62	6/23/2003
BRPZ-3RE	Bedrock	56.90	7.8	49.10	19.92	-0.08	37.00	57.00	57	6/23/2003
BRPZ-4	Bedrock	55.58	7.55	48.03	15.30	-5.70	40.00	61.00	61	6/23/2003
BRPZ-5RE	Bedrock	55.37	7.1	48.27	13.25	-6.75	42.00	62.00	62	6/23/2003
BRPZ-9	Bedrock	55.97	8.02	47.95	24.07	0.07	32.00	56.00	56	6/23/2003
MISS01B	Bedrock	61.98	13.93	48.05	37.42	6.92	23.00	53.50	53.5	6/23/2003
MISS02B	Bedrock	61.38	9.85	51.53	32.70	2.70	28.50	58.50	58.5	6/23/2003
MISS03B	Bedrock	57.66	7.28	50.38	36.78	6.78	20.00	50.00	50	6/23/2003
MISS04B	Bedrock	56.42	8.6	47.82	38.38	8.38	17.00	47.00	47	6/23/2003
MISS05B	Bedrock	59.76	12.97	46.79	33.09	3.09	25.00	55.00	55	6/23/2003
MISS07B	Bedrock	55.77	8.58	47.19	34.99	4.99	19.00	49.00	49	6/23/2003
MW-13D	Bedrock	46.12	3.99	42.13	21.30	-3.70	25.00	50.00	50	6/23/2003
MW-19D	Bedrock	55.96	5.82	50.14	39.17	14.17	17.00	42.00	42	6/23/2003
MW-19DD	Bedrock	55.81	6.36	49.45	4.64	-19.86	51.50	76.00	76	6/23/2003
MW-20D	Bedrock	58.88	7.7	51.18	28.46	3.46	30.00	55.00	55	6/23/2003
MW-23D	Bedrock	56.19	9	47.19	5.11	-14.89	51.00	71.00	71	6/23/2003
MW-23DD	Bedrock	56.98	10.17	46.81	-25.15	-45.15	82.00	102.00	102	6/23/2003
MW-24D	Bedrock	57.28	9.93	47.35	7.33	-12.67	47.70	67.70	67.7	6/23/2003
MW-24DD	Bedrock	57.08	9.82	47.26	-24.93	-49.93	80.00	105.00	105	6/23/2003
MW-25D	Bedrock	58.13	9.84	48.29	23.11	-1.89	33.00	58.00	59	6/23/2003
MW-26D	Bedrock	60.12	8.07	52.05	23.33	-1.67	33.50	58.50	59	6/23/2003
MW-27D	Bedrock	65.16	14.3	50.86	29.18	4.18	33.50	58.50	58.5	6/23/2003
MW-28D	Bedrock	64.50	14.29	50.21	29.90	4.90	32.00	57.00	57	6/23/2003
MW-2D	Bedrock	46.91	3.2	43.71	25.66	-1.34	21.50	48.50	48.5	6/23/2003
MW-31D	Bedrock	48.62	4.41	44.21	29.08	4.08	20.00	45.00	45	6/23/2003
MW-32D	Bedrock	48.83	2.45	46.38	17.18	-7.82	32.00	57.00	57	6/23/2003
MW-33D	Bedrock	62.00	13.27	48.73	13.94	-6.06	45.50	65.50	68	6/23/2003
MW-34D	Bedrock	60.63	6.76	53.87	30.35	5.35	28.00	53.00	53	6/23/2003
MW-3D	Bedrock	54.77	5.25	49.52	25.06	0.06	30.00	55.00	55	6/23/2003
MW-5D	Bedrock	45.15	5.1	40.05	13.43	-6.57	32.00	52.00	52	6/23/2003
MW-6D	Bedrock	42.34	3.66	38.68	13.84	-11.16	29.00	54.00	54	6/23/2003
MW-7D	Bedrock	53.73	5.21	48.52	32.99	7.99	21.00	46.00	46	6/23/2003
MW-8D	Bedrock	54.15	5	49.15	27.34	2.34	27.00	52.00	52	6/23/2003
PT-1DA	Bedrock	55.92	8.4	47.52	27.26	17.26	29.00	39.00	13	6/24/2003
PT-1DB	Bedrock	55.79	8.5	47.29	4.26	-5.74	52.00	62.00	13	6/24/2003

Legend
ft NGVD = Feet relative to the National Geodetic Vertical Datum
El. = Elevation
BTOMP = Below Top of Measuring Point
BGS = Below Ground Surface

Table 3-15

Summary of Hydraulic Conductivity Values obtained from Specific Capacity Tests - Supplmental Investigation
FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Specific Capacity, Q/s (gpm/ft)	Transmissivity (ft^2/day)	Saturated Thickness (ft)	Hydraulic Conductivity (cm/sec)	Date of Test
MW-27D	0.09	197.37	25.00	2.79E-03	8/15/2002
MW-28D	0.16	307.87	25.00	4.34E-03	8/14/2002
MW-31D	2.55	2133.05	25.00	3.01E-02	2/21/2003
MW-32D	1.24	1312.99	29.00	1.60E-02	5/6/2003
MW-33D	0.16	339.21	22.00	5.44E-03	9/16/2002
MW-34D	0.13	275.12	25.00	3.88E-03	9/17/2002
Minimum	0.09	197.37	22.00	2.79E-03	
Maximum	2.55	2133.05	29.00	3.01E-02	
Geometric Mean	0.31	501.36	N/A	7.05E-03	

Legend

Q/s = Specific Capacity

Q = Flow rate in gallons per minute (gpm)

s = Drawdown in feet (ft)

TABLE 4-1
Summary of Geoprobe Groundwater Samples by Cluster Location - Phase I

Count of Geoprobe Borings	Property ID	Property Name	Boring Identifier	Source	Depth of Measure, ft bgs	Turbidity (NTU)	pH (S.U.)	Specific Conductivity (uS/cm)	DO (mg/L)	Date Collected
1	01a	72 Sidney Street (a.k.a. 88 Money Street)	01a001	Environmental Boring	10'-14'	115.00	6.36	0.54	2.82	3/15/2000
2	02a	100 Hancock Street	02a001	Environmental Boring	10'-14'	999.00	6.93	1.01	2.22	3/31/2000
3	02a	100 Hancock Street	02a002	Environmental Boring	14'-18'	867.00	5.11	0.95	3.11	4/3/2000
4	02c	80 Industrial Road	02c001	Environmental Boring	12'-16'	888.00	7.29	0.48	NR	3/16/2000
5	02d	8 Mill Street	02d001	Environmental Boring	6'-10'	999.00	7.66	2.46	2.74	3/15/2000
6	02d	8 Mill Street	02d002	Environmental Boring	6'-8'	78.00	7.18	0.57	NR	3/16/2000
7	02d	8 Mill Street	02d003	Environmental Boring	8'-12'	663.00	7.17	0.96	NR	3/16/2000
8	03a	170 Gregg Street	03a001	Environmental Boring	4'-8'	999.00	7.17	0.94	NR	3/16/2000
9	04a	160/174 Essex Street	04a001	Environmental Boring	8'-12'	999.00	7.70	1.70	9.40	3/22/2000
10	04a	160/174 Essex Street	04a002	Environmental Boring	10'-14'	33.00	8.15	1.35	5.26	3/17/2000
11	04a	160/174 Essex Street	04a003	Environmental Boring	8'-12'	204.00	7.53	1.00	2.17	3/22/2000
12	05a	99 Essex Street	05a001	Environmental Boring	8'-12'	375.00	7.29	1.42	2.15	3/22/2000
13	05b	113 Essex Street	05b001	Environmental Boring	12'-16'	555.00	6.63	2.66	NR	3/23/2000
14	05c	200 NJ Rt. 17 South	05c001	Environmental Boring	7'-11'	285.00	7.74	0.97	NR	3/23/2000
15	06a	85-101 NJ Rt. 17 North	06a001	Environmental Boring	4'-8'	31.00	7.11	1.18	NR	3/23/2000
16	06b	137 NJ Rt. 17 North	06b001	Environmental Boring	2'-6'	112.00	7.20	1.43	NR	3/24/2000
17	06c	167 NJ Rt. 17 North	06c001	Environmental Boring	8'-12'	378.00	6.45	1.35	NR	3/24/2000
18	06c	167 NJ Rt. 17 North	06c002	Environmental Boring	6'-10'	999.00	6.76	0.93	4.32	3/27/2000
19	06d	239 NJ Rt. 17 North	06d001	Environmental Boring	5'-9'	121.00	7.33	1.59	NR	3/24/2000
20	06e	29 Essex Street	06e001	Environmental Boring	8'-12'	999.00	6.46	0.55	9.00	3/28/2000
21	07a	111 Essex Street	07a001	Environmental Boring	5'-9'	63.00	6.97	3.15	3.36	3/27/2000
22	08a	23 West Howcroft Road	08a001	Environmental Boring	8'-12'	355.00	7.15	1.18	1.23	3/30/2000
23	08a	23 West Howcroft Road	08a002	Environmental Boring	8'-12'	999.00	6.72	2.47	2.83	3/30/2000
24	08a	23 West Howcroft Road	08a003	Environmental Boring	4'-8'	999.00	7.10	2.39	7.50	3/30/2000
25	09a	149-151 Maywood Avenue	09a001	Environmental Boring	4'-8'	116.00	6.44	1.99	3.10	3/28/2000
26	09a	149-151 Maywood Avenue	09a002	Environmental Boring	6'-10'	133.00	6.65	1.43	7.53	3/28/2000
27	09a	149-151 Maywood Avenue	09a003	Environmental Boring	6'-10'	999.00	6.75	1.88	5.94	3/28/2000
28	09a	149-151 Maywood Avenue	09a004	Environmental Boring	5'-9'	999.00	5.73	1.04	3.20	3/31/2000
29	09a	149-151 Maywood Avenue	09a005	Environmental Boring	4'-8'	999.00	6.62	0.71	2.30	3/31/2000
30	09a	149-151 Maywood Avenue	09a007	Transect F	6'-10'	770.00	7.21	1.36	2.32	4/12/2000
30	09a	149-151 Maywood Avenue	09a007	Transect F	20.25'-24.25'	NR	NR	NR	NR	4/12/2000
31	09a	149-151 Maywood Avenue	09a008	Transect F	4'-8'	NR	NR	NR	NR	4/12/2000
31	09a	149-151 Maywood Avenue	09a008	Transect F	13'-17'	NR	NR	NR	NR	4/12/2000
32	09a	149-151 Maywood Avenue	09a009	Transect F	2'-6'	NR	NR	NR	NR	4/12/2000
32	09a	149-151 Maywood Avenue	09a009	Transect F	9'-13'	NR	NR	NR	NR	4/12/2000
33	09a	149-151 Maywood Avenue	09a010	Transect F	4'-8'	164.00	7.11	1.31	2.02	4/13/2000
34	10a	100 West Hunter Avenue (Stepan)	10a001	Environmental Boring	6'-10'	999.00	6.49	0.38	5.60	3/29/2000
35	10a	100 West Hunter Avenue (Stepan)	10a002	Environmental Boring	6'-10'	999.00	6.66	0.90	2.64	3/29/2000
36	10a	100 West Hunter Avenue (Stepan)	10a005	Environmental Boring	5'-9'	999.00	5.56	1.31	6.30	4/3/2000
37	10a	100 West Hunter Avenue (Stepan)	10a006	Environmental Boring	6'-10'	999.00	5.24	0.45	5.80	4/3/2000
38	10a	100 West Hunter Avenue (Stepan)	10a007	Environmental Boring	1'-5'	732.00	5.70	1.31	6.96	4/4/2000
39	10a	100 West Hunter Avenue (Stepan)	10a008	Environmental Boring	12'-16'	999.00	6.94	1.48	1.23	4/4/2000
40	11a	205 Maywood Avenue	11a001	Environmental Boring	4'-8'	999.00	7.84	0.36	64.00	3/27/2000
41	12b	100 West Hunter Avenue (MISS)	12b001	Environmental Boring	16'-20'	999.00	7.14	2.39	8.95	4/4/2000
42	12b	100 West Hunter Avenue (MISS)	12b002	Environmental Boring	10'-14'	999.00	6.94	2.55	2.24	4/4/2000
43	12b	100 West Hunter Avenue (MISS)	12b003	Environmental Boring	6'-10'	999.00	6.91	1.74	1.28	4/5/2000
44	12b	100 West Hunter Avenue (MISS)	12b004	Environmental Boring	16'-20'	999.00	6.78	2.50	5.21	4/5/2000
45	12b	100 West Hunter Avenue (MISS)	12b005	Environmental Boring	12'-16'	999.00	7.07	3.38	0.37	4/5/2000
46	12b	100 West Hunter Avenue (MISS)	12b006	Environmental Boring	5'-9'	966.00	6.71	0.08	7.63	4/5/2000

TABLE 4-1
Summary of Geoprobe Groundwater Samples by Cluster Location - Phase I

Count of Geoprobe Borings	Property ID	Property Name	Boring Identifier	Source	Depth of Measure, ft bgs	Turbidity (NTU)	pH (S.U.)	Specific Conductivity (uS/cm)	DO (mg/L)	Date Collected
47	12b	100 West Hunter Avenue (MISS)	12b007	Environmental Boring	8'-12'	999.00	6.90	2.36	1.37	4/28/2000
48	12b	100 West Hunter Avenue (MISS)	12b009	Transect E	10'-14'	999.00	8.03	2.20	7.01	4/6/2000
49	12b	100 West Hunter Avenue (MISS)	12b010	Transect E	13.5'-17.5'	999.00	7.39	2.81	0.49	4/6/2000
50	12b	100 West Hunter Avenue (MISS)	12b011	Transect E	10'-14'	999.00	7.56	2.36	1.04	4/7/2000
50	12b	100 West Hunter Avenue (MISS)	12b011	Transect E	19'-23'	NR	NR	NR	NR	4/7/2000
51	12b	100 West Hunter Avenue (MISS)	12b012	Transect E	9'-13'	999.00	7.11	1.11	3.75	4/7/2000
52	12b	100 West Hunter Avenue (MISS)	12b013	Transect E	10'-14'	112.00	7.05	1.22	6.54	4/10/2000
52	12b	100 West Hunter Avenue (MISS)	12b013	Transect E	19'-23'	NR	NR	NR	NR	4/10/2000
53	12b	100 West Hunter Avenue (MISS)	12b014	Transect E	15'-19'	584.00	11.40	0.29	1.17	4/10/2000
54	12b	100 West Hunter Avenue (MISS)	12b015	Transect A	4'-8'	999.00	7.05	3.15	4.75	4/19/2000
54	12b	100 West Hunter Avenue (MISS)	12b015	Transect A	16'-20'	NR	NR	NR	NR	4/19/2000
55	12b	100 West Hunter Avenue (MISS)	12b016	Transect A	5'-9'	999.00	6.55	3.67	0.22	4/20/2000
55	12b	100 West Hunter Avenue (MISS)	12b016	Transect A	16'-20'	NR	NR	NR	NR	4/20/2000
56	12b	100 West Hunter Avenue (MISS)	12b017	Transect A	6'-10'	999.00	6.94	2.43	6.55	4/24/2000
56	12b	100 West Hunter Avenue (MISS)	12b017	Transect A	21'-25'	NR	NR	NR	NR	4/24/2000
57	12b	100 West Hunter Avenue (MISS)	12b018	Transect A	8.5'-12.5'	999.00	7.12	3.01	0.50	4/24/2000
58	12b	100 West Hunter Avenue (MISS)	12b019	Transect A	3.5'-7.5'	440.00	7.26	0.54	3.40	4/24/2000
59	14a	Transect B	14a001	Transect B	5.5'-9.5'	999.00	7.27	0.72	6.80	4/25/2000
60	14a	Transect B	14a002	Transect B	9'-13'	56.00	6.85	0.70	6.81	4/27/2000
61	14a	Transect B	14a003	Transect B	4'-8'	999.00	7.23	0.51	2.70	4/28/2000
62	15a	Transect C	15a001	Transect C	5'-9'	999.00	7.59	0.19	5.25	4/13/2000
63	15a	Transect C	15a002	Transect C	6'-10'	999.00	6.71	0.27	8.60	4/14/2000
63	15a	Transect C	15a002	Transect C	15.75'-19.75'	NR	NR	NR	NR	4/14/2000
64	15a	Transect C	15a003	Transect C	10'-14'	999.00	7.02	0.41	2.20	4/14/2000
65	16a	Transect D	16a001	Transect D	6'-10'	999.00	6.24	2.05	0.96	4/17/2000
66	16a	Transect D	16a002	Transect D	7'-11'	NR	NR	NR	NR	4/17/2000
67	16a	Transect D	16a003	Transect D	14'-18'	NR	NR	NR	NR	4/18/2000
67	16a	Transect D	16a003	Transect D	14'-18'	17.00	5.95	1.55	8.10	4/18/2000
68	16a	Transect D	16a004	Transect D	7.1'-11.1'	999.00	7.64	2.20	6.92	4/25/2000
69	17a	Transect G	17a001	Transect G	2.5'-6.5'	999.00	5.64	1.38	2.53	4/18/2000
70	17a	Transect G	17a002	Transect G	11.2'-15.2'	999.00	7.35	1.21	0.61	4/25/2000
71	17a	Transect G	17a003	Transect G	11.5'-15.5'	999.00	8.22	0.37	4.60	4/28/2000
72	17a	Transect G	17a004	Transect G	8'-12'	251.00	7.45	1.51	6.29	5/1/2000
72	17a	Transect G	17a004	Transect G	17'-21	NR	NR	NR	NR	5/1/2000
73	18a	Transect J	18a001	Transect J	15.5'-19.5'	157.00	7.08	0.71	4.86	4/26/2000
74	18a	Transect J	18a002	Transect J	13.5'-17.5'	222.00	7.05	2.43	5.59	4/26/2000
75	18a	Transect J	18a003	Transect J	8'-12'	606.00	6.62	0.64	2.80	4/27/2000
75	18a	Transect J	18a003	Transect J	21'-25'	NR	NR	NR	NR	4/27/2000
76	18a	Transect J	18a004	Transect J	12'-16	643.00	7.01	2.04	1.27	4/27/2000

Notes:

ft bgs = Feet below ground surface
NTU = Nephelometric Turbidity Unit
S.U. = Standard Unit
mg/L = Milligrams per liter

TABLE 4-2
SUMMARY OF TOTAL RADIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a001	01a-020501	10'-14'	0.15	J	0.12	0.13	0.43	UJ	0.61	1.03	0.58	3/15/2000
02a	100 Hancock Street	02a001	02a-020503	10'-14'	7.96		1.40	0.23	10.16		1.91	2.20	**18.12**	3/31/2000
02a	100 Hancock Street	02a002	02a-020505	14'-18'	2.15		0.65	0.47	1.53	J	1.26	2.04	3.68	4/3/2000
02c	80 Industrial Road	02c001	02c-020511	12'-16'	2.39		0.75	0.45	4.07		1.63	2.39	**6.47**	3/16/2000
02d	8 Mill Street	02d001	02d-020513	6'-10'	0.21	U	0.23	0.44	1.00	U	1.50	2.56	1.21	3/15/2000
02d	8 Mill Street	02d002	02d-020515	6'-8'	2.17		0.78	0.50	0.47	U	1.40	2.43	2.64	3/16/2000
02d	8 Mill Street	02d003	02d-020517	8'-12'	0.53	J	0.23	0.18	0.80	J	0.66	1.08	1.34	3/16/2000
03a	170 Gregg Street	03a001	03a-020519	4'-8'	4.62		1.10	0.44	6.17		2.34	3.49	**10.80**	3/16/2000
04a	160/174 Essex Street	04a001	04a-020521	8'-12'	0.25	U	0.29	0.68	-1.08	U	1.43	2.67	0.25	3/22/2000
04a	160/174 Essex Street	04a002	04a-020523	10'-14'	0.44	J	0.20	0.16	0.99	J	0.64	1.02	1.43	3/17/2000
04a	160/174 Essex Street	04a003	04a-020525	8'-12'	0.29	J	0.19	0.22	0.21	U	0.62	1.07	0.49	3/22/2000
05a	99 Essex Street	05a001	05a-020527	8'-12'	0.28	J	0.17	0.20	0.00	UJ	0.59	1.06	0.28	3/22/2000
05b	113 Essex Street	05b001	05b-020529	12'-16'	0.61	J	0.26	0.19	1.60	J	0.67	1.00	2.21	3/23/2000
05c	200 NJ Rt. 17 South	05c001	05c-020531	7'-11'	0.61	J	0.27	0.25	0.62	U	0.87	1.46	1.23	3/23/2000
06a	85-101 NJ Rt. 17 North	06a001	06a-020533	4'-8'	0.21	J	0.16	0.26	0.65	U	0.66	1.09	0.87	3/23/2000
06b	137 NJ Rt. 17 North	06b001	06b-020535	2'-6'	3.92		1.09	0.79	4.84		1.90	2.80	**8.76**	3/24/2000
06c	167 NJ Rt. 17 North	06c001	06c-020537	8'-12'	7.79	J	1.92	1.13	6.85	J	3.44	5.34	**14.64**	3/24/2000
06c	167 NJ Rt. 17 North	06c002	06c-020539	6'-10'	13.51		2.35	0.60	21.97		2.80	2.79	**35.48**	3/27/2000
06d	239 NJ Rt. 17 North	06d001	06d-020541	5'-9'	0.38	J	0.20	0.20	1.47	J	0.73	1.11	1.85	3/24/2000
06e	29 Essex Street	06e001	06e-020543	8'-12'	1.99	J	0.84	0.90		R	3.32	5.35	1.99	3/28/2000
07a	111 Essex Street	07a001	07a-020545	5'-9'	38.46		4.32	0.49	66.97		4.19	2.74	**105.43**	3/27/2000
08a	23 West Howcroft Road	08a001	08a-020549	8'-12'	3.10	J	0.87	0.42	3.39	J	1.60	2.41	**6.49**	3/30/2000
08a	23 West Howcroft Road	08a002	08a-020551	8'-12'		R	0.18	0.30		R	1.37	2.51	R	3/30/2000
08a	23 West Howcroft Road	08a003	08a-020773	4'-8'	0.66	J	0.58	0.88	1.31	U	3.30	5.75	1.96	3/30/2000
09a	149-151 Maywood Avenue	09a001	09a-020553	4'-8'	5.10		1.00	0.50	7.31		1.69	2.13	**12.41**	3/28/2000
09a	149-151 Maywood Avenue	09a002	09a-020555	6'-10'	1.65		0.63	0.65	-0.36	U	1.68	3.00	1.65	3/28/2000
09a	149-151 Maywood Avenue	09a003	09a-020557	6'-10'	1.63		0.61	0.62	-1.40	U	1.27	2.41	1.63	3/28/2000
09a	149-151 Maywood Avenue	09a004	09a-020559	5'-9'	6.54		1.63	0.73	13.76		3.91	5.30	**20.30**	3/31/2000
09a	149-151 Maywood Avenue	09a005	09a-020561	4'-8'	2.00	J	0.68	0.45	2.47	J	1.32	2.04	4.47	3/31/2000
09a	149-151 Maywood Avenue	09a007	09a-020568	6'-10'	27.33		4.24	0.95	8.58		1.86	2.41	**35.91**	4/12/2000
09a	149-151 Maywood Avenue	09a007	09a-020569	20.25'-24.25'	10.21		1.75	0.51	11.74		2.27	2.83	**21.95**	4/11/2000
09a	149-151 Maywood Avenue	09a008	09a-020573	13'-17'	14.55		2.24	0.43	20.03		2.50	2.49	**34.58**	4/12/2000
09a	149-151 Maywood Avenue	09a008	09a-020572	4'-8'	5.22		1.37	0.82	2.45		1.52	2.40	**7.66**	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020576	2'-6'	29.27		3.72	0.38	58.13		3.72	2.28	**87.40**	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020577	9'-13'	1.34		0.51	0.38	0.84		1.28	2.17	2.18	4/12/2000
09a	149-151 Maywood Avenue	09a010	09a-020581	4'-8'	6.87	J	1.33	0.42	16.49	J	2.24	2.44	**23.36**	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a001	10a-020583	6'-10'	2.09		0.62	0.41	4.29		1.53	2.16	**6.38**	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a002	10a-020585	6'-10'	0.63	J	0.23	0.14	1.10	J	0.69	1.08	1.74	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a005	10a-020591	5'-9'	11.00		2.13	0.41	10.50		2.76	3.74	**21.50**	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a006	10a-020593	6'-10'	7.77		1.40	0.39	4.78		1.91	2.86	**12.55**	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a007	10a-020780	1'-5'	20.07	J	4.16	1.37	10.17	J	4.46	6.80	**30.24**	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a008	10a-020782	12'-16'	5.52		1.16	0.24	-0.15	U	1.53	2.71	**5.52**	4/4/2000
11a	205 Maywood Avenue	11a001	11a-020595	4'-8'	3.18		0.94	0.74	3.35	J	1.50	2.26	**6.53**	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b001	12b-020599	16'-20'	10.88		1.87	0.44	15.54		2.10	2.17	**26.42**	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b002	12b-020601	10'-14'	3.90		1.99	1.49	0.00	U	4.07	7.29	3.90	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b003	12b-020603	6'-10'	1.28	J	0.48	0.35	2.64	J	1.42	2.19	3.93	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b004	12b-020605	16'-20'	2.80		0.78	0.44	5.83		1.58	2.10	**8.63**	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b005	12b-020607	12'-16'	0.64	J	0.40	0.42	0.19	U	1.12	1.98	0.83	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b006	12b-020609	5'-9'	5.46		1.00	0.27	9.18		1.76	2.20	**14.64**	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b007	12b-020611	8'-12'	5.78		1.54	0.78	2.92	J	1.51	2.33	**8.70**	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b009	12b-020616	10'-14'	2.19		0.78	0.62	1.99	J	1.27	2.00	4.18	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b010	12b-020620	13.5'-17.5'	0.27	J	0.25	0.40	-0.78	U	1.22	2.27	0.27	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b011	12b-020624	10'-14'	7.62		1.56	0.77	9.71		1.75	1.99	**17.33**	4/7/2000

TABLE 4-2
SUMMARY OF TOTAL RADIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
12b	100 West Hunter Avenue (MISS)	12b011	12b-020625	19'-23'	1.61		0.68	0.48	1.72	J	1.37	2.22	3.33	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	12b-020628	9'-13'	1.16		0.49	0.48	1.69	J	1.23	1.96	2.85	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	12b-020629	19'-23'	1.75	J	0.69	0.67	1.34	UJ	1.38	2.28	3.09	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b013	12b-020633	19'-23'	2.36		0.84	0.51	2.23	J	1.41	2.24	4.59	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b013	12b-020632	10'-14'	2.19		0.77	0.30	1.98	J	1.42	2.28	4.18	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b014	12b-020637	15'-19'	6.13		1.53	0.64	5.47		1.91	2.78	**11.60**	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b015	12b-020640	4'-8'	1.53		0.60	0.38	0.08	U	1.98	3.53	1.61	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b015	12b-020641	16'-20'	1.81		0.59	0.34	2.36	J	1.76	2.81	4.17	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b016	12b-020644	5'-9'	16.67		2.82	0.56	13.91		2.24	2.41	**30.58**	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b016	12b-020645	16'-20'	0.97	J	0.56	0.50	-0.32	U	1.79	3.21	0.97	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b017	12b-020648	6'-10'	2.41	J	0.97	0.67	1.14	U	1.47	2.62	3.55	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b017	12b-020649	21'-25'	2.69	J	0.86	0.65	1.91		1.28	2.03	4.59	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b018	12b-020652	8.5'-12.5'	6.05		1.54	0.63	5.74	J	2.42	3.68	**11.79**	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b019	12b-020656	3.5'-7.5'		R	2.74	0.43		R	2.11	2.30	R	4/24/2000
14a	Transect B	14a001	14a-020666	5.5'-9.5'	0.68	J	0.49	0.70	0.85	U	1.35	2.29	1.53	4/25/2000
14a	Transect B	14a002	14a-020668	9'-13'	3.12		0.95	0.55	2.14	J	1.63	2.64	**5.26**	4/27/2000
14a	Transect B	14a003	14a-020670	4'-8'	7.89		1.69	0.70	7.38		1.75	2.24	**15.27**	4/28/2000
15a	Transect C	15a001	15a-020675	5'-9'	3.24		0.91	0.53	1.11	U	1.41	2.38	4.35	4/13/2000
15a	Transect C	15a002	15a-020676	6'-10'	2.39		0.84	0.68	2.79	J	1.36	2.06	**5.18**	4/14/2000
15a	Transect C	15a002	15a-020677	15.75'-19.75'	7.33		1.64	0.62	3.26	J	1.65	2.55	**10.60**	4/14/2000
15a	Transect C	15a003	15a-020678	10'-14'	0.82	J	0.50	0.77	1.01	U	1.59	2.71	1.83	4/14/2000
16a	Transect D	16a001	16a-020680	6'-10'	5.51	J	1.20	0.40	3.90	J	1.36	1.89	**9.41**	4/17/2000
16a	Transect D	16a002	16a-020682	7'-11'	21.72		3.12	0.59	16.10		2.19	2.22	**37.82**	4/17/2000
16a	Transect D	16a003	16a-020684	14'-18'	2.87		0.86	0.44	2.32	J	1.34	2.08	**5.19**	4/18/2000
16a	Transect D	16a004	16a-020686	7.1'-11.1'	16.17		2.82	0.55	10.97		1.86	1.96	**27.14**	4/25/2000
17a	Transect G	17a001	17a-020688	2.5'-6.5'	2.42	J	0.80	0.47	1.48	J	1.41	2.32	3.90	4/18/2000
17a	Transect G	17a002	17a-020690	11.2'-15.2'	4.20		1.14	0.51	5.73		1.88	2.62	**9.93**	4/25/2000
17a	Transect G	17a003	17a-020692	11.5'-15.5'	3.49	J	0.97	0.54	3.75	J	1.35	1.94	**7.24**	4/28/2000
17a	Transect G	17a004	17a-020694	8'-12'	22.13	J	3.68	1.07	9.73	J	1.78	2.07	**31.86**	5/1/2000
17a	Transect G	17a004	17a-020695	17'-21	0.41	U	0.45	1.09	1.94	J	1.31	2.08	2.35	5/1/2000
18a	Transect J	18a001	18a-020698	15.5'-19.5'	19.67	J	3.29	0.75	17.06	J	2.06	1.79	**36.73**	4/26/2000
18a	Transect J	18a002	18a-020702	13.5'-17.5'	2.41		0.85	0.60	2.42	J	1.30	2.00	4.83	4/26/2000
18a	Transect J	18a003	18a-020706	8'-12'	2.19	J	0.81	0.63	2.34	J	1.34	2.05	4.53	4/27/2000
18a	Transect J	18a003	18a-020707	21'-25'	1.98	J	0.94	0.48	1.64	J	1.62	2.68	3.62	4/26/2000
18a	Transect J	18a004	18a-020710	12'-16	1.55	J	0.77	0.83	0.85	U	1.51	2.58	2.40	4/27/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
Bolded Concentration indicates exceedance of Federal/State MCL of 5 pCi/L
R = Rejected Data

TABLE 4-3
SUMMARY OF TOTAL URANIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a001	01a-020501	10'-14'	1.48	2.33E-04	J	0.83	0.78	0.30	0.14	U	0.38	0.49	0.70	2.10	J	0.54	0.60	2.48	2.24	3/15/2000
02a	100 Hancock Street	02a001	02a-020503	10'-14'	10.69	1.68E-03	J	2.99	0.33	1.15	0.53	J	0.88	0.81	11.45	34.28	J	3.14	0.66	23.29	**34.81**	3/31/2000
02a	100 Hancock Street	02a002	02a-020505	14'-18'	4.95	7.77E-04	J	1.83	1.08	0.31	0.14	UJ	0.51	0.99	3.09	9.26	J	1.36	0.85	8.34	9.40	4/3/2000
02c	80 Industrial Road	02c001	02c-020511	12'-16'	4.55	7.14E-04	J	1.71	0.86	0.76	0.35	J	0.69	0.41	3.07	9.18	J	1.36	0.85	8.37	9.53	3/16/2000
02d	8 Mill Street	02d001	02d-020513	6'-10'	8.54	1.34E-03	J	2.52	0.66	1.32	0.61	J	0.93	0.69	8.04	24.08	J	2.42	0.56	17.90	24.69	3/15/2000
02d	8 Mill Street	02d002	02d-020515	6'-8'	1.88	2.95E-04	J	1.02	0.99	0.11	0.05	UJ	0.27	0.63	1.85	5.54	J	0.99	0.81	3.84	5.60	3/16/2000
02d	8 Mill Street	02d003	02d-020517	8'-12'	2.18	3.43E-04	J	1.21	0.82	0.13	0.06	U	0.32	0.72	0.88	2.62	J	0.75	0.93	3.19	2.68	3/16/2000
03a	170 Gregg Street	03a001	03a-020519	4'-8'	9.24	1.45E-03	J	2.89	0.75	0.76	0.35	UJ	0.80	1.12	8.21	24.58	J	2.70	1.39	18.21	24.93	3/16/2000
04a	160/174 Essex Street	04a001	04a-020521	8'-12'	2.19	3.44E-04	J	0.73	0.25	0.28	0.13	J	0.26	0.15	1.46	4.38		0.57	0.12	3.94	4.51	3/22/2000
04a	160/174 Essex Street	04a002	04a-020523	10'-14'	0.87	1.37E-04	J	0.47	0.30	0.07	0.03	U	0.14	0.19	0.55	1.66		0.36	0.15	1.49	1.69	3/17/2000
04a	160/174 Essex Street	04a003	04a-020525	8'-12'	0.95	1.49E-04	J	0.49	0.33	-0.01	-0.01	U	0.02	0.31	0.47	1.40	J	0.34	0.29	1.41	1.39	3/22/2000
05a	99 Essex Street	05a001	05a-020527	8'-12'	2.53	3.98E-04	J	0.92	0.43	0.04	0.02	U	0.15	0.43	1.71	5.13		0.73	0.49	4.29	5.15	3/22/2000
05b	113 Essex Street	05b001	05b-020529	12'-16'	1.47	2.30E-04	J	0.59	0.23	0.36	0.17	J	0.30	0.16	0.67	2.00	J	0.38	0.27	2.50	2.17	3/23/2000
05c	200 NJ Rt. 17 South	05c001	05c-020531	7'-11'	0.64	1.01E-04	J	0.40	0.37	0.15	0.07	UJ	0.23	0.43	0.24	0.71	UJ	0.24	0.32	1.03	0.78	3/23/2000
06a	85-101 NJ Rt. 17 North	06a001	06a-020533	4'-8'	4.01	6.29E-04	J	1.33	0.37	0.32	0.15	UJ	0.34	0.39	2.13	6.37	J	0.88	0.44	6.46	6.52	3/23/2000
06b	137 NJ Rt. 17 North	06b001	06b-020535	2'-6'	8.33	1.31E-03	J	3.18	1.29	1.37	0.64	J	1.23	1.32	5.81	17.40	J	2.51	1.06	15.51	18.04	3/24/2000
06c	167 NJ Rt. 17 North	06c001	06c-020537	8'-12'	10.93	1.72E-03	J	2.97	0.71	0.82	0.38	J	0.69	0.76	6.48	19.40	J	2.05	0.79	18.23	19.78	3/24/2000
06c	167 NJ Rt. 17 North	06c002	06c-020539	6'-10'	23.73	3.73E-03	J	6.44	1.19	2.89	1.34	J	1.68	0.97	17.22	51.56	J	5.01	1.18	43.84	**52.90**	3/27/2000
06d	239 NJ Rt. 17 North	06d001	06d-020541	5'-9'	0.89	1.40E-04	J	0.46	0.27	0.18	0.08	U	0.22	0.29	0.53	1.58	J	0.35	0.30	1.59	1.66	3/24/2000
06e	29 Essex Street	06e001	06e-020543	8'-12'	2.09	3.29E-04	J	0.95	0.48	-0.04	-0.02	U	0.05	0.59	2.58	7.73		1.07	0.58	4.68	7.72	3/28/2000
07a	111 Essex Street	07a001	07a-020545	5'-9'	16.35	2.57E-03	J	4.45	1.04	1.55	0.72	J	1.08	0.47	12.29	36.80	J	3.59	0.91	30.19	**37.52**	3/27/2000
08a	23 West Howcroft Road	08a001	08a-020549	8'-12'	5.63	8.84E-04	J	1.86	0.29	0.89	0.41	J	0.71	0.61	4.71	14.09	J	1.66	0.64	11.23	14.50	3/30/2000
08a	23 West Howcroft Road	08a002	08a-020551	8'-12'	76.29	1.20E-02	J	16.69	0.78	6.02	2.79	J	2.40	0.82	98.43	294.70	J	21.14	1.06	180.74	**297.50**	3/30/2000
08a	23 West Howcroft Road	08a003	08a-020773	4'-8'	40.41	6.35E-03	J	10.21	0.97	1.95	0.90	J	1.39	1.02	30.94	92.63	J	8.14	1.08	73.30	**93.54**	3/30/2000
09a	149-151 Maywood Avenue	09a001	09a-020553	4'-8'	7.95	1.25E-03	J	2.56	0.71	0.43	0.20	UJ	0.57	0.88	7.85	23.50	J	2.54	0.91	16.23	23.70	3/28/2000
09a	149-151 Maywood Avenue	09a002	09a-020555	6'-10'	4.80	7.54E-04	J	1.95	1.41	0.11	0.05	UJ	0.35	0.93	4.64	13.90	J	1.89	1.17	9.56	13.95	3/28/2000
09a	149-151 Maywood Avenue	09a003	09a-020557	6'-10'	3.06	4.80E-04	J	1.55	1.04	0.55	0.26	UJ	0.69	0.90	2.67	8.01	J	1.45	1.17	6.28	8.26	3/28/2000
09a	149-151 Maywood Avenue	09a004	09a-020559	5'-9'	0.90	1.41E-04	J	0.58	0.56	0.03	0.01	UJ	0.21	0.65	0.20	0.60	UJ	0.28	0.48	1.13	0.61	3/31/2000
09a	149-151 Maywood Avenue	09a005	09a-020561	4'-8'	3.83	6.02E-04	J	1.45	0.70	0.12	0.06	U	0.25	0.34	4.30	12.88		1.54	0.27	8.26	12.94	3/31/2000
09a	149-151 Maywood Avenue	09a007	09a-020568	6'-10'	15.10	2.37E-03		4.18	0.53	2.22	1.03		1.22	0.65	12.32	36.89		3.56	0.52	29.64	**37.92**	4/12/2000
09a	149-151 Maywood Avenue	09a007	09a-020569	20.25'-24.25'	5.66	8.89E-04		1.87	0.52	0.57	0.27		0.55	0.55	5.48	16.39		1.82	0.26	11.71	16.66	4/11/2000
09a	149-151 Maywood Avenue	09a008	09a-020573	13'-17'	3.80	5.97E-04		1.34	0.23	0.52	0.24		0.48	0.28	4.68	14.01		1.53	0.46	9.00	14.26	4/12/2000
09a	149-151 Maywood Avenue	09a008	09a-020572	4'-8'	1.19	1.87E-04		0.77	0.51	0.50	0.23		0.55	0.73	0.73	2.18		0.60	0.59	2.41	2.41	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020576	2'-6'	6.65	1.04E-03		1.94	0.39	0.50	0.23		0.47	0.48	6.12	18.33		1.83	0.38	13.26	18.56	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020577	9'-13'	6.50	1.02E-03		2.10	0.50	1.18	0.55		0.84	0.62	5.22	15.64		1.82	0.71	12.90	16.19	4/12/2000
09a	149-151 Maywood Avenue	09a010	09a-020581	4'-8'	6.30	9.90E-04	J	2.21	0.66	0.90	0.42	J	0.76	0.41	5.69	17.03	J	2.06	0.56	12.89	17.45	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a001	10a-020583	6'-10'	8.64	1.36E-03		2.45	0.58	0.51	0.23	U	0.54	0.61	8.51	25.48		2.42	0.49	17.65	25.72	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a002	10a-020585	6'-10'	0.35	5.47E-05	UJ	0.39	0.59	0.21	0.10	UJ	0.30	0.28	0.57	1.71	J	0.46	0.39	1.13	1.80	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a005	10a-020591	5'-9'	10.49	1.65E-03	J	3.12	0.83	0.82	0.38	J	0.77	0.78	11.29	33.80	J	3.28	0.74	22.60	**34.18**	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a006	10a-020593	6'-10'	11.03	1.73E-03	J	4.15	1.95	1.24	0.58	UJ	1.33	1.50	7.67	22.97	J	3.28	1.71	19.94	23.55	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a007	10a-020780	1'-5'	8.56	1.34E-03	J	2.44	0.52	0.55	0.25	UJ	0.56	0.37	6.97	20.87	J	2.12	0.51	16.08	21.13	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a008	10a-020782	12'-16'	14.65	2.30E-03	J	4.53	0.97	0.41	0.19	UJ	0.64	1.02	12.74	38.14	J	4.09	1.17	27.80	**38.33**	4/4/2000
11a	205 Maywood Avenue	11a001	11a-020595	4'-8'	2.43	3.81E-04	J	1.09	0.70	0.25	0.11	U	0.35	0.34	1.58	4.74		0.85	0.46	4.26	4.86	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b001	12b-020599	16'-20'	7.95	1.25E-03	J	2.66	0.70	0.74	0.34	UJ	0.76	0.50	7.02	21.02	J	2.45	0.69	15.72	21.36	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b002	12b-020601	10'-14'	3.98	6.25E-04	J	1.64	0.70	0.45	0.21	UJ	0.56	0.74	3.27	9.80		1.47	0.85	7.71	10.01	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b003	12b-020603	6'-10'	2.35	3.70E-04	J	1.13	0.72	0.39	0.18	UJ	0.48	0.63	1.17	3.51	J	0.77	0.60	3.91	3.69	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b004	12b-020605	16'-20'	2.19	3.43E-04	J	1.25	1.01	0.89	0.41	J	0.82	0.48	1.82	5.45	J	1.11	0.78	4.90	5.86	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b005	12b-020607	12'-16'	1.05	1.64E-04	J	0.73	0.32	0.14	0.07	UJ	0.29	0.39	0.46	1.39	UJ	0.47	0.31	1.65	1.45	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b006	12b-020609	5'-9'	15.11	2.37E-03	J	3.58	0.44	0.94	0.44	J	0.69	0.32	17.50	52.40	J	4.02	0.52	33.55	**52.83**	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b007	12b-020611	8'-12'	22.16	3.48E-03	J	5.72	0.58	0.93	0.43	J	0.79	0.42	16.94	50.72	J	4.60	0.34	40.03	**51.15**	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b009	12b-020616	10'-14'	9.88	1.55E-03	J	2.36	0.51	0.37	0.17	UJ	0.39	0.45	7.66	22.93	J	1.97	0.51	17.91	23.11	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b010	12b-020620	13.5'-17.5'	27.28	4.29E-03	J	5.86	0.77	1.68	0.78	J	0.96	0.56	31.43	94.10	J	6.61	0.83	60.39	**94.88**	4/6/2000

TABLE 4-3
SUMMARY OF TOTAL URANIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
12b	100 West Hunter Avenue (MISS)	12b011	12b-020624	10'-14'	15.79	2.48E-03	J	5.07	1.15	0.95	0.44	UJ	1.07	1.41	12.39	37.10	J	4.25	0.97	29.13	**37.54**	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b011	12b-020625	19'-23'	6.28	9.86E-04	J	1.94	0.64	0.26	0.12	UJ	0.37	0.35	5.44	16.30	U	1.77	0.49	11.98	16.42	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	12b-020628	9'-13'	28.27	4.44E-03	J	6.86	0.35	2.26	1.05	J	1.29	0.44	19.42	58.14	J	5.04	0.35	49.95	**59.19**	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	12b-020629	19'-23'	1.10	1.73E-04	J	0.71	0.56	0.26	0.12	UJ	0.36	0.35	0.83	2.47	J	0.60	0.28	2.18	2.59	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b013	12b-020633	19'-23'	2.94	4.62E-04	J	1.35	0.60	0.48	0.22	UJ	0.56	0.43	2.65	7.94	J	1.28	0.70	6.07	8.16	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b013	12b-020632	10'-14'	8.11	1.27E-03	J	2.52	0.83	0.44	0.20	UJ	0.55	0.72	5.98	17.92	J	2.06	0.68	14.54	18.12	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b014	12b-020636	6.4'-10'	1.26	1.97E-04		0.69	0.43	0.66	0.30		0.54	0.54	0.86	2.59		0.56	0.37	2.78	2.89	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b014	12b-020637	15'-19'	0.78	1.22E-04	J	0.54	0.55	0.19	0.09	U	0.29	0.48	0.79	2.36	J	0.54	0.50	1.75	2.45	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b015	12b-020640	4'-8'	1.72	2.70E-04	J	1.20	1.19	1.11	0.52	J	1.07	1.37	2.59	7.75	J	1.48	1.11	5.42	8.26	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b015	12b-020641	16'-20'	1.85	2.90E-04	J	1.10	1.08	0.13	0.06	UJ	0.32	0.73	2.81	8.42	J	1.36	0.89	4.79	8.48	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b016	12b-020644	5'-9'	4.94	7.76E-04	J	2.39	1.10	1.36	0.63	J	1.34	1.59	3.19	9.54	J	1.88	1.42	9.49	10.17	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b016	12b-020645	16'-20'	2.29	3.60E-04	J	1.85	1.55	0.27	0.13	UJ	0.85	2.25	1.56	4.66	J	1.54	1.81	4.12	4.79	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b017	12b-020649	21'-25'	6.22	9.77E-04	J	3.27	1.61	1.72	0.80	UJ	1.76	1.17	5.21	15.59	J	2.93	0.94	13.15	16.39	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b017	12b-020648	6'-10'	3.38	5.31E-04	J	2.35	2.58	-0.13	-0.06	UJ	0.19	2.12	1.31	3.93	UJ	1.46	2.21	4.69	3.87	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b018	12b-020652	8.5'-12.5'	7.03	1.10E-03	J	3.27	1.81	1.41	0.65	UJ	1.51	1.71	2.98	8.92	J	1.98	0.81	11.42	9.58	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b019	12b-020656	3.5'-7.5'	9.12	1.43E-03	J	3.90	1.42	2.26	1.05	J	1.91	1.02	5.79	17.32	J	2.94	0.83	17.17	18.37	4/24/2000
14a	Transect B	14a001	14a-020666	5.5'-9.5'	1.64	2.58E-04	J	1.42	1.88	0.25	0.11	U	0.61	1.38	0.96	2.86	U	1.11	1.78	2.85	2.98	4/25/2000
14a	Transect B	14a002	14a-020668	9'-13'	6.29	9.89E-04	J	2.90	1.69	0.21	0.10	UJ	0.66	1.73	2.92	8.73	J	1.89	1.69	9.42	8.83	4/27/2000
14a	Transect B	14a003	14a-020670	4'-8'	9.80	1.54E-03		2.58	0.49	0.66	0.30	J	0.55	0.61	4.80	14.38		1.55	0.38	15.26	14.69	4/28/2000
15a	Transect C	15a001	15a-020675	5'-9'	3.05	4.80E-04	J	1.29	0.56	0.72	0.33	J	0.64	0.69	1.21	3.63	J	0.75	0.47	4.99	3.97	4/13/2000
15a	Transect C	15a002	15a-020676	6'-10'	1.08	1.70E-04	J	0.72	0.29	0.40	0.19	UJ	0.47	0.36	1.36	4.08	J	0.82	0.58	2.84	4.27	4/14/2000
15a	Transect C	15a002	15a-020677	15.75'-19.75'	1.57	2.46E-04	J	0.88	0.49	0.63	0.29	J	0.60	0.60	2.19	6.56		1.07	0.49	4.39	6.85	4/14/2000
15a	Transect C	15a003	15a-020678	10'-14'	1.15	1.80E-04	J	0.71	0.45	-0.04	0.00	U	0.06	0.65	0.18	0.53	U	0.28	0.45	1.32	0.53	4/14/2000
16a	Transect D	16a001	16a-020680	6'-10'	3.63	5.71E-04	J	1.42	0.48	0.21	0.10	UJ	0.37	0.70	2.22	6.63	J	1.06	0.68	6.06	6.73	4/17/2000
16a	Transect D	16a002	16a-020682	7'-11'	4.97	7.81E-04		1.76	0.49	0.63	0.29	J	0.60	0.61	3.15	9.44		1.32	0.49	8.76	9.73	4/17/2000
16a	Transect D	16a003	16a-020684	14'-18'	2.73	4.28E-04		1.15	0.56	0.21	0.10	U	0.33	0.53	1.63	4.87		0.85	0.50	4.56	4.97	4/18/2000
16a	Transect D	16a004	16a-020686	7.1'-11.1'	7.91	1.24E-03	J	3.71	2.03	0.13	0.06	UJ	0.88	2.72	3.80	11.37	J	2.47	2.20	11.84	11.43	4/25/2000
17a	Transect G	17a001	17a-020688	2.5'-6.5'	2.42	3.81E-04		1.18	0.75	1.05	0.49	J	0.83	0.85	1.17	3.49	J	0.79	0.75	4.64	3.98	4/18/2000
17a	Transect G	17a002	17a-020690	11.2'-15.2'	3.01	4.73E-04	J	1.91	0.74	1.35	0.63	UJ	1.38	0.92	1.86	5.58	J	1.49	1.26	6.23	6.20	4/25/2000
17a	Transect G	17a003	17a-020692	11.5'-15.5'	1.43	2.24E-04	J	0.78	0.70	0.70	0.33	J	0.58	0.57	1.29	3.87	J	0.73	0.60	3.42	4.20	4/28/2000
17a	Transect G	17a004	17a-020694	8'-12'	2.30	3.62E-04	J	1.12	0.60	0.09	0.04	UJ	0.28	0.75	1.76	5.26	J	0.96	0.51	4.15	5.30	5/1/2000
17a	Transect G	17a004	17a-020695	17'-21	1.11	1.74E-04	J	0.70	0.27	0.25	0.11	UJ	0.35	0.34	0.60	1.80	J	0.51	0.27	1.96	1.91	5/1/2000
18a	Transect J	18a001	18a-020698	15.5'-19.5'	15.97	2.51E-03		5.16	1.55	0.16	0.07	U	0.67	1.92	16.46	49.28		5.28	2.08	32.59	**49.36**	4/26/2000
18a	Transect J	18a002	18a-020702	13.5'-17.5'	25.97	4.08E-03	J	8.04	1.40	4.79	2.22	J	2.90	1.73	21.94	65.69	J	7.08	1.39	52.70	**67.91**	4/26/2000
18a	Transect J	18a003	18a-020706	8'-12'	2.24	3.51E-04	U	1.61	2.00	0.36	0.17	U	0.79	1.78	1.46	4.37	J	1.29	1.79	4.05	4.53	4/27/2000
18a	Transect J	18a003	18a-020707	21'-25'	1.94	3.05E-04	J	1.46	1.15	0.87	0.40	U	1.08	1.42	2.30	6.89	J	1.64	1.62	5.11	7.29	4/26/2000
18a	Transect J	18a004	18a-020710	12'-16	4.04	6.34E-04		2.19	1.76	0.24	0.11	U	0.60	1.36	2.92	8.74	J	1.81	1.55	7.20	8.85	4/27/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Bolded concentrations denotes exceedance of Federal/State MCL of 30 ug/L for Total Uranium

TABLE 4-4

SUMMARY OF TOTAL THORIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a001	01a-020501	10'-14'	0.31	J	0.28	0.41	0.68	UJ	0.37	0.27	0.25	J	0.22	0.24	1.25	03/15/00
02a	100 Hancock Street	02a001	02a-020503	10'-14'	4.06		1.33	0.70	3.91		1.28	0.44	4.77		1.45	0.48	12.73	03/31/00
02a	100 Hancock Street	02a002	02a-020505	14'-18'	2.10		0.98	0.78	4.10		1.43	0.81	1.86		0.90	0.65	8.06	04/03/00
02c	80 Industrial Road	02c001	02c-020511	12'-16'	3.85		1.41	0.75	3.88	J	1.41	0.72	4.52		1.53	0.43	12.25	03/16/00
02d	8 Mill Street	02d001	02d-020513	6'-10'	7.71		2.19	0.66	6.11		1.86	0.70	7.31		2.10	0.73	**21.13**	03/15/00
02d	8 Mill Street	02d002	02d-020515	6'-8'	1.13	J	0.80	0.87	2.49	J	1.18	0.79	0.88	J	0.70	0.87	4.50	03/16/00
02d	8 Mill Street	02d003	02d-020517	8'-12'	0.13	U	0.18	0.32	0.42	J	0.28	0.23	0.10	U	0.15	0.28	0.65	03/16/00
03a	170 Gregg Street	03a001	03a-020519	4'-8'	8.49	J	2.48	0.59	6.72	J	2.11	0.80	8.17	J	2.40	0.65	**23.37**	03/16/00
04a	160/174 Essex Street	04a001	04a-020521	8'-12'	0.99	J	0.70	0.51	2.46	J	1.15	0.72	0.71	J	0.60	0.66	4.17	03/22/00
04a	160/174 Essex Street	04a002	04a-020523	10'-14'	0.32	U	0.43	0.77	1.32	J	0.77	0.77	0.20	U	0.32	0.64	1.84	03/17/00
04a	160/174 Essex Street	04a003	04a-020525	8'-12'	0.17	U	0.21	0.34	0.38	J	0.27	0.24	0.15	U	0.18	0.27	0.71	03/22/00
05a	99 Essex Street	05a001	05a-020527	8'-12'	0.26	J	0.24	0.32	0.32	J	0.25	0.28	0.01	J	0.09	0.28	0.59	03/22/00
05b	113 Essex Street	05b001	05b-020529	12'-16'	0.21	U	0.24	0.42	0.62	J	0.37	0.33	0.32	J	0.26	0.22	1.15	03/23/00
05c	200 NJ Rt. 17 South	05c001	05c-020531	7'-11'	0.08	U	0.14	0.27	0.64	J	0.37	0.13	0.14	U	0.17	0.23	0.87	03/23/00
06a	85-101 NJ Rt. 17 North	06a001	06a-020533	4'-8'	0.39	J	0.32	0.44	0.80	J	0.42	0.25	-0.03	U	0.11	0.41	1.20	03/23/00
06b	137 NJ Rt. 17 North	06b001	06b-020535	2'-6'	5.01		1.73	0.94	6.48		2.00	0.58	5.27		1.76	0.64	**16.76**	03/24/00
06c	167 NJ Rt. 17 North	06c001	06c-020537	8'-12'	13.73		3.42	0.44	11.67		3.02	0.67	10.98		2.88	0.67	**36.38**	03/24/00
06c	167 NJ Rt. 17 North	06c002	06c-020539	6'-10'	30.40		6.86	1.12	10.77		2.99	0.80	24.14		5.62	0.65	**65.31**	03/27/00
06d	239 NJ Rt. 17 North	06d001	06d-020541	5'-9'	0.18	U	0.21	0.30	0.52	J	0.35	0.33	0.24	J	0.23	0.23	0.94	03/24/00
06e	29 Essex Street	06e001	06e-020543	8'-12'	0.19	UJ	0.42	0.93	0.34	UJ	0.47	0.84	0.34	UJ	0.47	0.84	0.87	03/28/00
07a	111 Essex Street	07a001	07a-020545	5'-9'	38.84		7.07	0.75	11.40		2.57	0.46	41.86		7.55	0.55	**92.10**	03/27/00
08a	23 West Howcroft Road	08a001	08a-020549	8'-12'	2.85		1.21	0.62	3.66	J	1.41	0.84	3.25		1.30	0.56	9.75	03/30/00
08a	23 West Howcroft Road	08a002	08a-020551	8'-12'	103.90		17.68	0.50	18.81		3.83	0.53	96.78		16.51	0.53	**219.49**	03/30/00
08a	23 West Howcroft Road	08a003	08a-020773	4'-8'	1.34	J	0.80	0.57	0.57	J	0.53	0.63	0.90	J	0.65	0.57	2.82	03/30/00
09a	149-151 Maywood Avenue	09a001	09a-020553	4'-8'	6.87		2.00	0.56	6.11		1.86	0.87	7.00		2.02	0.50	**19.98**	03/28/00
09a	149-151 Maywood Avenue	09a002	09a-020555	6'-10'	2.42	J	1.26	1.13	2.34	J	1.24	1.20	1.38	J	0.91	0.87	6.13	03/28/00
09a	149-151 Maywood Avenue	09a003	09a-020557	6'-10'	1.16	J	0.85	0.81	4.42	J	1.81	1.25	1.60	J	1.02	0.99	7.18	03/28/00
09a	149-151 Maywood Avenue	09a004	09a-020559	5'-9'	-0.05	U	0.29	0.92	1.06	J	0.65	0.49	0.06	U	0.19	0.49	1.12	03/31/00
09a	149-151 Maywood Avenue	09a005	09a-020561	4'-8'	3.49		1.45	0.92	4.16	J	1.61	0.88	2.35		1.13	0.52	10.00	03/31/00
09a	149-151 Maywood Avenue	09a007	09a-020568	6'-10'	25.79		6.53	0.67	5.29		1.96	0.33	17.43		4.71	0.57	**48.51**	04/12/00
09a	149-151 Maywood Avenue	09a007	09a-020569	20.25'-24.25'	1.87		0.95	0.60	1.57		0.85	0.46	0.87		0.62	0.46	4.30	04/11/00
09a	149-151 Maywood Avenue	09a008	09a-020573	13'-17'	20.74		4.67	0.59	6.90		2.02	0.25	16.31		3.83	0.25	**43.95**	04/12/00
09a	149-151 Maywood Avenue	09a008	09a-020572	4'-8'	1.11		0.71	0.63	1.01		0.67	0.58	0.53		0.48	0.58	2.65	04/12/00
09a	149-151 Maywood Avenue	09a009	09a-020576	2'-6'	0.54		0.53	0.62	1.23		0.79	0.53	0.32		0.40	0.53	2.09	04/12/00
09a	149-151 Maywood Avenue	09a009	09a-020577	9'-13'	5.98		2.46	1.35	1.93		1.28	1.21	5.71		2.34	0.47	13.62	04/12/00
09a	149-151 Maywood Avenue	09a010	09a-020581	4'-8'	3.33	J	1.54	0.80	1.58	J	0.99	0.62	1.04	J	0.79	0.62	5.96	04/13/00
10a	100 West Hunter Avenue (Stepan)	10a001	10a-020583	6'-10'	1.96		0.88	0.67	3.49		1.21	0.62	2.36		0.95	0.43	7.81	03/29/00
10a	100 West Hunter Avenue (Stepan)	10a002	10a-020585	6'-10'	0.45	J	0.29	0.23	0.52	J	0.31	0.25	0.45	J	0.29	0.19	1.42	03/29/00
10a	100 West Hunter Avenue (Stepan)	10a005	10a-020591	5'-9'	16.23		3.78	0.74	11.74		2.94	0.77	15.16		3.57	0.53	**43.13**	04/03/00
10a	100 West Hunter Avenue (Stepan)	10a006	10a-020593	6'-10'	11.57		2.95	0.67	8.41		2.33	0.58	11.88		2.99	0.44	**31.86**	04/03/00
10a	100 West Hunter Avenue (Stepan)	10a007	10a-020780	1'-5'	10.55	J	2.82	1.08	9.44	J	2.59	0.71	10.59	J	2.80	0.55	**30.58**	04/04/00
10a	100 West Hunter Avenue (Stepan)	10a008	10a-020782	12'-16'	4.02		1.38	0.64	5.32		1.64	0.57	3.69		1.30	0.47	13.03	04/04/00
11a	205 Maywood Avenue	11a001	11a-020595	4'-8'	1.76	J	1.11	1.20	4.64	J	1.84	0.92	1.41	J	0.92	0.71	7.81	03/27/00
12b	100 West Hunter Avenue (MISS)	12b001	12b-020599	16'-20'	22.17		4.93	0.70	7.52		2.19	0.55	21.41		4.78	0.27	**51.10**	04/04/00
12b	100 West Hunter Avenue (MISS)	12b002	12b-020601	10'-14'	0.95	J	0.74	0.76	5.30	J	1.95	0.88	1.99	J	1.08	0.58	8.23	04/04/00
12b	100 West Hunter Avenue (MISS)	12b003	12b-020603	6'-10'	1.20	J	0.71	0.58	0.58	J	0.48	0.54	0.93	J	0.61	0.53	2.70	04/05/00
12b	100 West Hunter Avenue (MISS)	12b004	12b-020605	16'-20'	2.64	J	1.19	0.77	1.77	J	0.98	0.98	4.07	J	1.52	0.77	8.48	04/05/00
12b	100 West Hunter Avenue (MISS)	12b005	12b-020607	12'-16'	0.51	U	0.52	0.68	0.65	J	0.61	0.87	0.41	U	0.46	0.61	1.57	04/05/00
12b	100 West Hunter Avenue (MISS)	12b006	12b-020609	5'-9'	0.25	U	0.39	0.71	0.72	J	0.59	0.59	0.43	UJ	0.44	0.29	1.40	04/05/00
12b	100 West Hunter Avenue (MISS)	12b007	12b-020611	8'-12'	4.16	J	1.77	0.75	3.18	J	1.49	0.37	3.79	J	1.67	0.83	11.12	04/28/00
12b	100 West Hunter Avenue (MISS)	12b009	12b-020616	10'-14'	1.49		0.82	0.46	1.18	J	0.72	0.46	0.78	J	0.58	0.46	3.45	04/06/00
12b	100 West Hunter Avenue (MISS)	12b010	12b-020620	13.5'-17.5'		R	3.54	2.99		R	2.12	2.19		R	2.31	2.19	R	04/06/00
12b	100 West Hunter Avenue (MISS)	12b011	12b-020624	10'-14'	12.49	J	4.17	1.92	1.62	J	1.22	1.27	12.57	J	4.13	0.90	**26.68**	04/07/00
12b	100 West Hunter Avenue (MISS)	12b011	12b-020625	19'-23'	3.26	J	1.40	1.08	1.56	J	0.90	0.70	2.80	J	1.25	0.75	7.61	04/07/00
12b	100 West Hunter Avenue (MISS)	12b012	12b-020628	9'-13'	0.26	U	0.35	0.53	2.55	J	1.11	0.27	0.88		0.61	0.27	3.70	04/07/00
12b	100 West Hunter Avenue (MISS)	12b012	12b-020629	19'-23'	0.92	J	0.68	0.71	1.40	J	0.82	0.50	1.29	J	0.79	0.50	3.60	04/07/00
12b	100 West Hunter Avenue (MISS)	12b013	12b-020633	19'-23'	2.98	J	1.03	0.45	1.48		0.68	0.37	2.91		1.01	0.37	7.38	04/10/00

TABLE 4-4

SUMMARY OF TOTAL THORIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	Geoprobe Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
12b	100 West Hunter Avenue (MISS)	12b013	12b-020632	10'-14'	1.37	J	0.87	1.02	2.26	J	1.08	0.73	1.67	J	0.93	0.84	5.31	04/10/00
12b	100 West Hunter Avenue (MISS)	12b014	12b-020636	6.4'-10'	1.39		0.84	0.81	1.76		0.92	0.54	1.55		0.85	0.60	4.70	04/10/00
12b	100 West Hunter Avenue (MISS)	12b014	12b-020637	15'-19'	1.98		0.97	1.01	1.55	J	0.81	0.71	1.39		0.74	0.41	4.92	04/10/00
12b	100 West Hunter Avenue (MISS)	12b015	12b-020640	4'-8'	2.14	J	1.32	1.12	1.53	J	1.08	0.97	1.55	J	1.08	0.87	5.22	04/19/00
12b	100 West Hunter Avenue (MISS)	12b015	12b-020641	16'-20'	1.79	J	1.20	1.19	2.90	J	1.50	0.44	1.07	J	0.88	0.87	5.76	04/19/00
12b	100 West Hunter Avenue (MISS)	12b016	12b-020644	5'-9'	6.74	J	2.35	0.34	2.78	J	1.35	0.88	4.32	J	1.75	0.75	13.83	04/20/00
12b	100 West Hunter Avenue (MISS)	12b016	12b-020645	16'-20'	0.52	J	0.49	0.63	1.75	J	0.91	0.67	0.11	U	0.28	0.67	2.37	04/20/00
12b	100 West Hunter Avenue (MISS)	12b017	12b-020649	21'-25'	4.49		1.60	0.57	2.35	J	1.08	0.77	4.33		1.55	0.57	11.16	04/20/00
12b	100 West Hunter Avenue (MISS)	12b017	12b-020648	6'-10'	0.20	UJ	0.45	0.99	2.30	J	1.32	1.06	0.88	J	0.77	0.70	3.39	04/24/00
12b	100 West Hunter Avenue (MISS)	12b018	12b-020652	8.5'-12.5'	4.04		1.56	0.59	4.27	J	1.62	0.76	3.81		1.51	0.81	12.12	04/24/00
12b	100 West Hunter Avenue (MISS)	12b019	12b-020656	3.5'-7.5'	1.02	J	0.76	0.99	1.89	J	0.97	0.67	0.84	J	0.64	0.72	3.74	04/24/00
14a	Transect B	14a001	14a-020666	5.5'-9.5'	0.09	U	0.26	0.64	1.29	J	0.74	0.68	0.35	U	0.40	0.64	1.72	04/25/00
14a	Transect B	14a002	14a-020668	9'-13'	1.68	J	0.92	0.85	2.17	J	1.02	0.58	1.51		0.83	0.52	5.36	04/27/00
14a	Transect B	14a003	14a-020670	4'-8'	0.48	U	0.52	0.90	2.49	J	1.02	0.49	0.35	U	0.37	0.53	3.32	04/28/00
15a	Transect C	15a001	15a-020675	5'-9'	0.55	J	0.47	0.61	1.32	J	0.70	0.43	1.00	J	0.60	0.43	2.86	04/13/00
15a	Transect C	15a002	15a-020676	6'-10'	0.64	J	0.48	0.50	1.22	J	0.65	0.21	0.83		0.52	0.21	2.69	04/14/00
15a	Transect C	15a002	15a-020677	15.75'-19.75'	1.86		0.95	0.53	1.28	J	0.76	0.27	0.38	U	0.40	0.45	3.52	04/14/00
15a	Transect C	15a003	15a-020678	10'-14'	0.45	J	0.43	0.55	0.63	J	0.49	0.50	1.22		0.68	0.45	2.30	04/14/00
16a	Transect D	16a001	16a-020680	6'-10'	4.68		1.62	0.75	2.91	J	1.20	0.67	2.31		1.03	0.26	9.89	04/17/00
16a	Transect D	16a002	16a-020682	7'-11'	1.99		0.99	0.61	1.39	J	0.80	0.47	1.59		0.86	0.47	4.98	04/17/00
16a	Transect D	16a003	16a-020684	14'-18'	1.42	J	0.80	0.65	1.50	J	0.82	0.65	0.46	U	0.47	0.69	3.38	04/18/00
16a	Transect D	16a004	16a-020686	7.1'-11.1'	1.13	J	0.67	0.70	1.59	J	0.79	0.66	0.42	J	0.38	0.40	3.14	04/25/00
17a	Transect G	17a001	17a-020688	2.5'-6.5'	0.56	U	0.57	0.96	0.92	J	0.63	0.63	0.76	J	0.56	0.54	2.24	04/18/00
17a	Transect G	17a002	17a-020690	11.2'-15.2'	1.14	J	0.67	0.60	1.61	J	0.80	0.60	0.54	J	0.44	0.44	3.29	04/25/00
17a	Transect G	17a003	17a-020692	11.5'-15.5'	1.72		0.87	0.81	2.01	J	0.93	0.70	0.78	J	0.57	0.69	4.50	04/28/00
17a	Transect G	17a004	17a-020694	8'-12'	1.68		0.78	0.50	1.95	J	0.84	0.50	1.17		0.63	0.47	4.81	05/01/00
17a	Transect G	17a004	17a-020695	17'-21	0.15	U	0.30	0.60	1.17	J	0.74	0.54	0.35	U	0.41	0.60	1.67	05/01/00
18a	Transect J	18a001	18a-020698	15.5'-19.5'	4.35		1.53	0.63	2.39	J	1.04	0.49	3.73		1.37	0.49	10.47	04/26/00
18a	Transect J	18a002	18a-020702	13.5'-17.5'	5.05		1.68	0.72	2.39	J	1.06	0.80	5.75		1.82	0.56	13.19	04/26/00
18a	Transect J	18a003	18a-020706	8'-12'	0.65	J	0.50	0.46	1.35	J	0.73	0.23	0.32	U	0.34	0.39	2.33	04/27/00
18a	Transect J	18a003	18a-020707	21'-25'	2.19		0.98	0.51	1.35	J	0.73	0.40	2.03		0.92	0.39	5.58	04/26/00
18a	Transect J	18a004	18a-020710	12'-16	0.61	J	0.53	0.62	2.10	J	0.98	0.26	2.10		0.98	0.26	4.81	04/27/00

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
Bolded Concentration indicates exceedance of gross alpha standard of 15 pCi/L

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020501	01a001	Barium, Total	10'-14'	89.9		0.20	3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020501	01a001	Boron, Total	10'-14'	94.1		1.2	3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020501	01a001	Lithium, Total	10'-14'	2.6		0.10	3/15/2000
02a	100 Hancock Street	02a-020503	02a001	Barium, Total	10'-14'	218		0.20	3/31/2000
02a	100 Hancock Street	02a-020503	02a001	Boron, Total	10'-14'	88.6		1.2	3/31/2000
02a	100 Hancock Street	02a-020503	02a001	Lithium, Total	10'-14'	159	J	0.10	3/31/2000
02a	100 Hancock Street	02a-020505	02a002	Arsenic, Total	14'-18'	3.2	J	2.9	4/3/2000
02a	100 Hancock Street	02a-020505	02a002	Barium, Total	14'-18'	80		0.20	4/3/2000
02a	100 Hancock Street	02a-020505	02a002	Boron, Total	14'-18'	107		1.2	4/3/2000
02a	100 Hancock Street	02a-020505	02a002	Lead, Total	14'-18'	4		2.3	4/3/2000
02a	100 Hancock Street	02a-020505	02a002	Lithium, Total	14'-18'	766	J	0.10	4/3/2000
02c	80 Industrial Road	02c-020511	02c001	Barium, Total	12'-16'	97.3		0.20	3/16/2000
02c	80 Industrial Road	02c-020511	02c001	Boron, Total	12'-16'	76.6		1.2	3/16/2000
02c	80 Industrial Road	02c-020511	02c001	Lithium, Total	12'-16'	168		0.10	3/16/2000
02d	8 Mill Street	02d-020513	02d001	Arsenic, Total	6'-10'	26.6	J	2.9	3/15/2000
02d	8 Mill Street	02d-020513	02d001	Barium, Total	6'-10'	769		0.20	3/15/2000
02d	8 Mill Street	02d-020513	02d001	Boron, Total	6'-10'	66.4		1.2	3/15/2000
02d	8 Mill Street	02d-020513	02d001	Lithium, Total	6'-10'	38.6		0.10	3/15/2000
02d	8 Mill Street	02d-020513	02d001	Selenium, Total	6'-10'	6.2		4.4	3/15/2000
02d	8 Mill Street	02d-020515	02d002	Arsenic, Total	6'-8'	14.4	J	2.9	3/16/2000
02d	8 Mill Street	02d-020515	02d002	Barium, Total	6'-8'	150		0.20	3/16/2000
02d	8 Mill Street	02d-020515	02d002	Boron, Total	6'-8'	93.9		1.2	3/16/2000
02d	8 Mill Street	02d-020515	02d002	Chromium, Total	6'-8'	2.5		0.60	3/16/2000
02d	8 Mill Street	02d-020515	02d002	Lithium, Total	6'-8'	56.3		0.10	3/16/2000
02d	8 Mill Street	02d-020517	02d003	Arsenic, Total	8'-12'	14.3	J	2.9	3/16/2000
02d	8 Mill Street	02d-020517	02d003	Barium, Total	8'-12'	200		0.20	3/16/2000
02d	8 Mill Street	02d-020517	02d003	Boron, Total	8'-12'	68.8		1.2	3/16/2000
02d	8 Mill Street	02d-020517	02d003	Chromium, Total	8'-12'	0.8		0.60	3/16/2000
02d	8 Mill Street	02d-020517	02d003	Lithium, Total	8'-12'	3.9		0.10	3/16/2000
03a	170 Gregg Street	03a-020519	03a001	Barium, Total	4'-8'	225		0.20	3/16/2000
03a	170 Gregg Street	03a-020519	03a001	Boron, Total	4'-8'	80.6		1.2	3/16/2000
03a	170 Gregg Street	03a-020519	03a001	Lithium, Total	4'-8'	6.7		0.10	3/16/2000
04a	160/174 Essex Street	04a-020521	04a001	Barium, Total	8'-12'	68.7		0.20	3/22/2000
04a	160/174 Essex Street	04a-020521	04a001	Boron, Total	8'-12'	364		1.2	3/22/2000
04a	160/174 Essex Street	04a-020521	04a001	Lithium, Total	8'-12'	1620		0.10	3/22/2000
04a	160/174 Essex Street	04a-020523	04a002	Barium, Total	10'-14'	184		0.20	3/17/2000
04a	160/174 Essex Street	04a-020523	04a002	Boron, Total	10'-14'	90.8		1.2	3/17/2000
04a	160/174 Essex Street	04a-020525	04a003	Barium, Total	8'-12'	218		0.20	3/22/2000
04a	160/174 Essex Street	04a-020525	04a003	Boron, Total	8'-12'	111		1.2	3/22/2000
04a	160/174 Essex Street	04a-020525	04a003	Lithium, Total	8'-12'	31.9		0.10	3/22/2000
05a	99 Essex Street	05a-020527	05a001	Barium, Total	8'-12'	143		0.20	3/22/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
05a	99 Essex Street	05a-020527	05a001	Boron, Total	8'-12'	401		1.2	3/22/2000
05a	99 Essex Street	05a-020527	05a001	Lithium, Total	8'-12'	599		0.10	3/22/2000
05b	113 Essex Street	05b-020529	05b001	Barium, Total	12'-16'	573		0.20	3/23/2000
05b	113 Essex Street	05b-020529	05b001	Boron, Total	12'-16'	149		1.2	3/23/2000
05b	113 Essex Street	05b-020529	05b001	Chromium, Total	12'-16'	1.1		0.60	3/23/2000
05b	113 Essex Street	05b-020529	05b001	Lithium, Total	12'-16'	42.6		0.10	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Arsenic, Total	7'-11'	4.9		2.9	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Barium, Total	7'-11'	149		0.20	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Boron, Total	7'-11'	541		1.2	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Chromium, Total	7'-11'	1		0.60	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Lithium, Total	7'-11'	1020		0.10	3/23/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	Silver, Total	7'-11'	0.95		0.90	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	Arsenic, Total	4'-8'	11.6		2.9	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	Barium, Total	4'-8'	234		0.20	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	Boron, Total	4'-8'	158		1.2	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	Chromium, Total	4'-8'	0.98		0.60	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	Lithium, Total	4'-8'	30.4		0.10	3/23/2000
06b	137 NJ Rt. 17 North	06b-020535	06b001	Barium, Total	2'-6'	156		0.20	3/24/2000
06b	137 NJ Rt. 17 North	06b-020535	06b001	Boron, Total	2'-6'	67.3		1.2	3/24/2000
06b	137 NJ Rt. 17 North	06b-020535	06b001	Lithium, Total	2'-6'	6.8		0.10	3/24/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	Arsenic, Total	8'-12'	74.5		2.9	3/24/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	Barium, Total	8'-12'	735		0.20	3/24/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	Boron, Total	8'-12'	75.9		1.2	3/24/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	Chromium, Total	8'-12'	2.9		0.60	3/24/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	Lithium, Total	8'-12'	220		0.10	3/24/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Arsenic, Total	6'-10'	5.7		2.9	3/27/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Barium, Total	6'-10'	404		0.20	3/27/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Boron, Total	6'-10'	474		1.2	3/27/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Chromium, Total	6'-10'	2.8		0.60	3/27/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Lithium, Total	6'-10'	744		0.10	3/27/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Arsenic, Total	5'-9'	19.6		2.9	3/24/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Barium, Total	5'-9'	299		0.20	3/24/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Boron, Total	5'-9'	278		1.2	3/24/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Chromium, Total	5'-9'	4.1		0.60	3/24/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Lithium, Total	5'-9'	424		0.10	3/24/2000
06e	29 Essex Street	06e-020543	06e001	Barium, Total	8'-12'	144		0.20	3/28/2000
06e	29 Essex Street	06e-020543	06e001	Boron, Total	8'-12'	22.4		1.2	3/28/2000
06e	29 Essex Street	06e-020543	06e001	Chromium, Total	8'-12'	4.7		0.60	3/28/2000
06e	29 Essex Street	06e-020543	06e001	Lead, Total	8'-12'	3.8		2.3	3/28/2000
07a	111 Essex Street	07a-020545	07a001	Barium, Total	5'-9'	181		0.20	3/27/2000
07a	111 Essex Street	07a-020545	07a001	Boron, Total	5'-9'	65.6		1.2	3/27/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
07a	111 Essex Street	07a-020545	07a001	Chromium, Total	5'-9'	1.1		0.60	3/27/2000
07a	111 Essex Street	07a-020545	07a001	Lead, Total	5'-9'	3.3		2.3	3/27/2000
07a	111 Essex Street	07a-020545	07a001	Lithium, Total	5'-9'	400		0.10	3/27/2000
08a	23 West Howcroft Road	08a-020549	08a001	Arsenic, Total	8'-12'	3.3	J	2.9	3/20/2000
08a	23 West Howcroft Road	08a-020549	08a001	Barium, Total	8'-12'	86		0.20	3/20/2000
08a	23 West Howcroft Road	08a-020549	08a001	Boron, Total	8'-12'	53.3		1.2	3/20/2000
08a	23 West Howcroft Road	08a-020549	08a001	Lithium, Total	8'-12'	7.6	J	0.10	3/20/2000
08a	23 West Howcroft Road	08a-020551	08a002	Barium, Total	8'-12'	21.1		0.20	3/20/2000
08a	23 West Howcroft Road	08a-020551	08a002	Boron, Total	8'-12'	49		1.2	3/20/2000
08a	23 West Howcroft Road	08a-020551	08a002	Lithium, Total	8'-12'	212	J	0.10	3/20/2000
08a	23 West Howcroft Road	08a-020773	08a003	Arsenic, Total	4'-8'	56.4	J	2.9	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Barium, Total	4'-8'	2720		0.20	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Barium, Total	4'-8'	28.2		0.20	3/20/2000
08a	23 West Howcroft Road	08a-020773	08a003	Boron, Total	4'-8'	15.9		1.2	3/20/2000
08a	23 West Howcroft Road	08a-020773	08a003	Boron, Total	4'-8'	40.3		1.2	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Cadmium, Total	4'-8'	5.1		0.30	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Chromium, Total	4'-8'	120		0.60	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Lead, Total	4'-8'	3430	J	2.3	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Lithium, Total	4'-8'	133	J	0.10	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Lithium, Total	4'-8'	10.2	J	0.10	3/20/2000
08a	23 West Howcroft Road	08a-020773	08a003	Mercury, Total	4'-8'	4.1		0.10	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Selenium, Total	4'-8'	8.4		4.4	4/11/2000
08a	23 West Howcroft Road	08a-020773	08a003	Silver, Total	4'-8'	1.3		0.90	4/11/2000
09a	149-151 Maywood Avenue	09a-020553	09a001	Barium, Total	4'-8'	287		0.20	3/28/2000
09a	149-151 Maywood Avenue	09a-020553	09a001	Boron, Total	4'-8'	39.1		1.2	3/28/2000
09a	149-151 Maywood Avenue	09a-020553	09a001	Chromium, Total	4'-8'	1.8		0.60	3/28/2000
09a	149-151 Maywood Avenue	09a-020553	09a001	Lead, Total	4'-8'	9		2.3	3/28/2000
09a	149-151 Maywood Avenue	09a-020553	09a001	Lithium, Total	4'-8'	7.1		0.10	3/28/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	Arsenic, Total	6'-10'	87.4		2.9	3/28/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	Barium, Total	6'-10'	160		0.20	3/28/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	Boron, Total	6'-10'	126		1.2	3/28/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	Chromium, Total	6'-10'	0.86		0.60	3/28/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	Lithium, Total	6'-10'	135		0.10	3/28/2000
09a	149-151 Maywood Avenue	09a-020557	09a003	Arsenic, Total	6'-10'	4.9		2.9	3/28/2000
09a	149-151 Maywood Avenue	09a-020557	09a003	Barium, Total	6'-10'	134		0.20	3/28/2000
09a	149-151 Maywood Avenue	09a-020557	09a003	Boron, Total	6'-10'	91.4		1.2	3/28/2000
09a	149-151 Maywood Avenue	09a-020557	09a003	Chromium, Total	6'-10'	1.1		0.60	3/28/2000
09a	149-151 Maywood Avenue	09a-020557	09a003	Lithium, Total	6'-10'	42.6		0.10	3/28/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Arsenic, Total	5'-9'	3.8	J	2.9	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Arsenic, Total	5'-9'	5.6	J	2.9	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Barium, Total	5'-9'	87.7		0.2	3/31/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-020559	09a004	Barium, Total	5'-9'	148		0.20	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Boron, Total	5'-9'	111		1.2	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Boron, Total	5'-9'	110		1.2	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Chromium, Total	5'-9'	285		0.60	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Lithium, Total	5'-9'	15.7	J	0.10	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Lithium, Total	5'-9'	23.2	J	0.10	3/31/2000
09a	149-151 Maywood Avenue	09a-020561	09a005	Arsenic, Total	4'-8'	5.6	J	2.9	3/31/2000
09a	149-151 Maywood Avenue	09a-020561	09a005	Barium, Total	4'-8'	80.1		0.20	3/31/2000
09a	149-151 Maywood Avenue	09a-020561	09a005	Boron, Total	4'-8'	93.6		1.2	3/31/2000
09a	149-151 Maywood Avenue	09a-020561	09a005	Lithium, Total	4'-8'	11.7	J	0.10	3/31/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Arsenic, Total	6'-10'	478		2.9	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Barium, Total	6'-10'	480		0.20	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Boron, Total	6'-10'	932		1.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Chromium, Total	6'-10'	6.5		0.60	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Lead, Total	6'-10'	3.5	J	2.3	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Lithium, Total	6'-10'	306		0.10	4/12/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Arsenic, Total	20.25'-24.25'	12.8		2.9	4/11/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Barium, Total	20.25'-24.25'	4040		0.20	4/11/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Boron, Total	20.25'-24.25'	171		1.2	4/11/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Chromium, Total	20.25'-24.25'	1.1		0.60	4/11/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Lithium, Total	20.25'-24.25'	43	J	0.10	4/11/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Arsenic, Total	4'-8'	39.8		2.9	4/12/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Barium, Total	4'-8'	667		0.20	4/12/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Boron, Total	4'-8'	122		1.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Chromium, Total	4'-8'	2.6		0.60	4/12/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Lithium, Total	4'-8'	84.1	J	0.10	4/12/2000
09a	149-151 Maywood Avenue	09a-020573	09a008	Barium, Total	13'-17'	201		0.20	4/12/2000
09a	149-151 Maywood Avenue	09a-020573	09a008	Boron, Total	13'-17'	95		1.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020573	09a008	Chromium, Total	13'-17'	1.1		0.60	4/12/2000
09a	149-151 Maywood Avenue	09a-020573	09a008	Lithium, Total	13'-17'	18.1	J	0.10	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Arsenic, Total	2'-6'	3.9		2.9	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Boron, Total	2'-6'	59.2		1.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Cadmium, Total	2'-6'	1.3	J	0.30	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Chromium, Total	2'-6'	1.6		0.60	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Lead, Total	2'-6'	25.6		2.3	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	Lithium, Total	2'-6'	58.1	J	0.10	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Barium, Total	9'-13'	241		0.20	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Boron, Total	9'-13'	252		1.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Chromium, Total	9'-13'	1.4		0.60	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Lead, Total	9'-13'	4.3	J	2.3	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Lithium, Total	9'-13'	77.4	J	0.10	4/12/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-020581	09a010	Arsenic, Total	4'-8'	4.4	J	2.9	4/13/2000
09a	149-151 Maywood Avenue	09a-020581	09a010	Barium, Total	4'-8'	151		0.20	4/13/2000
09a	149-151 Maywood Avenue	09a-020581	09a010	Boron, Total	4'-8'	247		1.2	4/13/2000
09a	149-151 Maywood Avenue	09a-020581	09a010	Chromium, Total	4'-8'	1.9		0.60	4/13/2000
09a	149-151 Maywood Avenue	09a-020581	09a010	Lithium, Total	4'-8'	243		0.10	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020583	10a001	Barium, Total	6'-10'	58.2		0.20	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020583	10a001	Boron, Total	6'-10'	44.6		1.2	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020583	10a001	Chromium, Total	6'-10'	0.72		0.60	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020585	10a002	Barium, Total	6'-10'	217		0.20	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020585	10a002	Boron, Total	6'-10'	121		1.2	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020585	10a002	Chromium, Total	6'-10'	5.8		0.60	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020585	10a002	Lithium, Total	6'-10'	416		0.10	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	Arsenic, Total	5'-9'	82.1	J	2.9	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	Barium, Total	5'-9'	405		0.20	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	Boron, Total	5'-9'	52.6	J	1.2	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	Lithium, Total	5'-9'	253	J	0.10	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Barium, Total	6'-10'	70.5		0.20	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Boron, Total	6'-10'	140		1.2	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Selenium, Total	6'-10'	5.7		4.4	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020780	10a007	Barium, Total	1'-5'	160		0.20	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020780	10a007	Boron, Total	1'-5'	50.4		1.2	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020780	10a007	Lithium, Total	1'-5'	60.5	J	0.10	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Arsenic, Total	12'-16'	5.9	J	2.9	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Barium, Total	12'-16'	455		0.20	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Boron, Total	12'-16'	123		1.2	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Lithium, Total	12'-16'	44.9	J	0.10	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Arsenic, Total	16'-20'	89.6	J	2.9	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Barium, Total	16'-20'	20.6		0.20	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Boron, Total	16'-20'	1830		1.2	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Chromium, Total	16'-20'	114		0.60	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Lithium, Total	16'-20'	5240	J	0.10	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	Arsenic, Total	10'-14'	251	J	2.9	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	Barium, Total	10'-14'	32.8		0.20	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	Boron, Total	10'-14'	290		1.2	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	Lithium, Total	10'-14'	4740	J	0.10	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	Arsenic, Total	6'-10'	8.7		2.9	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	Barium, Total	6'-10'	202		0.20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	Boron, Total	6'-10'	111		1.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	Lithium, Total	6'-10'	947		0.10	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Arsenic, Total	16'-20'	28.5		2.9	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Barium, Total	16'-20'	107		0.20	4/5/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Boron, Total	16'-20'	441		1.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Lead, Total	16'-20'	3.1		2.3	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Lithium, Total	16'-20'	1080		0.10	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	Arsenic, Total	12'-16'	3		2.9	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	Barium, Total	12'-16'	94.1		0.20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	Boron, Total	12'-16'	731		1.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	Chromium, Total	12'-16'	9.6		0.60	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	Lithium, Total	12'-16'	1710		0.10	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Barium, Total	5'-9'	33.3		0.20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Boron, Total	5'-9'	33.1		1.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Chromium, Total	5'-9'	602		0.60	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Lead, Total	5'-9'	3.4		2.3	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Lithium, Total	5'-9'	130		0.10	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	Arsenic, Total	8'-12'	14.8		2.9	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	Barium, Total	8'-12'	183		0.20	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	Boron, Total	8'-12'	3180		1.2	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	Chromium, Total	8'-12'	1.8		0.60	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	Lithium, Total	8'-12'	7450	J	0.10	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Arsenic, Total	10'-14'	46.7		2.9	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Barium, Total	10'-14'	389		0.20	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Boron, Total	10'-14'	1130		1.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Chromium, Total	10'-14'	8.5		0.60	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Lead, Total	10'-14'	4.8		2.3	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Lithium, Total	10'-14'	3910	J	0.10	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Arsenic, Total	13.5'-17.5'	26		2.9	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Barium, Total	13.5'-17.5'	170		0.20	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Boron, Total	13.5'-17.5'	1160		1.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Chromium, Total	13.5'-17.5'	0.82		0.60	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Lithium, Total	13.5'-17.5'	2400	J	0.10	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Arsenic, Total	10'-14'	177		2.9	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Barium, Total	10'-14'	108		0.20	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Boron, Total	10'-14'	1840		1.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Chromium, Total	10'-14'	2.2		0.60	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Lithium, Total	10'-14'	4690	J	0.10	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Arsenic, Total	19'-23'	3.2		2.9	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Barium, Total	19'-23'	136		0.20	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Boron, Total	19'-23'	502		1.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Chromium, Total	19'-23'	1.1		0.60	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Lithium, Total	19'-23'	1050	J	0.10	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	Arsenic, Total	9'-13'	4.1		2.9	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	Barium, Total	9'-13'	250		0.20	4/7/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	Boron, Total	9'-13'	217		1.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	Chromium, Total	9'-13'	0.85		0.60	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	Lithium, Total	9'-13'	2100	J	0.10	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	Barium, Total	19'-23'	228		0.20	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	Boron, Total	19'-23'	401		1.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	Chromium, Total	19'-23'	0.94		0.60	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	Lithium, Total	19'-23'	2790	J	0.10	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020632	12b013	Arsenic, Total	10'-14'	7.6		2.9	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020632	12b013	Barium, Total	10'-14'	322		0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020632	12b013	Boron, Total	10'-14'	249		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020632	12b013	Chromium, Total	10'-14'	0.72		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020632	12b013	Lithium, Total	10'-14'	161		0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	Arsenic, Total	19'-23'	3		2.9	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	Barium, Total	19'-23'	244		0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	Boron, Total	19'-23'	244		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	Chromium, Total	19'-23'	1.3		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	Lithium, Total	19'-23'	867		0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020637	12b014	Barium, Total	15'-19'	446		0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020637	12b014	Boron, Total	15'-19'	154		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020637	12b014	Chromium, Total	15'-19'	1.3		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020637	12b014	Lithium, Total	15'-19'	71.7	J	0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	Arsenic, Total	4'-8'	3760		2.9	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	Barium, Total	4'-8'	47.7		0.20	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	Boron, Total	4'-8'	2080		1.2	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	Chromium, Total	4'-8'	4.3		0.60	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	Lithium, Total	4'-8'	6320		0.10	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Arsenic, Total	16'-20'	4850		2.9	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Barium, Total	16'-20'	4.3		0.20	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Boron, Total	16'-20'	1990		1.2	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Chromium, Total	16'-20'	2		0.60	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Lithium, Total	16'-20'	6110		0.10	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	Mercury, Total	16'-20'	0.1		0.10	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Arsenic, Total	5'-9'	746		2.9	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Barium, Total	5'-9'	12.1		0.20	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Boron, Total	5'-9'	486		1.2	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Chromium, Total	5'-9'	25.4		0.60	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Lead, Total	5'-9'	13.1		2.3	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Lithium, Total	5'-9'	2860		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	Mercury, Total	5'-9'	0.12		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Arsenic, Total	16'-20'	22.6		2.9	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Barium, Total	16'-20'	10.2		0.20	4/20/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Boron, Total	16'-20'	822		1.2	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Chromium, Total	16'-20'	6.2		0.60	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Lithium, Total	16'-20'	3340		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	Mercury, Total	16'-20'	0.12		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	Barium, Total	6'-10'	31.6		0.20	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	Boron, Total	6'-10'	102		1.2	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	Chromium, Total	6'-10'	3.4		0.60	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	Lithium, Total	6'-10'	4400	J	0.10	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Barium, Total	21'-25'	37.1		0.20	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Boron, Total	21'-25'	289		1.2	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Chromium, Total	21'-25'	3.7		0.60	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Lithium, Total	21'-25'	12800		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Mercury, Total	21'-25'	0.12		0.10	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Barium, Total	8.5'-12.5'	64.6		0.20	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Boron, Total	8.5'-12.5'	239		1.2	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Chromium, Total	8.5'-12.5'	1.1		0.60	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Lithium, Total	8.5'-12.5'	5040	J	0.10	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Barium, Total	3.5'-7.5'	402		0.20	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Boron, Total	3.5'-7.5'	154		1.2	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Cadmium, Total	3.5'-7.5'	0.4		0.30	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Chromium, Total	3.5'-7.5'	2		0.60	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Lead, Total	3.5'-7.5'	17.2		2.3	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Lithium, Total	3.5'-7.5'	383	J	0.10	4/24/2000
14a	Transect B	14a-020666	14a001	Barium, Total	5.5'-9.5'	1140		0.20	4/25/2000
14a	Transect B	14a-020666	14a001	Boron, Total	5.5'-9.5'	81.1		1.2	4/25/2000
14a	Transect B	14a-020666	14a001	Chromium, Total	5.5'-9.5'	0.72		0.60	4/25/2000
14a	Transect B	14a-020666	14a001	Lithium, Total	5.5'-9.5'	98	J	0.10	4/25/2000
14a	Transect B	14a-020668	14a002	Barium, Total	9'-13'	146		0.20	4/27/2000
14a	Transect B	14a-020668	14a002	Boron, Total	9'-13'	61.2		1.2	4/27/2000
14a	Transect B	14a-020668	14a002	Lithium, Total	9'-13'	119	J	0.10	4/27/2000
14a	Transect B	14a-020670	14a003	Barium, Total	4'-8'	678		0.20	4/28/2000
14a	Transect B	14a-020670	14a003	Boron, Total	4'-8'	92.1		1.2	4/28/2000
14a	Transect B	14a-020670	14a003	Chromium, Total	4'-8'	2.7		0.60	4/28/2000
14a	Transect B	14a-020670	14a003	Lithium, Total	4'-8'	11	J	0.10	4/28/2000
15a	Transect C	15a-020675	15a001	Barium, Total	5'-9'	60.1		0.20	4/13/2000
15a	Transect C	15a-020675	15a001	Boron, Total	5'-9'	14.7		1.2	4/13/2000
15a	Transect C	15a-020675	15a001	Chromium, Total	5'-9'	1.3		0.60	4/13/2000
15a	Transect C	15a-020676	15a002	Barium, Total	6'-10'	78.6		0.20	4/14/2000
15a	Transect C	15a-020676	15a002	Boron, Total	6'-10'	22.8		1.2	4/14/2000
15a	Transect C	15a-020676	15a002	Chromium, Total	6'-10'	0.88		0.60	4/14/2000
15a	Transect C	15a-020677	15a002	Barium, Total	15.75'-19.75'	125		0.20	4/14/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
15a	Transect C	15a-020677	15a002	Boron, Total	15.75'-19.75'	28.5		1.2	4/14/2000
15a	Transect C	15a-020677	15a002	Chromium, Total	15.75'-19.75'	1.5		0.60	4/14/2000
16a	Transect D	16a-020680	16a001	Barium, Total	6'-10'	81.7		0.20	4/10/2000
16a	Transect D	16a-020680	16a001	Boron, Total	6'-10'	184		1.2	4/10/2000
16a	Transect D	16a-020680	16a001	Chromium, Total	6'-10'	1.3		0.60	4/10/2000
16a	Transect D	16a-020680	16a001	Lithium, Total	6'-10'	680		0.10	4/10/2000
16a	Transect D	16a-020682	16a002	Barium, Total	7'-11'	41.8		0.20	4/17/2000
16a	Transect D	16a-020682	16a002	Boron, Total	7'-11'	26.7		1.2	4/17/2000
16a	Transect D	16a-020684	16a003	Barium, Total	14'-18'	163		0.20	4/18/2000
16a	Transect D	16a-020684	16a003	Boron, Total	14'-18'	87.1		1.2	4/18/2000
16a	Transect D	16a-020684	16a003	Chromium, Total	14'-18'	1.5		0.60	4/18/2000
16a	Transect D	16a-020684	16a003	Lithium, Total	14'-18'	617		0.10	4/18/2000
16a	Transect D	16a-020686	16a004	Barium, Total	7.1'-11.1'	194		0.20	4/25/2000
16a	Transect D	16a-020686	16a004	Boron, Total	7.1'-11.1'	55.9		1.2	4/25/2000
17a	Transect G	17a-020688	17a001	Barium, Total	2.5'-6.5'	106		0.20	4/18/2000
17a	Transect G	17a-020688	17a001	Boron, Total	2.5'-6.5'	91.6		1.2	4/18/2000
17a	Transect G	17a-020688	17a001	Chromium, Total	2.5'-6.5'	1.5		0.60	4/18/2000
17a	Transect G	17a-020688	17a001	Lithium, Total	2.5'-6.5'	190		0.10	4/18/2000
17a	Transect G	17a-020690	17a002	Barium, Total	11.2'-15.2'	528		0.20	4/25/2000
17a	Transect G	17a-020690	17a002	Boron, Total	11.2'-15.2'	125		1.2	4/25/2000
17a	Transect G	17a-020690	17a002	Lithium, Total	11.2'-15.2'	30.3	J	0.10	4/25/2000
17a	Transect G	17a-020692	17a003	Barium, Total	11.5'-15.5'	415		0.20	4/28/2000
17a	Transect G	17a-020692	17a003	Boron, Total	11.5'-15.5'	65.1		1.2	4/28/2000
17a	Transect G	17a-020692	17a003	Chromium, Total	11.5'-15.5'	1.1		0.60	4/28/2000
17a	Transect G	17a-020692	17a003	Lithium, Total	11.5'-15.5'	4.2	J	0.10	4/28/2000
18a	Transect J	18a-020698	18a001	Barium, Total	15.5'-19.5'	433		0.20	4/26/2000
18a	Transect J	18a-020698	18a001	Boron, Total	15.5'-19.5'	125		1.2	4/26/2000
18a	Transect J	18a-020698	18a001	Lithium, Total	15.5'-19.5'	118	J	0.10	4/26/2000
18a	Transect J	18a-020702	18a002	Barium, Total	13.5'-17.5'	73.3		0.20	4/26/2000
18a	Transect J	18a-020702	18a002	Boron, Total	13.5'-17.5'	68.9		1.2	4/26/2000
18a	Transect J	18a-020702	18a002	Chromium, Total	13.5'-17.5'	0.76		0.60	4/26/2000
18a	Transect J	18a-020702	18a002	Lithium, Total	13.5'-17.5'	514	J	0.10	4/26/2000
18a	Transect J	18a-020706	18a003	Arsenic, Total	8'-12'	154		2.9	4/27/2000
18a	Transect J	18a-020706	18a003	Barium, Total	8'-12'	351		0.20	4/27/2000
18a	Transect J	18a-020706	18a003	Boron, Total	8'-12'	152		1.2	4/27/2000
18a	Transect J	18a-020706	18a003	Chromium, Total	8'-12'	1.4		0.60	4/27/2000
18a	Transect J	18a-020706	18a003	Lithium, Total	8'-12'	344	J	0.10	4/27/2000
18a	Transect J	18a-020707	18a003	Arsenic, Total	21'-25'	585		2.9	4/26/2000
18a	Transect J	18a-020707	18a003	Barium, Total	21'-25'	293		0.20	4/26/2000
18a	Transect J	18a-020707	18a003	Boron, Total	21'-25'	470		1.2	4/26/2000
18a	Transect J	18a-020707	18a003	Chromium, Total	21'-25'	2.2		0.60	4/26/2000

TABLE 4-5
SUMMARY OF DETECTABLE METALS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
18a	Transect J	18a-020707	18a003	Lithium, Total	21'-25'	4620	J	0.10	4/26/2000
18a	Transect J	18a-020710	18a004	Arsenic, Total	12'-16	383		2.9	4/27/2000
18a	Transect J	18a-020710	18a004	Barium, Total	12'-16	232		0.20	4/27/2000
18a	Transect J	18a-020710	18a004	Boron, Total	12'-16	276		1.2	4/27/2000
18a	Transect J	18a-020710	18a004	Chromium, Total	12'-16	3		0.60	4/27/2000
18a	Transect J	18a-020710	18a004	Lithium, Total	12'-16	1670	J	0.10	4/27/2000
18a	Transect J	18a-020710	18a004	Silver, Total	12'-16	1		0.90	4/27/2000

Note:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-6
SUMMARY OF FILTERED METALS IN GEOPROBE GROUNDWATER SAMPLES EXCEEDING STANDARDS - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
02a	100 Hancock Street	02a-020505	02a002	14'-18'	Lithium, Total	766	J	0.10	NA	730	4/3/2000	NA	730	4/3/2000
02d	8 Mill Street	02d-020513	02d001	6'-10'	Arsenic, Total	26.6	J	2.9	10	8	3/15/2000	8	NA	3/15/2000
02d	8 Mill Street	02d-020515	02d002	6'-8'	Arsenic, Total	14.4	J	2.9	10	8	3/16/2000	8	NA	3/16/2000
02d	8 Mill Street	02d-020517	02d003	8'-12'	Arsenic, Total	14.3	J	2.9	10	8	3/16/2000	8	NA	3/16/2000
04a	160/174 Essex Street	04a-020521	04a001	8'-12'	Lithium, Total	1620		0.10	NA	730	3/22/2000	NA	730	3/22/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	7'-11'	Lithium, Total	1020		0.10	NA	730	3/23/2000	NA	730	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	4'-8'	Arsenic, Total	11.6		2.9	10	8	3/23/2000	8	NA	3/23/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	8'-12'	Arsenic, Total	74.5		2.9	10	8	3/24/2000	8	NA	3/24/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	6'-10'	Lithium, Total	744		0.10	NA	730	3/27/2000	NA	730	3/27/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	5'-9'	Arsenic, Total	19.6		2.9	10	8	3/24/2000	8	NA	3/24/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	6'-10'	Arsenic, Total	87.4		2.9	10	8	3/28/2000	8	NA	3/28/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	6'-10'	Arsenic, Total	478		2.9	10	8	4/12/2000	8	NA	4/12/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	20.25'-24.25'	Arsenic, Total	12.8		2.9	10	8	4/11/2000	8	NA	4/11/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	20.25'-24.25'	Barium, Total	4040		0.20	2000	2000	4/11/2000	2000	NA	4/11/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	4'-8'	Arsenic, Total	39.8		2.9	10	8	4/12/2000	8	NA	4/12/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	2'-6'	Lead, Total	25.6		2.3	15	10	4/12/2000	10	NA	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	5'-9'	Arsenic, Total	82.1	J	2.9	10	8	4/3/2000	8	NA	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Arsenic, Total	89.6	J	2.9	10	8	4/4/2000	8	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Chromium, Total	114		0.60	100	100	4/4/2000	100	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Lithium, Total	5240	J	0.10	NA	730	4/4/2000	NA	730	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	10'-14'	Arsenic, Total	251	J	2.9	10	8	4/4/2000	8	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	10'-14'	Lithium, Total	4740	J	0.10	NA	730	4/4/2000	NA	730	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	6'-10'	Arsenic, Total	8.7		2.9	10	8	4/5/2000	8	NA	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	6'-10'	Lithium, Total	947		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	16'-20'	Arsenic, Total	28.5		2.9	10	8	4/5/2000	8	NA	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	16'-20'	Lithium, Total	1080		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	12'-16'	Lithium, Total	1710		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	5'-9'	Chromium, Total	602		0.60	100	100	4/5/2000	100	NA	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	8'-12'	Arsenic, Total	14.8		2.9	10	8	4/28/2000	8	NA	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	8'-12'	Lithium, Total	7450	J	0.10	NA	730	4/28/2000	NA	730	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	10'-14'	Arsenic, Total	46.7		2.9	10	8	4/6/2000	8	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	10'-14'	Lithium, Total	3910	J	0.10	NA	730	4/6/2000	NA	730	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	13.5'-17.5'	Arsenic, Total	26		2.9	10	8	4/6/2000	8	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	13.5'-17.5'	Lithium, Total	2400	J	0.10	NA	730	4/6/2000	NA	730	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	10'-14'	Arsenic, Total	177		2.9	10	8	4/7/2000	8	NA	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	10'-14'	Lithium, Total	4690	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	19'-23'	Lithium, Total	1050	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	9'-13'	Lithium, Total	2100	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	19'-23'	Lithium, Total	2790	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	19'-23'	Lithium, Total	867		0.10	NA	730	4/10/2000	NA	730	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	4'-8'	Arsenic, Total	3760		2.9	10	8	4/19/2000	8	NA	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	4'-8'	Lithium, Total	6320		0.10	NA	730	4/19/2000	NA	730	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	16'-20'	Arsenic, Total	4850		2.9	10	8	4/19/2000	8	NA	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	16'-20'	Lithium, Total	6110		0.10	NA	730	4/19/2000	NA	730	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	16'-20'	Arsenic, Total	22.6		2.9	10	8	4/20/2000	8	NA	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	16'-20'	Lithium, Total	3340		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Arsenic, Total	746		2.9	10	8	4/20/2000	8	NA	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Lead, Total	13.1		2.3	15	10	4/20/2000	10	NA	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Lithium, Total	2860		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	6'-10'	Lithium, Total	4400	J	0.10	NA	730	4/24/2000	NA	730	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	21'-25'	Lithium, Total	12800		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	8.5'-12.5'	Lithium, Total	5040	J	0.10	NA	730	4/25/2000	NA	730	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	3.5'-7.5'	Lead, Total	17.2		2.3	15	10	4/24/2000	10	NA	4/24/2000
18a	Transect J	18a-020706	18a003	8'-12'	Arsenic, Total	154		2.9	10	8	4/27/2000	8	NA	4/27/2000
18a	Transect J	18a-020707	18a003	21'-25'	Arsenic, Total	585		2.9	10	8	4/26/2000	8	NA	4/26/2000
18a	Transect J	18a-020707	18a003	21'-25'	Lithium, Total	4620	J	0.10	NA	730	4/26/2000	NA	730	4/26/2000
18a	Transect J	18a-020710	18a004	12'-16'	Arsenic, Total	383		2.9	10	8	4/27/2000	8	NA	4/27/2000
18a	Transect J	18a-020710	18a004	12'-16'	Lithium, Total	1670	J	0.10	NA	730	4/27/2000	NA	730	4/27/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-7
SUMMARY OF FILTERED METALS IN GEOPROBE GROUNDWATER SAMPLES EXCEEDING GROUNDWATER STANDARDS SORTED BY CHEMICALS - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
02d	8 Mill Street	02d-020513	02d001	6'-10'	Arsenic, Total	26.6	J	2.9	10	8	3/15/2000	8	NA	3/15/2000
02d	8 Mill Street	02d-020515	02d002	6'-8'	Arsenic, Total	14.4	J	2.9	10	8	3/16/2000	8	NA	3/16/2000
02d	8 Mill Street	02d-020517	02d003	8'-12'	Arsenic, Total	14.3	J	2.9	10	8	3/16/2000	8	NA	3/16/2000
06a	85-101 NJ Rt. 17 North	06a-020533	06a001	4'-8'	Arsenic, Total	11.6		2.9	10	8	3/23/2000	8	NA	3/23/2000
06c	167 NJ Rt. 17 North	06c-020537	06c001	8'-12'	Arsenic, Total	74.5		2.9	10	8	3/24/2000	8	NA	3/24/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	5'-9'	Arsenic, Total	19.6		2.9	10	8	3/24/2000	8	NA	3/24/2000
09a	149-151 Maywood Avenue	09a-020555	09a002	6'-10'	Arsenic, Total	87.4		2.9	10	8	3/28/2000	8	NA	3/28/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	20.25'-24.25'	Arsenic, Total	12.8		2.9	10	8	4/11/2000	8	NA	4/11/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	6'-10'	Arsenic, Total	478		2.9	10	8	4/12/2000	8	NA	4/12/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	4'-8'	Arsenic, Total	39.8		2.9	10	8	4/12/2000	8	NA	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	5'-9'	Arsenic, Total	82.1	J	2.9	10	8	4/3/2000	8	NA	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Arsenic, Total	89.6	J	2.9	10	8	4/4/2000	8	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	10'-14'	Arsenic, Total	251	J	2.9	10	8	4/4/2000	8	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	6'-10'	Arsenic, Total	8.7		2.9	10	8	4/5/2000	8	NA	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	16'-20'	Arsenic, Total	28.5		2.9	10	8	4/5/2000	8	NA	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	8'-12'	Arsenic, Total	14.8		2.9	10	8	4/28/2000	8	NA	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	10'-14'	Arsenic, Total	46.7		2.9	10	8	4/6/2000	8	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	13.5'-17.5'	Arsenic, Total	26		2.9	10	8	4/6/2000	8	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	10'-14'	Arsenic, Total	177		2.9	10	8	4/7/2000	8	NA	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	16'-20'	Arsenic, Total	4850		2.9	10	8	4/19/2000	8	NA	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	4'-8'	Arsenic, Total	3760		2.9	10	8	4/19/2000	8	NA	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	16'-20'	Arsenic, Total	22.6		2.9	10	8	4/20/2000	8	NA	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Arsenic, Total	746		2.9	10	8	4/20/2000	8	NA	4/20/2000
18a	Transect J	18a-020707	18a003	21'-25'	Arsenic, Total	585		2.9	10	8	4/26/2000	8	NA	4/26/2000
18a	Transect J	18a-020706	18a003	8'-12'	Arsenic, Total	154		2.9	10	8	4/27/2000	8	NA	4/27/2000
18a	Transect J	18a-020710	18a004	12'-16	Arsenic, Total	383		2.9	10	8	4/27/2000	8	NA	4/27/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	20.25'-24.25'	Barium, Total	4040		0.20	2000	2000	4/11/2000	2000	NA	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Chromium, Total	114		0.60	100	100	4/4/2000	100	NA	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	5'-9'	Chromium, Total	602		0.60	100	100	4/5/2000	100	NA	4/5/2000
09a	149-151 Maywood Avenue	09a-020576	09a009	2'-6'	Lead, Total	25.6		2.3	15	10	4/12/2000	10	NA	4/12/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Lead, Total	13.1		2.3	15	10	4/20/2000	10	NA	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	3.5'-7.5'	Lead, Total	17.2		2.3	15	10	4/24/2000	10	NA	4/24/2000
02a	100 Hancock Street	02a-020505	02a002	14'-18'	Lithium, Total	766	J	0.10	NA	730	4/3/2000	NA	730	4/3/2000
04a	160/174 Essex Street	04a-020521	04a001	8'-12'	Lithium, Total	1620		0.10	NA	730	3/22/2000	NA	730	3/22/2000
05c	200 NJ Rt. 17 South	05c-020531	05c001	7'-11'	Lithium, Total	1020		0.10	NA	730	3/23/2000	NA	730	3/23/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	6'-10'	Lithium, Total	744		0.10	NA	730	3/27/2000	NA	730	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	16'-20'	Lithium, Total	5240	J	0.10	NA	730	4/4/2000	NA	730	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	10'-14'	Lithium, Total	4740	J	0.10	NA	730	4/4/2000	NA	730	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	6'-10'	Lithium, Total	947		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	16'-20'	Lithium, Total	1080		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020607	12b005	12'-16'	Lithium, Total	1710		0.10	NA	730	4/5/2000	NA	730	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020611	12b007	8'-12'	Lithium, Total	7450	J	0.10	NA	730	4/28/2000	NA	730	4/28/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	10'-14'	Lithium, Total	3910	J	0.10	NA	730	4/6/2000	NA	730	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	13.5'-17.5'	Lithium, Total	2400	J	0.10	NA	730	4/6/2000	NA	730	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	10'-14'	Lithium, Total	4690	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	19'-23'	Lithium, Total	1050	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020629	12b012	19'-23'	Lithium, Total	2790	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020628	12b012	9'-13'	Lithium, Total	2100	J	0.10	NA	730	4/7/2000	NA	730	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020633	12b013	19'-23'	Lithium, Total	867		0.10	NA	730	4/10/2000	NA	730	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020641	12b015	16'-20'	Lithium, Total	6110		0.10	NA	730	4/19/2000	NA	730	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020640	12b015	4'-8'	Lithium, Total	6320		0.10	NA	730	4/19/2000	NA	730	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020645	12b016	16'-20'	Lithium, Total	3340		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020644	12b016	5'-9'	Lithium, Total	2860		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	21'-25'	Lithium, Total	12800		0.10	NA	730	4/20/2000	NA	730	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020648	12b017	6'-10'	Lithium, Total	4400	J	0.10	NA	730	4/24/2000	NA	730	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	8.5'-12.5'	Lithium, Total	5040	J	0.10	NA	730	4/25/2000	NA	730	4/25/2000
18a	Transect J	18a-020707	18a003	21'-25'	Lithium, Total	4620	J	0.10	NA	730	4/26/2000	NA	730	4/26/2000
18a	Transect J	18a-020710	18a004	12'-16	Lithium, Total	1670	J	0.10	NA	730	4/27/2000	NA	730	4/27/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-8
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GEOPROBE GOUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
02a	100 Hancock Street	02a-020505	02a002	Neodymium, Total	14'-18'	19.8	J	13.2	4/3/2000
02d	8 Mill Street	02d-020517	02d003	Yttrium, Total	8'-12'	2.3		1.9	3/16/1900
05a	99 Essex Street	05a-020527	05a001	Lanthanum, Total	8'-12'	49.5	J	33.8	3/22/1900
05b	113 Essex Street	05b-020529	05b001	Neodymium, Total	12'-16'	24.9		13.2	3/23/2000
06c	167 NJ Rt. 17 North	06c-020539	06c002	Neodymium, Total	6'-10'	15.2	J	13.2	3/27/2000
06d	239 NJ Rt. 17 North	06d-020541	06d001	Neodymium, Total	5'-9'	18.8	J	13.2	3/24/2000
06e	29 Essex Street	06e-020543	06e001	Yttrium, Total	8'-12'	3.6		1.9	3/28/2000
07a	111 Essex Street	07a-020545	07a001	Neodymium, Total	5'-9'	26.7		13.2	3/27/2000
08a	23 West Howcroft Road	08a-020549	08a001	Neodymium, Total	8'-12'	22.8	J	13.2	3/30/2000
08a	23 West Howcroft Road	08a-020551	08a002	Neodymium, Total	8'-12'	19	J	13.2	3/30/2000
08a	23 West Howcroft Road	08a-020773	08a003	Neodymium, Total	4'-8'	27.2	J	13.2	3/30/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Dysprosium, Total	5'-9'	12.9	J	3.1	3/31/2000
09a	149-151 Maywood Avenue	09a-020559	09a004	Neodymium, Total	5'-9'	13.7	J	13.2	3/31/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Dysprosium, Total	6'-10'	3.6	J	3.1	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Neodymium, Total	6'-10'	30.7	J	13.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020568	09a007	Yttrium, Total	6'-10'	2.8	J	1.9	4/12/2000
09a	149-151 Maywood Avenue	09a-020569	09a007	Neodymium, Total	20.25'-24.25'	13.5	J	13.2	4/11/2000
09a	149-151 Maywood Avenue	09a-020572	09a008	Neodymium, Total	4'-8'	18.1	J	13.2	4/12/2000
09a	149-151 Maywood Avenue	09a-020577	09a009	Neodymium, Total	9'-13'	19.2	J	13.2	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020591	10a005	Yttrium, Total	5'-9'	3.3		1.9	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Dysprosium, Total	6'-10'	3.8	J	3.1	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Neodymium, Total	6'-10'	17.3	J	13.2	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020593	10a006	Yttrium, Total	6'-10'	1.9		1.9	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Dysprosium, Total	12'-16'	5.8	J	3.1	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Neodymium, Total	12'-16'	13.9	J	13.2	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020782	10a008	Yttrium, Total	12'-16'	5.2		1.9	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Neodymium, Total	16'-20'	22.5	J	13.2	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020599	12b001	Yttrium, Total	16'-20'	2		1.9	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020601	12b002	Neodymium, Total	10'-14'	23.6	J	13.2	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020603	12b003	Neodymium, Total	6'-10'	22.8	J	13.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Neodymium, Total	16'-20'	26.3	J	13.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020605	12b004	Yttrium, Total	16'-20'	2.6		1.9	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020609	12b006	Neodymium, Total	5'-9'	14	J	13.2	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Dysprosium, Total	10'-14'	3.2		3.1	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Neodymium, Total	10'-14'	18.6	J	13.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020616	12b009	Yttrium, Total	10'-14'	5.5		1.9	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020620	12b010	Neodymium, Total	13.5'-17.5'	15.9	J	13.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020624	12b011	Neodymium, Total	10'-14'	33.1	J	13.2	4/7/2000

TABLE 4-8
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GEOPROBE GOUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe	Analysis Name	Sample Depth (ft bgs)	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Cerium, Total	19'-23'	79.6	J	35.0	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Dysprosium, Total	19'-23'	6.2		3.1	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020625	12b011	Neodymium, Total	19'-23'	53.9	J	13.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020637	12b014	Dysprosium, Total	15'-19'	3.9	J	3.1	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020649	12b017	Lanthanum, Total	21'-25'	85.2		33.8	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Cerium, Total	8.5'-12.5'	56.3		35.0	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Dysprosium, Total	8.5'-12.5'	4.4	J	3.1	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Neodymium, Total	8.5'-12.5'	40.9	J	13.2	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020652	12b018	Yttrium, Total	8.5'-12.5'	3		1.9	4/25/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Dysprosium, Total	3.5'-7.5'	3.1	J	3.1	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020656	12b019	Neodymium, Total	3.5'-7.5'	14.9	J	13.2	4/24/2000
14a	Transect B	14a-020666	14a001	Dysprosium, Total	5.5'-9.5'	8.7	J	3.1	4/25/2000
14a	Transect B	14a-020666	14a001	Yttrium, Total	5.5'-9.5'	2.2		1.9	4/25/2000
14a	Transect B	14a-020668	14a002	Dysprosium, Total	9'-13'	4.3	J	3.1	4/27/2000
14a	Transect B	14a-020668	14a002	Yttrium, Total	9'-13'	2.2		1.9	4/27/2000
14a	Transect B	14a-020670	14a003	Yttrium, Total	4'-8'	4.2		1.9	4/28/2000
16a	Transect D	16a-020686	16a004	Dysprosium, Total	7.1'-11.1'	3.9	J	3.1	4/25/2000
17a	Transect G	17a-020690	17a002	Dysprosium, Total	11.2'-15.2'	3.1	J	3.1	4/25/2000
17a	Transect G	17a-020692	17a003	Dysprosium, Total	11.5'-15.5'	3.9	J	3.1	4/28/2000
18a	Transect J	18a-020698	18a001	Dysprosium, Total	15.5'-19.5'	9.7	J	3.1	4/26/2000
18a	Transect J	18a-020702	18a002	Neodymium, Total	13.5'-17.5'	26.1	J	13.2	4/26/2000
18a	Transect J	18a-020706	18a003	Dysprosium, Total	8'-12'	6.5	J	3.1	4/27/2000
18a	Transect J	18a-020710	18a004	Neodymium, Total	12'-16	17.6	J	13.2	4/27/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-9
SUMMARY OF DETECTABLE VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020821	12b010	13.5 - 17.5	Carbon Disulfide	2	J	5	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020821	12b010	13.5 - 17.5	Methylene Chloride	2	J	5	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020824	12b011	10.3 - 14	Carbon Disulfide	2	J	5	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020824	12b011	10.3 - 14	Benzene	36		5	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020640	12b015	4'-8'	Tetrachloroethene	3	J	5	4/24/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020644	12b016	5'-9'	Benzene	4	J	5	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020645	12b016	16'-20'	Benzene	71		5	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020645	12b016	16'-20'	Toluene	3	J	5	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020645	12b016	16'-20'	Total Xylene	2	J	5	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020649	12b017	21'-25'	Benzene	4	J	5	4/20/2000
14a	Transect B	14a-020839	14a001	8.1 - 9	Tetrachloroethene	22		5	8/11/2000
14a	Transect B	14a-020839	14a001	8.1 - 9	Trichloroethene	6		5	8/11/2000
14a	Transect B	14a-020839	14a001	8.1 - 9	1,2-Dichloroethene (total)	6		5	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	1,1-Dichloroethene	2	J	5	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	1,2-Dichloroethene (total)	28		5	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	1,1,1-Trichloroethane	1	J	5	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	Trichloroethene	21		5	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	Tetrachloroethene	55		5	8/11/2000
14a	Transect B	14a-020845	14a003	4.5 - 8.5	Tetrachloroethene	3	J	5	8/11/2000
15a	Transect C	15a-020855	15a003	9.5 - 13.5	Tetrachloroethene	4	J	5	8/18/2000
18a	Transect J	18a-020698	18a001	15.5'-19.5'	Tetrachloroethene	5		5	4/26/2000
18a	Transect J	18a-020702	18a002	13.5'-17.5'	Tetrachloroethene	7		5	4/26/2000
18a	Transect J	18a-020710	18a004	12'-16	Carbon disulfide	1	J	5	4/27/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-10
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES EXCEEDING GROUNDWATER STANDARDS - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Lower of Federal or State MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020821	12b010	13.5 - 17.5	Methylene Chloride	2	J	5	3	2	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect E	12b-020824	12b011	10.3 - 14	Benzene	36		5	1	1	8/17/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020640	12b015	4 - 8	Tetrachloroethene	3	J	5	1	1	4/24/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020644	12b016	5 - 9	Benzene	4	J	5	1	1	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020645	12b016	16 - 20	Benzene	71		5	1	1	4/20/2000
12b	100 West Hunter Avenue (MISS) - Transect A	12b-020649	12b017	21 - 25	Benzene	4	J	5	1	1	4/20/2000
14a	Transect B	14a-020839	14a001	8.1 - 9	Tetrachloroethene	22		5	1	1	8/11/2000
14a	Transect B	14a-020839	14a001	8.1 - 9	Trichloroethene	6		5	1	1	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	1,1-Dichloroethene	2	J	5	2	2	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	1,2-Dichloroethene (total)	28		5	70	10*	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	Tetrachloroethene	55		5	1	1	8/11/2000
14a	Transect B	14a-020842	14a002	9 - 13	Trichloroethene	21		5	1	1	8/11/2000
14a	Transect B	14a-020845	14a003	4.5 - 8.5	Tetrachloroethene	3	J	5	1	1	8/11/2000
15a	Transect C	15a-020855	15a003	9.5 - 13.5	Tetrachloroethene	4	J	5	1	1	8/18/2000
18a	Transect J	18a-020698	18a001	15.5 - 19.5	Tetrachloroethene	5		5	1	1	4/26/2000
18a	Transect J	18a-020702	18a002	13.5 - 17.5	Tetrachloroethene	7		5	1	1	4/26/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
* - Represents cis 1,2-dichloroethene standard.

TABLE 4-11
SUMMARY OF TOTAL RADIUM IN EXISTING OVERBURDEN MONITORING WELL SAMPLES - PHASE I

Property ID Number	Property Name	Well	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
08a	23 West Howcroft Road	B38W12A	08a-020714	7.4'-12.4'	0.255	J	0.24	0.41		R	18.82	33.71	0.25	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-020716	6.7'-11.7'	0.458	J	0.29	0.31	0.507	UJ	1.29	2.23	0.96	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04A	10a-020720	4.7'-9.7'	0.517	J	0.33	0.47	1.228	U	1.34	2.24	1.74	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-020724	10.4'-15.2'	0.467	J	0.39	0.56	2.749	J	1.71	2.71	3.22	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-020726	6.7'-11.7'	0.192		0.29	0.62	0.840		1.45	2.49	1.03	4/13/2000
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-020728	17'-22'	0.617	J	0.41	0.68	0.140	UJ	1.22	2.16	0.76	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-020732	6.9'-16.9'	0.948		0.45	0.33	0.429	U	1.17	2.04	1.38	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-020734	10.7'-14.6'	0.714	J	0.40	0.55	0.982	U	1.19	2.00	1.70	4/7/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-020736	7.2'-13.2'	0.512		0.42	0.63	1.173		1.56	2.64	1.69	4/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-020740	12.9'-14.9'	1.776		0.74	0.57	1.626	J	1.49	2.44	3.40	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-020730	13'-18'	0.803		0.39	0.30	0.000		1.23	2.30	0.80	4/11/2000
19a	Parkway	B38W14S	19a-020742	8'-13'	0.150	U	0.20	0.47	0.300	U	1.11	1.96	0.45	6/14/2000
20a	Grove	B38W15S	20a-020744	10.5'-15.5'	0.600	J	0.36	0.44	1.790	J	1.19	1.89	2.39	6/13/2000
20a	Grove	B38W17A	20a-020746	7.6'-12.6'	0.273		0.22	0.25	1.097		1.24	2.06	1.37	4/11/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected Result
Combined Radium Federal/State MCL is 5 pCi/L

TABLE 4-12
SUMMARY OF TOTAL URANIUM IN EXISTING OVERBURDEN MONITORING WELL SAMPLES - PHASE I

Property ID Number:	Property Name:	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
08a	23 West Howcroft Road	B38W12A	08a-020714	7.4'-12.4'	14.57	2.29E-03	J	4.59	1.61	1.09	0.51	J	1.04	1.05	15.42	46.17	J	4.77	1.20	31.08	**46.68**	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-020716	6.7'-11.7'	0.58	9.15E-05	J	0.52	0.66	0.04	0.02	U	0.25	0.76	0.39	1.17	U	0.43	0.66	1.01	1.19	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04A	10a-020720	4.7'-9.7'	0.73	1.14E-04	J	0.58	0.65	0.10	0.05	UJ	0.25	0.57	1.05	3.15	J	0.68	0.54	1.88	3.20	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-020724	10.4'-15.2'	0.55	8.63E-05	J	0.49	0.62	0.22	0.10	UJ	0.31	0.30	0.50	1.51	J	0.45	0.48	1.27	1.61	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-020726	6.7'-11.7'	0.52	8.19E-05		0.48	0.65	0.25	0.12		0.38	0.70	0.20	0.60		0.31	0.57	0.97	0.72	4/13/2000
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-020728	17'-22'	1.32	2.07E-04	J	0.86	0.56	0.25	0.12	UJ	0.43	0.81	0.67	1.99	J	0.61	0.73	2.23	2.11	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-020732	6.9'-16.9'	0.28	4.34E-05	UJ	0.52	1.10	0.15	0.07	UJ	0.36	0.82	0.52	1.56	UJ	0.67	1.19	0.95	1.63	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-020734	10.7'-14.6'	37.62	5.91E-03	J	8.24	0.32	2.90	1.34	J	1.42	0.68	41.71	124.88	J	9.01	0.32	82.23	**126.23**	4/7/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-020736	7.2'-13.2'	2.33	3.66E-04		1.08	0.81	0.70	0.32		0.62	0.80	1.57	4.71		0.85	0.64	4.61	5.04	4/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-020740	12.9'-14.9'	1.24	1.95E-04	J	0.81	0.63	0.12	0.06	U	0.29	0.66	0.91	2.72	J	0.68	0.54	2.27	2.77	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-020730	13'-18'	0.44	6.99E-05		0.48	0.79	0.32	0.15		0.38	0.29	0.13	0.39		0.25	0.52	0.89	0.53	4/11/2000
19a	Parkway	B38W14S	19a-020742	8'-13'	1.36	2.14E-04		0.58	0.37	0.07	0.03	U	0.17	0.41	0.86	2.57	J	0.45	0.41	2.29	2.61	6/14/2000
20a	Grove	B38W15S	20a-020744	10.5'-15.5'	0.60	9.43E-05	J	0.37	0.24	-0.02	0.00	U	0.03	0.34	0.26	0.78	J	0.26	0.35	0.86	0.78	6/13/2000
20a	Grove	B38W17A	20a-020746	7.6'-12.6'	0.48	7.59E-05		0.39	0.33	0.07	0.03		0.18	0.40	0.18	0.52		0.25	0.42	0.73	0.56	4/11/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected Result
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L
Bolded concentrations denotes exceedance of Federal/State MCL

TABLE 4-13
SUMMARY OF TOTAL THORIUM IN EXISTING OVERBURDEN MONITORING WELL SAMPLES - PHASE I

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
08a	23 West Howcroft Road	B38W12A	08a-020714	7.4'-12.4'	1.38	J	0.98	0.71	4.61	J	1.94	1.14	1.92	J	1.17	0.93	7.91	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-020716	6.7'-11.7'	0.89	J	0.84	1.31	0.99	J	0.83	1.12	0.64	UJ	0.67	1.03	2.51	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04A	10a-020720	4.7'-9.7'	0.65	J	0.57	0.73	1.09	J	0.72	0.63	0.19	UJ	0.30	0.48	1.93	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-020724	10.4'-15.2'	0.24	U	0.37	0.73	1.39	J	0.76	0.54	0.54	J	0.45	0.24	2.16	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-020726	6.7'-11.7'	-0.05		0.07	0.74	1.40		0.96	0.96	0.27		0.49	1.02	1.67	4/13/2000
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-020728	17'-22'	0.04	U	0.25	0.68	1.18	J	0.67	0.44	0.12	U	0.23	0.49	1.34	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-020732	6.9'-16.9'	0.50	U	0.53	0.74	0.53	J	0.52	0.62	0.11	U	0.23	0.31	1.14	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-020734	10.7'-14.6'	0.20	UJ	0.40	0.85	1.09	J	0.72	0.30	0.20	UJ	0.31	0.50	1.49	4/7/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-020736	7.2'-13.2'	-0.03		0.39	1.21	2.17		1.15	0.82	0.27		0.45	0.88	2.44	4/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-020740	12.9'-14.9'	0.06	U	0.30	0.80	0.91	J	0.64	0.64	0.21	U	0.35	0.68	1.19	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-020730	13'-18'	0.72		0.71	1.11	1.28		0.88	1.09	0.35		0.45	0.77	2.35	4/11/2000
19a	Parkway	B38W14S	19a-020742	8'-13'	0.13	U	0.16	0.26	0.58	J	0.32	0.21	0.03	U	0.08	0.18	0.74	6/14/2000
20a	Grove	B38W15S	20a-020744	10.5'-15.5'	0.10	U	0.14	0.24	0.36	J	0.25	0.11	0.03	U	0.08	0.22	0.49	6/13/2000
20a	Grove	B38W17A	20a-020746	7.6'-12.6'	0.58		0.69	1.16	2.32		1.23	0.80	0.09		0.27	0.72	2.99	4/11/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected Result

TABLE 4-14
SUMMARY OF METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID:	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
08a	23 West Howcroft Road	08a-020714	B38W12A	7.4'-12.4'	Barium, Total	29		0.20	3/28/2000
08a	23 West Howcroft Road	08a-020714	B38W12A	7.4'-12.4'	Boron, Total	27.2		1.2	3/28/2000
08a	23 West Howcroft Road	08a-020714	B38W12A	7.4'-12.4'	Chromium, Total	5.7		0.60	3/28/2000
08a	23 West Howcroft Road	08a-020714	B38W12A	7.4'-12.4'	Lithium, Total	120		0.10	3/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Arsenic, Total	130		2.9	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Barium, Total	44.9		0.20	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Boron, Total	81.8		1.2	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Lithium, Total	178		0.10	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Barium, Total	30.9		0.20	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Boron, Total	93.9		1.2	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Cadmium, Total	0.77		0.30	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Chromium, Total	4.5		0.60	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Lead, Total	4.5		2.3	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Lithium, Total	9.8	J	0.10	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020724	B38W24S	10.4'-15.2'	Barium, Total	39.6		0.20	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020724	B38W24S	10.4'-15.2'	Boron, Total	83.4		1.2	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020724	B38W24S	10.4'-15.2'	Lithium, Total	39.1		0.10	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Arsenic, Total	10.5	J	2.9	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Barium, Total	124		0.20	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Boron, Total	80.3		1.2	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Chromium, Total	4		0.60	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Lithium, Total	678		0.10	4/13/2000
12a	NY, Susquehanna, & Western Railway	12a-020728	B38W01S	17'-22'	Barium, Total	303		0.20	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020728	B38W01S	17'-22'	Boron, Total	23.5		1.2	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020728	B38W01S	17'-22'	Chromium, Total	43.2		0.60	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020728	B38W01S	17'-22'	Lithium, Total	14.4		0.10	4/14/2000
12b	100 West Hunter Avenue (MISS)	12b-020730	MISS01AA	13'-18'	Barium, Total	8.2	J	0.20	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020730	MISS01AA	13'-18'	Boron, Total	227		1.2	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020730	MISS01AA	13'-18'	Chromium, Total	0.78		0.60	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020730	MISS01AA	13'-18'	Lead, Total	2.3	J	2.3	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020730	MISS01AA	13'-18'	Lithium, Total	242		0.10	4/11/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Arsenic, Total	4770		2.9	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Barium, Total		R	0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Boron, Total	967		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Chromium, Total	4.6		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Lithium, Total	7810		0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Mercury, Total	0.19		0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020734	MISS05A	10.7'-14.6'	Barium, Total	16.3		0.20	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020734	MISS05A	10.7'-14.6'	Boron, Total	407		1.2	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020734	MISS05A	10.7'-14.6'	Lithium, Total	729	J	0.10	4/7/2000

TABLE 4-14
SUMMARY OF METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID:	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Arsenic, Total	4	J	2.9	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Barium, Total	56.3		0.20	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Boron, Total	370		1.2	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Cadmium, Total	1.8		0.30	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Chromium, Total	2.7		0.60	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Lead, Total	5		2.3	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Lithium, Total	2170		0.10	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Mercury, Total	0.1		0.10	4/13/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Arsenic, Total	16.9		2.9	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Barium, Total	35.4	J	0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Boron, Total	871		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Chromium, Total	1.2		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Lithium, Total	1230		0.10	4/10/2000
19a	Parkway	19a-020742	B38W14S	8'-13'	Barium, Total	85.8		0.10	6/14/2000
19a	Parkway	19a-020742	B38W14S	8'-13'	Boron, Total	43.2		1.8	6/14/2000
19a	Parkway	19a-020742	B38W14S	8'-13'	Lithium, Total	32.5		0.20	6/14/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Arsenic, Total	6.2		3.2	6/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Barium, Total	36.9		0.10	6/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Boron, Total	558		1.8	6/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Cadmium, Total	0.5		0.40	6/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Chromium, Total	7.5	J	0.60	6/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Lithium, Total	2640		0.20	6/13/2000
20a	Grove	20a-020746	B38W17A	7.6'-12.6'	Barium, Total	62		0.20	4/11/2000
20a	Grove	20a-020746	B38W17A	7.6'-12.6'	Boron, Total	66.6		1.2	4/11/2000
20a	Grove	20a-020746	B38W17A	7.6'-12.6'	Chromium, Total	60.2		0.60	4/11/2000
20a	Grove	20a-020746	B38W17A	7.6'-12.6'	Lithium, Total	349		0.10	4/11/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-15
SUMMARY OF METALS IN OVERBURDEN GROUNDWATER SAMPLES EXCEEDING STANDARDS - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result	Result Qualifier	IDL	MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Arsenic, Total	10.5	J	2.9	10	8	N/A	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Arsenic, Total	130		2.9	10	8	N/A	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Arsenic, Total	16.9		2.9	10	8	N/A	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020740	B38W19S	12.9'-14.9'	Lithium, Total	1230		0.10	N/A	N/A	730	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Arsenic, Total	4770		2.9	10	8	N/A	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020732	MISS02A	6.9'-16.9'	Lithium, Total	7810		0.10	N/A	N/A	730	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020736	MISS06A	7.2'-13.2'	Lithium, Total	2170		0.10	N/A	N/A	730	4/13/2000
20a	Grove	20a-020744	B38W15S	10.5'-15.5'	Lithium, Total	2640		0.20	N/A	N/A	730	6/13/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable
PQL = Practical Quantitation Limit
GWQC = Groundwater Quality Criteria

TABLE 4-16
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
08a	23 West Howcroft Road	08a-020714	B38W12A	7.4'-12.4'	Neodymium, Total	40.5		13.2	3/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020724	B38W24S	10.4'-15.2'	Dysprosium, Total	8.1		3.1	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020726	B38W25S	6.7'-11.7'	Yttrium, Total	3		1.9	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020716	MISS03A	6.7'-11.7'	Neodymium, Total	14.9	J	13.2	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Yttrium, Total	11.4		1.9	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Neodymium, Total	31.1	J	13.2	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020720	MISS04A	4.7'-9.7'	Dysprosium, Total	11.9		3.1	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020734	MISS05A	10.7'-14.6'	Yttrium, Total	2		1.9	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020734	MISS05A	10.7'-14.6'	Neodymium, Total	17.3	J	13.2	4/7/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-17
SUMMARY OF TOTAL RADIUM IN EXISTING BEDROCK MONITORING WELL SAMPLES - PHASE I

Property ID Number	Property Name	Well	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA 228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
08a	23 West Howcroft Road	B38W12B	08a-020715	34.5'-44.9'	1.48	J	0.62	0.61	1.00	U	1.24	2.08	2.48	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-020717	20'-50'	0.67	J	0.38	0.45	0.37	U	1.38	2.39	1.04	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-020748	17'-47'	0.93	J	0.54	0.55	2.04	J	1.69	2.75	2.97	4/5/2000
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-020725	22'-27'	0.68	J	0.42	0.67	1.27	J	1.16	1.90	1.95	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-020727	21.6'-26.6'	1.34		0.79	0.52	-0.63		1.71	3.14	1.34	4/13/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-020719	29.50-39.50'	0.64		0.45	0.55	0.65		1.24	2.13	1.29	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-020718	22.7'-27.7'	1.46		0.70	0.64	-0.14		1.21	2.18	1.46	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-020721	22.7'-33'	0.54	J	0.32	0.44	0.50	U	1.16	2.01	1.04	4/6/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-020722	15.9'-20.90'	0.31	J	0.29	0.49	0.98	U	1.33	2.25	1.29	4/28/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-020723	18.5'-28.8'	0.06	U	0.09	0.20	0.12	U	0.56	0.99	0.18	3/30/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-020729	37'-42'	0.54	J	0.41	0.72	-0.67	U	1.13	2.12	0.54	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-020731	23'-53.5'	0.22	J	0.21	0.31	0.34	U	1.30	2.28	0.56	4/18/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-020733	28.5'-58.5'	0.79	J	0.49	0.67	1.05	U	1.25	2.10	1.84	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-020735	25'-55'	2.04	J	0.66	0.37		R	8.55	15.43	2.04	4/3/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-020738	19'-49'	0.13	J	0.12	0.20	0.25	U	0.69	1.20	0.38	3/29/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-020739	35'-40'	15.57		2.29	0.65	22.81		2.43	2.23	**38.38**	4/6/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-020741	21.7'-31.9'	0.67	J	0.30	0.19	0.50	U	0.68	1.15	1.16	3/29/2000
19a	Parkway	B38W14D	19a-020743	46'-51.5'	0.54	J	0.34	0.33	0.13	U	1.78	3.15	0.67	6/14/2000
20a	Grove	B38W15D	20a-020745	40'-45'	0.73	J	0.39	0.43	0.40	U	1.34	2.34	1.13	6/13/2000
20a	Grove	B38W17B	20a-020747	18.7'-29'	0.78	J	0.41	0.45	2.04	J	1.16	1.77	2.81	4/18/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected Result
Combined Radium Federal/State MCL is 5 pCi/L
Bolded concentration denotes exceedance of Federal/State MCL

TABLE 4-18
SUMMARY OF TOTAL URANIUM IN EXISTING BEDROCK MONITORING WELL SAMPLES - PHASE I

Property ID Number:	Property Name:	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium (ug/L) (1)	Date Collected
08a	23 West Howcroft Road	B38W12B	08a-020715	34.5'-44.9'	1.38	2.17E-04	J	0.79	0.73	0.46	0.21	UJ	0.53	0.85	0.86	2.58	J	0.64	0.81	2.70	2.79	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-020717	20'-50'	0.74	1.16E-04	J	0.55	0.43	0.12	0.05	UJ	0.23	0.31	0.17	0.51	UJ	0.27	0.43	1.02	0.57	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-020748	17'-47'	0.21	3.34E-05	UJ	0.33	0.60	-0.02	0.00	UJ	0.04	0.52	0.06	0.18	UJ	0.19	0.49	0.27	0.18	4/5/2000
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-020725	22'-27'	0.77	1.21E-04	J	0.63	0.75	0.44	0.20	UJ	0.55	0.87	0.44	1.33	UJ	0.49	0.75	1.65	1.53	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-020727	21.6'-26.6'	0.16	2.53E-05		0.40	0.93	0.11	0.05		0.27	0.62	0.34	1.03		0.45	0.76	0.62	1.08	4/13/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-020719	29.50-39.50'	0.40	6.29E-05		0.41	0.54	0.31	0.14		0.39	0.51	0.06	0.18		0.18	0.48	0.77	0.32	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-020718	22.7'-27.7'	0.79	1.23E-04		0.60	0.67	0.44	0.20		0.49	0.64	0.35	1.05		0.39	0.52	1.57	1.25	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-020721	22.7'-33'	0.33	5.24E-05	UJ	0.42	0.75	0.64	0.30	J	0.57	0.61	0.38	1.13	UJ	0.42	0.64	1.35	1.43	4/6/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-020722	15.9'-20.90'	2.38	3.74E-04	J	1.18	0.55	0.69	0.32	J	0.68	0.80	0.77	2.32	J	0.66	0.72	3.84	2.64	4/28/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-020723	18.5'-28.8'	0.13	2.12E-05	U	0.17	0.22	0.12	0.05	U	0.17	0.16	0.27	0.80	J	0.24	0.26	0.52	0.86	3/30/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-020729	37'-42'	0.54	8.49E-05	UJ	0.58	0.96	0.26	0.12	UJ	0.37	0.35	0.68	2.04	J	0.58	0.63	1.48	2.16	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-020731	23'-53.5'	1.50	2.35E-04	J	0.90	0.92	0.28	0.13	U	0.46	0.90	0.85	2.55	J	0.66	0.73	2.63	2.68	4/18/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-020733	28.5'-58.5'	1.36	2.14E-04	J	0.97	0.71	0.35	0.16	UJ	0.55	0.88	0.74	2.22	J	0.71	0.71	2.45	2.38	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-020735	25'-55'	1.84	2.88E-04	J	0.97	0.75	0.33	0.15	U	0.47	0.80	1.72	5.15	J	0.93	0.75	3.88	5.31	4/3/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-020738	19'-49'	4.79	7.52E-04	J	1.55	0.56	0.52	0.24	J	0.47	0.59	2.76	8.26	J	1.07	0.60	8.07	8.50	3/29/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-020739	35'-40'	4.20	6.59E-04	J	1.35	0.35	0.27	0.12	UJ	0.33	0.44	3.19	9.54	J	1.13	0.35	7.65	9.67	4/6/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-020741	21.7'-31.9'	0.17	2.63E-05	U	0.22	0.37	0.10	0.05	U	0.19	0.40	0.06	0.18	U	0.16	0.37	0.33	0.23	3/29/2000
19a	Parkway	B38W14D	19a-020743	46'-51.5'	1.19	1.87E-04	J	0.59	0.33	0.21	0.10	UJ	0.26	0.35	0.70	2.10	J	0.44	0.33	2.10	2.19	6/14/2000
20a	Grove	B38W15D	20a-020745	40'-45'	6.31	9.91E-04		1.65	0.40	-0.05	0.00	U	0.05	0.44	2.86	8.56		0.95	0.45	9.17	8.56	6/13/2000
20a	Grove	B38W17B	20a-020747	18.7'-29'	0.86	1.34E-04	J	0.64	0.67	0.08	0.04	U	0.26	0.69	0.17	0.51	U	0.30	0.56	1.11	0.55	4/18/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
ND = Denotes all isotopes are non-detect
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L

TABLE 4-19
SUMMARY OF TOTAL THORIUM EXISTING BEDROCK MONITORING WELL SAMPLES - PHASE I

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screened Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
08a	23 West Howcroft Road	B38W12B	08a-020715	34.5'-44.9'	0.12	UJ	0.52	1.31	2.16	J	1.14	0.94	0.78	J	0.66	0.73	3.06	3/28/2000
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-020717	20'-50'	0.18	U	0.33	0.68	0.84	J	0.64	0.83	-0.05	U	0.05	0.55	1.02	4/5/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-020748	17'-47'	0.09	UJ	0.86	2.27	1.71	J	1.32	1.61	1.15	J	1.00	0.91	2.94	4/5/2000
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-020725	22'-27'	0.02	UJ	0.41	1.20	5.95	J	2.17	1.03	0.29	UJ	0.47	0.93	6.26	4/7/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-020727	21.6'-26.6'	0.16		0.34	0.76	1.45		0.88	0.70	0.54		0.53	0.63	2.14	4/13/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-020719	29.50-39.50'	0.12		0.29	0.69	1.78		0.93	0.69	0.29		0.40	0.73	2.19	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-020718	22.7'-27.7'	-0.07		0.32	1.17	1.26		0.97	1.25	0.41		0.57	1.02	1.67	4/12/2000
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-020721	22.7'-33'	0.42	UJ	0.54	0.92	1.51	U	0.96	0.79	0.33	UJ	0.46	0.79	2.25	4/6/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-020722	15.9'-20.90'		R	0.08	0.66	1.59	J	0.80	0.46	0.67	J	0.50	0.39	2.26	4/28/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-020723	18.5'-28.8'	0.10	UJ	0.24	0.56	0.67	J	0.46	0.46	0.11	UJ	0.19	0.36	0.88	3/30/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-020729	37'-42'	-0.05	U	0.27	0.85	0.80	J	0.61	0.83	0.26	U	0.34	0.58	1.07	4/14/2000
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-020731	23'-53.5'	0.52	J	0.50	0.50	1.21	JU	0.78	0.70	0.23	U	0.38	0.75	1.97	4/18/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-020733	28.5'-58.5'	0.09	U	0.22	0.50	0.41	U	0.44	0.50	0.30	U	0.38	0.50	0.81	4/10/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-020735	25'-55'	1.58	J	0.89	0.65	2.11	J	1.03	0.65	0.81	J	0.63	0.65	4.50	4/3/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-020738	19'-49'	0.16	UJ	0.25	0.48	0.62	J	0.42	0.39	0.10	UJ	0.17	0.32	0.87	3/29/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-020739	35'-40'	27.08		5.37	0.72	5.08		1.55	0.64	29.02		5.68	0.50	**61.18**	4/6/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-020741	21.7'-31.9'	0.08	U	0.16	0.35	0.88	J	0.43	0.24	0.17	U	0.18	0.21	1.13	3/29/2000
19a	Parkway	B38W14D	19a-020743	46'-51.5'	0.04	U	0.16	0.40	0.90	J	0.43	0.32	0.12	U	0.18	0.33	1.06	6/14/2000
20a	Grove	B38W15D	20a-020745	40'-45'	0.39	J	0.31	0.41	0.74	J	0.40	0.22	0.13	U	0.16	0.22	1.26	6/13/2000
20a	Grove	B38W17B	20a-020747	18.7'-29'	0.28	U	0.48	0.97	2.05	J	1.01	0.66	0.52	J	0.51	0.70	2.85	4/18/2000

Note:
pCi/L - picocuries per liter
J - Estimated Concentration
U - Non-Detect
UJ - Estimated Non-Detect
R - Rejected Result

TABLE 4-20
SUMMARY OF RCRA 8 METALS AND LITHIUM/BORON IN BEDROCK GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
08a	23 West Howcroft Road	08a-020715	B38W12B	34.5'-44.9'	Barium, Total	105		0.20	3/28/2000
08a	23 West Howcroft Road	08a-020715	B38W12B	34.5'-44.9'	Boron, Total	34.2		1.2	3/28/2000
08a	23 West Howcroft Road	08a-020715	B38W12B	34.5'-44.9'	Chromium, Total	26.6		0.60	3/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Arsenic, Total	8		2.9	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Barium, Total	18.2		0.20	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Boron, Total	97.2		1.2	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Lithium, Total	82.5		0.10	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Barium, Total	239		0.20	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Boron, Total	1570		1.2	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Chromium, Total	2.9		0.60	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Lead, Total	4.1	J	2.3	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Lithium, Total	2400		0.10	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Barium, Total	12	J	0.20	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Boron, Total	101		1.2	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Chromium, Total	4.4		0.60	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Lithium, Total	62.9	J	0.10	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020721	B38W05B	22.7'-33'	Barium, Total	142		0.20	4/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-020721	B38W05B	22.7'-33'	Boron, Total	33.1		1.2	4/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-020721	B38W05B	22.7'-33'	Chromium, Total	163		0.60	4/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-020721	B38W05B	22.7'-33'	Lithium, Total	8.8		0.10	4/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-020722	B38W06B	15.9'-20.90'	Barium, Total	104		0.20	4/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020722	B38W06B	15.9'-20.90'	Boron, Total	114		1.2	4/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020722	B38W06B	15.9'-20.90'	Chromium, Total	4.7		0.60	4/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020722	B38W06B	15.9'-20.90'	Lithium, Total	294	J	0.10	4/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020723	B38W07B	18.5'-28.8'	Barium, Total	33		0.20	3/20/2000
10a	100 West Hunter Avenue (Stepan)	10a-020723	B38W07B	18.5'-28.8'	Boron, Total	48		1.2	3/20/2000
10a	100 West Hunter Avenue (Stepan)	10a-020723	B38W07B	18.5'-28.8'	Lithium, Total	20.9	J	0.10	3/20/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Barium, Total	51.9		0.20	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Boron, Total	94.4		1.2	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Cadmium, Total	0.6		0.30	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Chromium, Total	4.3		0.60	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Lead, Total	2.6		2.3	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Lithium, Total	52.7		0.10	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020727	B38W25D	21.6'-26.6'	Barium, Total	60.4		0.20	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020727	B38W25D	21.6'-26.6'	Boron, Total	143		1.2	4/13/2000

TABLE 4-20
SUMMARY OF RCRA 8 METALS AND LITHIUM/BORON IN BEDROCK GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020727	B38W25D	21.6'-26.6'	Chromium, Total	3.2		0.60	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020727	B38W25D	21.6'-26.6'	Lithium, Total	1110		0.10	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Barium, Total	107		0.20	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Boron, Total	113		1.2	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Chromium, Total	5.8		0.60	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Lithium, Total	41.4		0.10	4/5/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Barium, Total	15.6		0.20	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Boron, Total	303		1.2	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Chromium, Total	1.4		0.60	4/14/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Lithium, Total	1650		0.10	4/14/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Arsenic, Total	9.1	J	2.9	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Barium, Total	109		0.20	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Boron, Total	62.2		1.2	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Chromium, Total	5.5		0.60	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Lithium, Total	83.8		0.10	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Barium, Total	13	J	0.20	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Boron, Total	1910		1.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Chromium, Total	18.8		0.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Lithium, Total	14900		0.10	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Silver, Total	1.7		0.90	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Arsenic, Total	4.4	J	2.9	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Barium, Total	481		0.20	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Boron, Total	528		1.2	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Chromium, Total	5.5		0.60	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Lithium, Total	6600	J	0.10	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Arsenic, Total	64.8		2.9	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Barium, Total	18.8		0.20	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Boron, Total	991		1.2	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Chromium, Total	1.9		0.60	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Lithium, Total	5160		0.10	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Arsenic, Total	23.2		2.9	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Barium, Total	29.3		0.20	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Boron, Total	386		1.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Chromium, Total	66.8		0.60	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Lead, Total	15.8		2.3	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Lithium, Total	3000	J	0.10	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Mercury, Total	0.13		0.10	4/6/2000

TABLE 4-20
SUMMARY OF RCRA 8 METALS AND LITHIUM/BORON IN BEDROCK GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Arsenic, Total	57.7		2.9	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Barium, Total	30.6		0.20	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Boron, Total	1120		1.2	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Chromium, Total	6.4		0.60	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Lithium, Total	5600		0.10	3/29/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Arsenic, Total	3.2		3.2	6/14/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Barium, Total	106		0.10	6/14/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Boron, Total	48.1		1.8	6/14/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Cadmium, Total	0.45		0.40	6/14/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Lead, Total	21.3		2.3	6/14/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Lithium, Total	22.9		0.20	6/14/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Arsenic, Total	11.5		3.2	6/13/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Barium, Total	31.2		0.10	6/13/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Boron, Total	594		1.8	6/13/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Lithium, Total	3380		0.20	6/13/2000
20a	Grove	20a-020747	B38W17B	18.7'-29'	Barium, Total	81.9		0.20	4/18/2000
20a	Grove	20a-020747	B38W17B	18.7'-29'	Boron, Total	319		1.2	4/18/2000
20a	Grove	20a-020747	B38W17B	18.7'-29'	Chromium, Total	2		0.60	4/18/2000
20a	Grove	20a-020747	B38W17B	18.7'-29'	Lithium, Total	1540		0.10	4/18/2000

Notes:

J = Estimated Concentration
ft bgs = Feet below ground surface
ug/L =Micrograms per liter

TABLE 4-21
SUMMARY OF METALS IN BEDROCK EXCEEDING GROUNDWATER STANDARDS - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Arsenic, Total	8		2.9	10	8	NA	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Lithium, Total	2400		0.10	NA	NA	730	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020721	B38W05B	22.7'-33'	Chromium, Total	163		0.60	100	100	NA	4/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-020727	B38W25D	21.6'-26.6'	Lithium, Total	1110		0.10	NA	NA	730	4/13/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Lithium, Total	1650		0.10	NA	NA	730	4/14/2000
12b	100 West Hunter Avenue (MISS)	12b-020731	MISS01B	23'-53.5'	Arsenic, Total	9.1	J	2.9	10	8	NA	4/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Lithium, Total	14900		0.10	NA	NA	730	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Lithium, Total	6600	J	0.10	NA	NA	730	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Arsenic, Total	64.8		2.9	10	8	NA	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020738	MISS07B	19'-49'	Lithium, Total	5160		0.10	NA	NA	730	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Arsenic, Total	23.2		2.9	10	8	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Lead, Total	15.8		2.3	15	10	NA	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Lithium, Total	3000	J	0.10	NA	NA	730	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Arsenic, Total	57.7		2.9	10	8	NA	3/29/2000
12b	100 West Hunter Avenue (MISS)	12b-020741	B38W19D	21.7'-31.9'	Lithium, Total	5600		0.10	NA	NA	730	3/29/2000
19a	Parkway	19a-020743	B38W14D	46'-51.5'	Lead, Total	21.3		2.3	15	10	NA	6/14/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Arsenic, Total	11.5		3.2	10	8	NA	6/13/2000
20a	Grove	20a-020745	B38W15D	40'-45'	Lithium, Total	3380		0.20	NA	NA	730	6/13/2000
20a	Grove	20a-020747	B38W17B	18.7'-29'	Lithium, Total	1540		0.10	NA	NA	730	4/18/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-22
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN BEDROCK GROUNDWATER SAMPLES - PHASE I

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Dysprosium, Total	8.9		3.1	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Neodymium, Total	25.7	J	13.2	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020717	MISS03B	20'-50'	Yttrium, Total	3		1.9	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020718	B38W04B	22.7'-27.7'	Dysprosium, Total	4.4	J	3.1	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Cerium, Total	35.1	J	35.0	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Dysprosium, Total	8.3	J	3.1	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Neodymium, Total	42.5	J	13.2	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020719	B38W03B	29.50-39.50'	Yttrium, Total	4.7	J	1.9	4/12/2000
10a	100 West Hunter Avenue (Stepan)	10a-020722	B38W06B	15.9'-20.90'	Neodymium, Total	15.6	J	13.2	4/28/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Dysprosium, Total	11.1		3.1	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020725	B38W24D	22'-27'	Neodymium, Total	15	J	13.2	4/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Dysprosium, Total	8.7		3.1	4/5/2000
10a	100 West Hunter Avenue (Stepan)	10a-020748	MISS04B	17'-47'	Neodymium, Total	20.4	J	13.2	4/5/2000
12a	NY, Susquehanna, & Western Railway	12a-020729	B38W02D	37'-42'	Yttrium, Total	2.7		1.9	4/14/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Neodymium, Total	17.2	J	13.2	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020733	MISS02B	28.5'-58.5'	Yttrium, Total	2.9	J	1.9	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Dysprosium, Total	4.8	J	3.1	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020735	MISS05B	25'-55'	Neodymium, Total	29.2	J	13.2	4/3/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Cerium, Total	702		35.0	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Dysprosium, Total	21.2		3.1	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Lanthanum, Total	483	J	33.8	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Neodymium, Total	309	J	13.2	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020739	B38W18D	35'-40'	Yttrium, Total	66		1.9	4/6/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-23
SUMMARY OF TOTAL RADIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	GWRI Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	Filtered/Unfiltered	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-226 NAD	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	RA-228 NAD	Total Radium (pCi/L)	Date Collected
02b	80 Hancock Street	02b001	02b-020507	12'-15.5	U	5.94	J	1.45	0.62	*3.83*	5.94	J	2.30	2.34	*5.65*	**11.88**	8/22/2001
02b	80 Hancock Street	02b001	02b-020507	12'-15.5	F	0.36	J	0.19	0.26		0.69	UJ	0.73	0.79		1.06	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	12'-16'	U		R	1.70	2.17	NA		R	6.34	6.94	NA	R	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	12'-16'	F	0.53	J	0.24	0.30		0.35	UJ	0.67	0.73		0.87	8/22/2001
07a	111 Essex Street	07a002	07a-021153	10.5'-14.50'	U	3.10		0.76	0.32	0.61	4.31		1.09	1.06	*2.09*	**7.40**	11/30/2000
07a	111 Essex Street	07a002	07a-021183	10.5'-14.50'	F	2.47	J	0.69	0.45		2.98		0.79	0.76		**5.46**	11/30/2000
07a	111 Essex Street	07a003	07a-021154	11.5'-15.5'	U	1.44	J	0.45	0.25	0.30	1.35		0.72	0.74	0.20	2.79	11/30/2000
07a	111 Essex Street	07a003	07a-021184	11.5'-15.5'	F	1.26	J	0.40	0.28		1.07		0.60	0.62		2.33	11/30/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021160	14'-18'	U	1.24		0.55	0.59	0.92	1.35	UJ	1.47	1.58	1.10	2.59	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021186	14'-18'	F	0.64		0.34	0.41		0.50	UJ	1.43	1.56		1.15	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021156	18'-22'	U	1.33		0.56	0.48	0.13	1.91		1.38	1.46	1.03	3.24	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021185	18-22'	F	1.23		0.54	0.45		1.66		1.31	1.40		2.90	12/1/2000
13a	Transect H & I	13a001	13a-021187	15.5'-19.5'	U	1.73	J	0.72	0.88	1.37	2.42	UJ	2.19	2.42	*2.12*	4.15	12/4/2000
13a	Transect H & I	13a001	13a-020659	15.5'-19.5'	F	0.62	J	0.38	0.60		0.75	UJ	1.16	1.26		1.36	12/4/2000
13a	Transect H & I	13a002	13a-021189	10'-14'	U	2.11	J	0.77	0.97	0.10	2.09	UJ	1.87	2.09	1.30	4.20	12/4/2000
13a	Transect H & I	13a002	13a-020660	10'-14'	F	2.01	J	0.70	0.65		2.07	UJ	1.83	2.07		4.08	12/4/2000
13a	Transect H & I	13a003	13a-020662	10'-14'	U	0.28	J	0.27	0.69	0.15	0.57	UJ	0.88	0.96	0.23	0.85	12/5/2000
13a	Transect H & I	13a003	13a-021195	10'-14'	F	0.23	J	0.18	0.32		0.93	J	0.76	0.81		1.17	12/5/2000
13a	Transect H & I	13a004	13a-020664	10'-14'	U	2.08	J	0.80	0.77	*2.15*	2.70	J	1.82	1.92	*2.22*	4.79	12/5/2000
13a	Transect H & I	13a004	13a-021196	10'-14'	F	0.31	J	0.19	0.25		0.95	J	0.80	0.85		1.27	12/5/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
Bolded Concentration indicates exceedance of Federal/State MCL of 5 pCi/L
NA= Not Applicable
R = Rejected Data
F = Filtered U = Unfiltered
NAD = Normalized Absolute Difference
NAD > 1.69 Signifies Potential Statistical Difference in Results

TABLE 4-24
SUMMARY OF TOTAL URANIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	GWRI Site ID	S&W Lab Sample ID	Filtered / Unfiltered	Depth of Measure (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-234 NAD	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error	U-235 MDA (pCi/L)	U-235 NAD	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	U-238 NAD	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
02b	80 Hancock Street	02b001	02b-020507	U	12'-15.5	1.39	2.18E-04	J	0.69	0.38	1.48	0.13	0.06	UJ	0.25	0.52	0.39	0.75	2.24	J	0.51	0.57	0.93	2.26	2.30	8/22/2001
02b	80 Hancock Street	02b001	02b-020507	F	12'-15.5	0.24	3.83E-05		0.36	0.72		0.01	0.01		0.17	0.56		0.21	0.64	UJ	0.26	0.42		0.47	0.65	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	U	12'-16'	2.90	4.55E-04	J	1.04	0.52	0.83	0.57	0.26	U	0.16	0.57	0.00	2.36	7.07	J	0.91	0.41	0.21	5.83	7.33	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	F	12'-16'	1.83	2.88E-04		0.76	0.61		0.57	0.26	U	0.16	0.57		2.11	6.31	J	0.80	0.40		4.51	6.58	8/22/2001
07a	111 Essex Street	07a002	07a-021153	U	10.5'-14.50'	1.99	3.13E-04		0.70	0.31	0.84	0.21	0.10	UJ	0.22	0.25	0.19	1.82	5.46		0.66	0.27	0.01	4.02	5.55	11/30/2000
07a	111 Essex Street	07a002	07a-021183	F	10.5'-14.50'	2.96	4.66E-04		0.93	0.30		0.15	0.07	UJ	0.20	0.31		1.84	5.49		0.68	0.34		4.95	5.56	11/30/2000
07a	111 Essex Street	07a003	07a-021154	U	11.5'-15.5'	6.27	9.85E-04		1.49	0.32	0.62			R	0.20	0.14	NA	4.17	12.47		1.10	0.22	0.30	10.44	12.47	11/30/2000
07a	111 Essex Street	07a003	07a-021184	F	11.5'-15.5'	7.74	1.22E-03		1.85	0.41		0.12	0.05	U	0.19	0.38		4.67	13.99		1.25	0.29		12.53	14.05	11/30/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021160	U	14'-18'	1.15	1.80E-04	J	0.53	0.37	0.27			R	0.22	0.17	NA	0.58	1.73	J	0.36	0.27	0.36	1.72	1.73	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021186	F	14'-18'	1.36	2.13E-04	J	0.59	0.51		0.32	0.15	J	0.28	0.31		0.78	2.33	J	0.43	0.41		2.45	2.48	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021156	U	18'-22'	0.59	9.26E-05	J	0.35	0.31	1.46	0.11	0.05	U	0.19	0.36	0.15	0.51	1.53	J	0.32	0.29	0.50	1.21	1.58	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021185	F	18-22'	1.83	2.88E-04	J	0.78	0.37		0.08	0.04	UJ	0.15	0.21		0.79	2.38	J	0.47	0.29		2.70	2.41	12/1/2000
13a	Transect H & I	13a001	13a-021187	U	15.5'-19.5'	0.43	6.73E-05	J	0.35	0.54	0.66	0.01	0.00	U	0.12	0.38	*3.08*	0.25	0.76	U	0.27	0.48	0.87	0.69	0.76	12/4/2000
13a	Transect H & I	13a001	13a-020659	F	15.5'-19.5'	0.82	1.28E-04	J	0.47	0.34		0.38	0.18	U	0.03	0.38		0.71	2.12		0.45	0.46		1.90	2.30	12/4/2000
13a	Transect H & I	13a002	13a-021189	U	10'-14'	0.56	8.74E-05	J	0.38	0.38	1.00			R	0.07	0.57	NA	0.29	0.87	UJ	0.30	0.48	0.47	0.85	0.87	12/4/2000
13a	Transect H & I	13a002	13a-020660	F	10'-14'	0.13	2.01E-05	U	0.19	0.37		0.02	0.01	U	0.11	0.30		0.13	0.38	U	0.17	0.29		0.28	0.40	12/4/2000
13a	Transect H & I	13a003	13a-020662	U	10'-14'	0.40	6.31E-05	J	0.29	0.38	0.64	0.05	0.02	U	0.15	0.37	0.01	0.43	1.30		0.31	0.39	0.02	0.88	1.32	12/5/2000
13a	Transect H & I	13a003	13a-021195	F	10'-14'	0.17	2.71E-05	U	0.21	0.35		0.05	0.02	U	0.11	0.26		0.44	1.33		0.30	0.21		0.66	1.35	12/5/2000
13a	Transect H & I	13a004	13a-020664	U	10'-14'	2.65	4.17E-04	J	1.08	0.61	*2.44*	0.10	0.05	UJ	0.21	0.28	0.38	1.68	5.03		0.82	0.54	*1.98*	4.43	5.07	12/5/2000
13a	Transect H & I	13a004	13a-021196	F	10'-14'	0.01	8.11E-07	U	0.12	0.36		0.02	0.01	U	0.10	0.32		0.03	0.10	U	0.12	0.31		0.05	0.10	12/5/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L
NA = Not Applicable
F = Filtered U = Unfiltered
NAD = Normalized Absolute Difference
NAD > 1.69 Signifies Potential Statistical Difference in Results

TABLE 4-25

SUMMARY OF TOTAL THORIUM IN GEOPROBE GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	GWRI Site ID:	S&W Lab Sample ID	Filtered / Unfiltered	Depth of Measure (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-228 NAD	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-230 NAD	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Th-232 NAD	Total Thorium (pCi/L)	Date Collected
02b	80 Hancock Street	02b001	02b-020507	U	12'-15.5	1.36	J	0.73	0.59	1.51	0.76	UJ	0.58	0.83	0.55	1.31	J	0.74	0.79	0.91	3.43	8/22/2001
02b	80 Hancock Street	02b001	02b-020507	F	12'-15.5	0.19	U	0.28	0.52		1.23		0.64	0.56		0.54		0.42	0.47		1.96	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	U	12'-16'	0.48	J	0.36	0.34	0.55	0.60	UJ	0.45	0.61	0.34	1.09	J	0.56	0.34	1.02	2.17	8/22/2001
02b	80 Hancock Street	02b002	02b-020509	F	12'-16'	0.23	UJ	0.28	0.44		0.84		0.54	0.60		0.41	UJ	0.37	0.50		1.47	8/22/2001
07a	111 Essex Street	07a002	07a-021153	U	10.5'-14.50'	0.98	J	0.48	0.43		1.04	J	0.48	0.29	0.85	1.31		0.54	0.27	1.92	3.32	11/30/2000
07a	111 Essex Street	07a002	07a-021183	F	10.5'-14.50'	0.01	UJ	0.09	0.29	*1.97*	0.54	J	0.33	0.29		0.20	UJ	0.20	0.26		0.75	11/30/2000
07a	111 Essex Street	07a003	07a-021154	U	11.5'-15.5'	0.45	J	0.30	0.35	1.16	0.79	J	0.38	0.28	0.07	0.48		0.28	0.17	1.07	1.72	11/30/2000
07a	111 Essex Street	07a003	07a-021184	F	11.5'-15.5'	0.06	UJ	0.17	0.39		0.75	J	0.42	0.44		0.12	U	0.19	0.37		0.92	11/30/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021160	U	14'-18'	0.79		0.43	0.34	1.68	1.28	J	0.56	0.32	1.13	0.90	J	0.46	0.29	1.35	2.98	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b020	12b-021186	F	14'-18'	0.02	U	0.15	0.41		0.53	J	0.36	0.38		0.21	UJ	0.23	0.32		0.76	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021156	U	18'-22'	0.28		0.22	0.19	0.62	0.29	U	0.30	0.52	0.37	0.18	UJ	0.19	0.25	0.15	0.76	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b026	12b-021185	F	18-22'	0.10	U	0.18	0.35		0.45	J	0.31	0.33		0.15	UJ	0.17	0.25		0.70	12/1/2000
13a	Transect H & I	13a001	13a-021187	U	15.5'-19.5'	0.00	UJ	0.13	0.44	0.59	0.41	U	0.41	0.71	0.55	0.10	U	0.25	0.58	0.11	0.50	12/4/2000
13a	Transect H & I	13a001	13a-020659	F	15.5'-19.5'	0.16	UJ	0.23	0.45		0.74	J	0.43	0.39		0.13	U	0.21	0.40		1.03	12/4/2000
13a	Transect H & I	13a002	13a-021189	U	10'-14'	0.24	UJ	0.25	0.32	0.39	0.29	UJ	0.30	0.46	0.29	0.32	J	0.32	0.50	0.81	0.86	12/4/2000
13a	Transect H & I	13a002	13a-020660	F	10'-14'	0.11	UJ	0.24	0.55		0.42	J	0.33	0.44		0.04	U	0.14	0.37		0.57	12/4/2000
13a	Transect H & I	13a003	13a-020662	U	10'-14'	0.64		0.35	0.24	1.72	0.56	J	0.35	0.42	1.08	0.28	J	0.23	0.29	0.08	1.47	12/5/2000
13a	Transect H & I	13a003	13a-021195	F	10'-14'	0.00	U	0.13	0.42		0.09	U	0.27	0.63		0.31	UJ	0.31	0.47		0.40	12/5/2000
13a	Transect H & I	13a004	13a-020664	U	10'-14'	1.73		0.93	0.54	1.51	1.30	J	0.86	1.09	1.27	0.86	J	0.70	0.99	1.14	3.90	12/5/2000
13a	Transect H & I	13a004	13a-021196	F	10'-14'	0.33	U	0.04	0.33		0.16	U	0.26	0.52		0.04	U	0.18	0.48		0.53	12/5/2000

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
F = Filtered U = Unfiltered
NAD = Normalized Absolute Difference
NAD > 1.69 Signifies Potential Statistical Difference in Results

TABLE 4-26A
SUMMARY OF TAL METALS IN OVERBURDEN GEOPROBE SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Depth of Measure (ft bgs)	Geoprobe ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Aluminum, Total	1070		16.0	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Barium, Total	265	J	0.10	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Boron, Total	67.6	J	1.6	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Calcium, Total	77800	J	7.8	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Chromium, Total	7.2		1.4	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Cobalt, Total	4.3		0.90	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Copper, Total	8.4		0.50	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Iron, Total	3110		15.6	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Lithium, Total	6.8		0.10	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Magnesium, Total	11000		8.0	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Manganese, Total	8690		0.10	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Nickel, Total	12.8		1.7	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Potassium, Total	1520	J	10.7	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Sodium, Total	16200	J	1.6	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Vanadium, Total	3.7		0.50	8/22/2001
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Zinc, Total	18.4	J	0.40	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Aluminum, Total	234		16.0	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Arsenic, Total	81.8		3.9	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Barium, Total	171	J	0.10	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Boron, Total	101	J	1.6	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Calcium, Total	101000	J	7.8	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Chromium, Total	1.5		1.4	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Cobalt, Total	1.8		0.90	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Copper, Total	1.3	J	0.50	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Iron, Total	5630		15.6	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Lithium, Total	588		0.10	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Magnesium, Total	35500		8.0	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Manganese, Total	2380		0.10	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Nickel, Total	5.7		1.7	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Potassium, Total	2040	J	10.7	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Sodium, Total	47900	J	1.6	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Vanadium, Total	1.9		0.50	8/22/2001
02b	80 Hancock Street	02b-020509	12'-16'	02b002	Zinc, Total	23.3	J	0.40	8/22/2001
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Aluminum, Total	72.6		22.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Barium, Total	89.4		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Boron, Total	1840		2.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Calcium, Total	336000		19.2	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Copper, Total	1		0.90	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Iron, Total	327		21.8	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Lithium, Total	1380		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Magnesium, Total	35300		6.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Manganese, Total	2040		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Nickel, Total	1.5		0.90	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Potassium, Total	199000		409	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Sodium, Total	128000		41.0	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Vanadium, Total	3.3		0.80	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Arsenic, Total	5.7		2.4	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Barium, Total	87.7		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Boron, Total	279		2.7	12/1/2000

TABLE 4-26A
SUMMARY OF TAL METALS IN OVERBURDEN GEOPROBE SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Depth of Measure (ft bgs)	Geoprobe ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Calcium, Total	404000		19.2	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Cobalt, Total	4.5		0.90	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Iron, Total	7800		21.8	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Lithium, Total	1180		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Magnesium, Total	32400		6.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Manganese, Total	4540		0.20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Nickel, Total	5.7		0.90	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Potassium, Total	112000		409	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Sodium, Total	66300		4.1	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Zinc, Total	9.6		0.40	12/1/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Barium, Total	95.5		0.20	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Boron, Total	105		2.7	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Calcium, Total	142000		19.2	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Cobalt, Total	7.6		0.90	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Iron, Total	2020		21.8	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Lithium, Total	175		0.20	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Magnesium, Total	22600		6.7	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Manganese, Total	2140		0.20	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Nickel, Total	10.5		0.90	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Potassium, Total	30900		40.9	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Sodium, Total	50100		4.1	12/4/2000
13a	Transect H & I	13a-020658	15.5'-19.5'	13a001	Zinc, Total	17.5		0.40	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Arsenic, Total	9.9		2.4	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Barium, Total	104		0.20	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Boron, Total	476		2.7	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Calcium, Total	44800		19.2	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Chromium, Total	1.2		0.60	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Iron, Total	2760		21.8	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Lithium, Total	1540		0.20	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Magnesium, Total	4160		6.7	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Manganese, Total	746		0.20	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Potassium, Total	63400		40.9	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Sodium, Total	181000		41.0	12/4/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Vanadium, Total	1.1		0.80	12/4/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Aluminum, Total	39.9		22.7	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Barium, Total	181		0.20	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Beryllium, Total	0.18		0.10	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Boron, Total	77		2.7	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Calcium, Total	134000		19.2	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Cobalt, Total	47.8		0.90	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Iron, Total	1620		21.8	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Lithium, Total	84.3		0.20	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Magnesium, Total	23700		6.7	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Manganese, Total	4550		0.20	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Nickel, Total	57.7		0.90	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Potassium, Total	32400		40.9	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Sodium, Total	44900		4.1	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Thallium, Total	4.5		4.0	12/5/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Zinc, Total	7.1		0.40	12/5/2000

TABLE 4-26A
SUMMARY OF TAL METALS IN OVERBURDEN GEOPROBE SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Depth of Measure (ft bgs)	Geoprobe ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
13a	Transect H & I	13a-020664	10'-14'	13a004	Aluminum, Total	47.2		22.7	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Barium, Total	98.3		0.20	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Beryllium, Total	0.13		0.10	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Boron, Total	98		2.7	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Calcium, Total	87100		19.2	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Iron, Total	1690		21.8	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Lithium, Total	341		0.20	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Magnesium, Total	20600		6.7	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Manganese, Total	1240		0.20	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Potassium, Total	112000		409	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Sodium, Total	59100		4.1	12/5/2000
13a	Transect H & I	13a-020664	10'-14'	13a004	Zinc, Total	3.4		0.40	12/5/2000

Notes:

J = Estimated Concentration

ft bgs = Feet below ground surface

TABLE 4-26B
SUMMARY OF METALS IN GEOPROBE GROUNDWATER SAMPLES EXCEEDING GROUNDWATER STANDARDS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Greater of NJGW Criteria or NJ PQL (ug/L)	MCL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
02b	80 Hancock Street	02b-020509	02b002	Arsenic, Total	81.8		3.9	8	10	NA	8/22/2001
13a	Transect H & I	13a-020660	13a002	Arsenic, Total	9.9		2.4	8	10	NA	12/4/2000
13a	Transect H & I	13a-020660	13a002	Lithium, Total	1540		0.20	NA	NA	730	12/4/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Lithium, Total	1380		0.20	NA	NA	730	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	12b026	Lithium, Total	1180		0.20	NA	NA	730	12/1/2000
13a	Transect H & I	13a-020662	13a003	Thallium, Total	4.5		4.0	10	2	NA	12/5/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-27
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GEOPROBE SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Depth of Measure (ft bgs)	Geoprobe I.D.	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
02b	80 Hancock Street	02b-020507	12'-15.5	02b001	Yttrium, Total	4.5		1.3	8/22/2001
12b	100 West Hunter Avenue (MISS)	12b-021160	14'-18'	12b020	Neodymium, Total	19.6		13.2	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Dysprosium, Total	4.7		3.1	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Lanthanum, Total	47.4		33.8	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	18'-22'	12b026	Neodymium, Total	23.7		13.2	12/1/2000
13a	Transect H & I	13a-020660	10'-14'	13a002	Dysprosium, Total	7.8		3.1	12/4/2000
13a	Transect H & I	13a-020662	10'-14'	13a003	Dysprosium, Total	4.9	J	3.1	12/5/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-28

SUMMARY OF DETECTABLE VOCS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Benzene	9		5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Carbon Disulfide	1	J	5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Methylene Chloride	2	J	5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	12b026	Methylene Chloride	3	J	5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	1,2-Dichloroethene (total)	1	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	2-Butanone	3	J	5	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	Benzene	0.7	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	Carbon Disulfide	0.5	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	Ethylbenzene	3	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	Toluene	0.9	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021625	12B027	Total Xylene	19	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021626	12b028	1,2-Dichloroethene (total)	1		1	12/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021626	12b028	Benzene	2		1	12/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021626	12b028	Total Xylene	0.1	J	1	12/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021626	12b028	Trichloroethene	0.1	J	1	12/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021627	12b029	1,2-Dichloroethene (total)	0.5	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021627	12b029	Carbon Disulfide	1		1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021627	12b029	Ethylbenzene	0.1	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021627	12b029	Toluene	0.2	J	1	12/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021627	12b029	Total Xylene	0.9	J	1	12/13/2001
13a	Transect H & I	13a-020658	13a001	1,1-Dichloroethane	1	J	5	12/4/2000
13a	Transect H & I	13a-020658	13a001	1,2-Dichloroethene (total)	99	J	5	12/4/2000
13a	Transect H & I	13a-020658	13a001	Methylene Chloride	1	J	5	12/4/2000
13a	Transect H & I	13a-020658	13a001	Tetrachloroethene	160	J	5	12/4/2000
13a	Transect H & I	13a-020658	13a001	Trichloroethene	35	J	5	12/4/2000
13a	Transect H & I	13a-020659	13a001	1,1,1-Trichloroethane	1	J	5	12/4/2000
13a	Transect H & I	13a-020659	13a001	1,1-Dichloroethane	1	J	5	12/4/2000
13a	Transect H & I	13a-020659	13a001	1,2-Dichloroethene (total)	100		5	12/4/2000
13a	Transect H & I	13a-020659	13a001	Methylene Chloride	2	J	5	12/4/2000
13a	Transect H & I	13a-020659	13a001	Tetrachloroethene	200		5	12/4/2000
13a	Transect H & I	13a-020659	13a001	Trichloroethene	38		5	12/4/2000
13a	Transect H & I	13a-020660	13a002	1,2-Dichloroethene (total)	5	J	5	12/4/2000
13a	Transect H & I	13a-020660	13a002	Carbon Disulfide	1	J	5	12/4/2000
13a	Transect H & I	13a-020662	13a003	1,1,1-Trichloroethane	2	J	5	12/5/2000
13a	Transect H & I	13a-020662	13a003	1,1-Dichloroethane	2	J	5	12/5/2000
13a	Transect H & I	13a-020662	13a003	1,1-Dichloroethene	1	J	5	12/5/2000
13a	Transect H & I	13a-020662	13a003	1,2-Dichloroethene (total)	140		5	12/5/2000
13a	Transect H & I	13a-020662	13a003	Carbon Disulfide	1	J	5	12/5/2000
13a	Transect H & I	13a-020662	13a003	Chloroform	2	J	5	12/5/2000
13a	Transect H & I	13a-020662	13a003	Tetrachloroethene	360		25	12/5/2000
13a	Transect H & I	13a-020662	13a003	Trichloroethene	160		5	12/5/2000
13a	Transect H & I	13a-021295	13a004	1,1-Dichloroethane	2	J	5	12/18/2000
13a	Transect H & I	13a-021295	13a004	Acetone	13		10	12/18/2000
13a	Transect H & I	13a-021295	13a004	Carbon Disulfide	2	J	5	12/18/2000

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-29
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GEOPROBE GROUNDWATER SAMPLES EXCEEDING GROUNDWATER STANDARDS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe I.D.	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Lower of Federal or State MCL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Benzene	9		5	1	1	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021160	12b020	Methylene Chloride	2	J	5	2	3	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021156	12b026	Methylene Chloride	3	J	5	2	3	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021626	12b028	Benzene	2		1	1	1	12/14/2001
13a	Transect H & I	13a-020658	13a001	1,2-Dichloroethene (total)	99	J	5	10 (a)	70 (a)	12/4/2000
13a	Transect H & I	13a-020658	13a001	Tetrachloroethene	160	J	5	1	1	12/4/2000
13a	Transect H & I	13a-020658	13a001	Trichloroethene	35	J	5	1	1	12/4/2000
13a	Transect H & I	13a-020659	13a001	1,2-Dichloroethene (total)	100		5	10 (a)	70 (a)	12/4/2000
13a	Transect H & I	13a-020659	13a001	Methylene Chloride	2	J	5	2	3	12/4/2000
13a	Transect H & I	13a-020659	13a001	Tetrachloroethene	200		5	1	1	12/4/2000
13a	Transect H & I	13a-020659	13a001	Trichloroethene	38		5	1	1	12/4/2000
13a	Transect H & I	13a-020662	13a003	1,2-Dichloroethene (total)	140		5	10 (a)	70 (a)	12/5/2000
13a	Transect H & I	13a-020662	13a003	Trichloroethene	160		5	1	1	12/5/2000
13a	Transect H & I	13a-020662	13a003	Tetrachloroethene	360		25	1	1	12/5/2000

Notes:
J = Estimated Concentration
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
(a) = Standard is for cis 1,2-dichloroethene

TABLE 4-30
SUMMARY OF TOTAL RADIUM IN OVERBURDEN MONITORING WELL SAMPLES - PHASE II

Property ID Number	Property Name:	Well	S&W Lab Sample ID	Screened Interval (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16S	01a-021076	4'-14'	0.10	U	0.11	0.23	0.70	UJ	0.63	0.70	0.80	2/19/2001
02a	100 Hancock Street	MW-14S	02a-021072	4'-14'	0.47		0.26	0.38	1.27		0.78	0.81	1.73	2/27/2001
02d	8 Mill Street	MW-15S	02d-021074	4'-8'	0.17	J	0.14	0.25	0.51	UJ	0.70	0.76	0.68	2/19/2001
05a	99 Essex Street	MW-13S	05a-021541	4'-11'	2.75		0.77	0.64	1.38		0.72	0.75	4.12	4/19/2001
06a	85-101 NJ Rt. 17 North	OBMW8	06a-021415	5.5'-12.50'	0.20	J	0.13	0.18	1.03	UJ	0.92	1.03	1.23	2/13/2001
06b	137 NJ Rt. 17 North	OBMW3	06b-021405	5'-12'	0.61	J	0.26	0.32	0.67		0.58	0.62	1.28	2/15/2001
06e	29 Essex Street	OBMW12	06e-021423	5'-15'	0.29	J	0.18	0.30	0.85	J	0.79	0.85	1.14	2/12/2001
07a	111 Essex Street	MW-21S	07a-021591	4'-14'	0.61		0.36	0.46	1.84		0.75	0.76	2.45	7/11/2001
08a	23 West Howcroft Road	B38W12A	08a-021031	7.4'-12.4'	0.15	J	0.12	0.20	1.17	J	0.69	0.72	1.31	11/2/2000
08a	23 West Howcroft Road	MW-12S	08a-021068	4'-14'	1.52		0.55	0.40	1.29	UJ	1.16	1.29	2.81	2/22/2001
08a	23 West Howcroft Road	OBMW7	08a-021413	5'-15'	0.56	J	0.25	0.34	1.27	J	1.09	1.16	1.83	2/13/2001
09a	149-151 Maywood Avenue	MW-11S	09a-021066	3.5'-8.5'	0.30	J	0.20	0.29	0.52	UJ	0.79	0.86	0.82	2/12/2001
09a	149-151 Maywood Avenue	OBMW10	09a-021418	5'-15'	11.78		1.67	0.40	5.72		1.04	0.96	**17.50**	2/20/2001
09a	149-151 Maywood Avenue	OBMW11	09a-021420	5'-10'	0.48	J	0.25	0.30		R	0.95	1.09	0.48	2/13/2001
09a	149-151 Maywood Avenue	OBMW13	09a-021424	4'-14'	1.07	J	0.41	0.48	0.64	UJ	0.88	0.95	1.71	2/7/2001
09a	149-151 Maywood Avenue	OBMW14	09a-021426	4'-14'	0.44	J	0.21	0.25	1.21	J	0.92	0.98	1.65	2/12/2001
09a	149-151 Maywood Avenue	OBMW1	09a-021400	3'-10'	0.56	J	0.32	0.47	1.17		0.75	0.79	1.73	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021015	6.7'-11.7'	0.33	J	0.19	0.23	1.29	UJ	1.16	1.29	1.62	11/15/2000
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021590	6.7'-11.7'	0.22	J	0.16	0.15	0.78	UJ	0.78	0.83	1.00	7/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-021042	10.4'-15.2'	0.65	J	0.26	0.26	0.18	UJ	1.02	1.13	0.83	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-021044	6.7'-11.7'	1.02	J	0.33	0.33	0.67	UJ	0.72	0.77	1.69	11/27/2000
10a	100 West Hunter Avenue (Stepan)	MW-1	10A-021611	7.17	0.40	J	0.20	0.22	0.52	UJ	0.66	0.72	0.92	8/16/2001
10a	100 West Hunter Avenue (Stepan)	OBMW15	10a-021428	12'-17'	0.36	J	0.24	0.44	1.01	UJ	0.89	1.01	1.37	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW17	10a-021432	5'-15'	0.27	J	0.18	0.21	0.81	UJ	0.73	0.81	1.08	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW18	10a-021438	6'-11'	0.54	J	0.28	0.38	0.20	UJ	0.83	0.92	0.74	2/12/2001
10a	100 West Hunter Avenue (Stepan)	OBMW19	10a-021439	8.1'-15.40'	1.55		0.51	0.45	0.86	UJ	0.78	0.86	2.41	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-2S	10a-021505	31.5'-41.5'	0.86		0.39	0.62	1.61		0.88	0.92	2.47	2/27/2001
10a	100 West Hunter Avenue (Stepan)	WELL 1	10a-021433	5'-15'	0.74		0.33	0.30	0.67	UJ	0.69	0.75	1.41	2/20/2001
10a	100 West Hunter Avenue (Stepan)	WELL 2	10a-021434	9'-19'	0.31		0.17	0.17	0.38	UJ	0.66	0.72	0.68	2/14/2001
10a	100 West Hunter Avenue (Stepan)	WELL 5	10a-021435	5'-12'	1.02	J	0.37	0.40	0.30	UJ	0.71	0.78	1.31	2/8/2001
10a	100 West Hunter Avenue (Stepan)	WELL 8	10a-021436	7'-17'	0.61		0.34	0.54	0.37	UJ	0.73	0.80	0.97	2/14/2001
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-021024	17'-22'	0.13	J	0.10	0.15	0.94	UJ	0.83	0.94	1.07	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3S	12a-021051	7'-17'	0.55		0.22	0.23	0.72		0.55	0.58	1.27	3/15/2001
12a	NY, Susquehanna, & Western Railway	MW-20S	12a-021085	5'-15'	0.57		0.23	0.18	0.51	UJ	0.67	0.72	1.08	3/15/2001
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-021013	6.9'-16.9'	1.92	J	0.90	1.25	1.97	UJ	1.74	1.97	3.89	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-021019	10.7'-14.6'	1.39	J	0.34	0.22	2.50	J	0.74	0.72	3.88	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-021021	7.2'-13.2'	0.60	J	0.24	0.22	0.89	J	0.88	0.94	1.49	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS07A	12b-021022	4.6'-9.6'	0.26	J	0.18	0.28	0.66	J	0.64	0.68	0.92	3/12/2001
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-021040	12.9'-14.9'	0.63	J	0.24	0.23	2.10	J	0.70	0.69	2.74	11/7/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-021011	13'-18'	0.90	J	0.29	0.22	0.96	J	0.85	0.90	1.86	11/20/2000
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021574	3.5'-23.5'	0.06	U	0.10	0.25	1.02	J	0.64	0.67	1.08	6/13/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021583	3.5'-23.5'	0.19	UJ	0.16	0.26	0.18	UJ	0.89	0.97	0.37	6/28/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021570	3.5'-23.5'	0.27	J	0.16	0.19	0.53	UJ	0.78	0.84	0.80	6/12/2001
12b	100 West Hunter Avenue (MISS)	MW-25S	12b-021641	6'-16'	0.37	UJ	0.18	0.23	0.38	U	0.45	0.74	0.75	1/3/2002
17a	Transect G	MW-22S	17a-021604	2'-10'	0.18	UJ	0.15	0.21	0.22	UJ	0.63	0.70	0.40	7/24/2001
19a	Parkway	B38W14S	19a-021033	8'-13'	0.34	J	0.21	0.35	3.18	J	0.74	0.70	3.53	11/16/2000

TABLE 4-30
SUMMARY OF TOTAL RADIUM IN OVERBURDEN MONITORING WELL SAMPLES - PHASE II

Property ID Number	Property Name:	Well	S&W Lab Sample ID	Screened Interval (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
20a	Grove	B38W15S	20a-021035	10.5'-15.5'	0.68	J	0.28	0.31	1.41		0.89	0.94	2.09	11/9/2000
20a	Grove	B38W17A	20a-021037	7.6'-12.6'	0.34	J	0.17	0.24	0.61	UJ	0.73	0.79	0.95	11/2/2000
22b	Lodi Brook Drainage Basin	MW-9S	22b-021062	5'-13'	0.38		0.23	0.35	6.20	J	2.16	2.17	**6.58**	3/19/2001
22b	Lodi Brook Drainage Basin	MW-10S	22b-021064	5'-10.8'	0.37	J	0.21	0.31	0.72	UJ	0.75	0.80	1.09	2/26/2001
22b	Lodi Brook Drainage Basin	MW-17S	22b-021079	4'-10'	0.28	J	0.27	0.59	1.19	UJ	1.06	1.19	1.47	2/21/2001
22b	Lodi Brook Drainage Basin	MW-18S	22b-021080	3.75'-13.75'	0.37	J	0.29	0.56	0.14	UJ	0.61	0.68	0.51	2/15/2001
23b	Westerly Brook Drainage Basin	MW-2S	23b-021048	5'-13'	0.62		0.34	0.49	0.34	UJ	0.63	0.69	0.97	2/21/2001
23b	Westerly Brook Drainage Basin	MW-4S	23b-021052	5'-9'	0.26	J	0.19	0.29	0.59	UJ	0.79	0.85	0.85	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5S	23b-021054	5'15'	0.25	J	0.18	0.26	0.58	UJ	0.67	0.72	0.83	3/12/2001
23b	Westerly Brook Drainage Basin	MW-6S	23b-021056	5'-15'	0.70	J	0.41	0.73	0.05	UJ	0.72	0.80	0.75	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7S	23b-021058	5'-15'	0.22	J	0.18	0.35	0.16	UJ	0.68	0.74	0.38	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8S	23b-021060	5'-15'	0.08	U	0.10	0.21	0.32	UJ	0.67	0.73	0.40	3/1/2001

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Denotes Rejected Data

TABLE 4-31

SUMMARY OF TOTAL URANIUM IN OVERBURDEN MONITORING WELL SAMPLES - PHASE II

Property ID Number:	Property Name:	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16S	01a-021076	4'-14'	0.88	1.38E-04	J	0.57	0.69	0.67	0.31	U	0.19	0.67	0.23	0.69	U	0.32	0.61	1.78	1.00	2/19/2001
02a	100 Hancock Street	MW-14S	02a-021072	4'-14'	3.81	5.98E-04		1.24	0.57	0.04	0.02	U	0.17	0.50	1.68	5.02		0.75	0.50	5.53	5.04	2/27/2001
02d	8 Mill Street	MW-15S	02d-021074	4'-8'	0.67	1.05E-04	J	0.56	0.76	0.41	0.19	UJ	0.45	0.60	0.81	2.43	U	0.21	0.81	1.89	2.62	2/19/2001
05a	99 Essex Street	MW-13S	05a-021541	4'-11'	2.05	3.22E-04	J	0.83	0.55	0.02	0.01	U	0.15	0.46	0.63	1.90	J	0.45	0.61	2.71	1.91	4/19/2001
06a	85-101 NJ Rt. 17 North	OBMW8	06a-021415	5.5'-12.50'	0.63	9.90E-05	J	0.44	0.44	0.24	0.11	UJ	0.29	0.39	0.46	1.38	J	0.39	0.52	1.33	1.49	2/13/2001
06b	137 NJ Rt. 17 North	OBMW3	06b-021405	5'-12'	1.82	2.86E-04	J	0.84	0.73	0.58	0.27	U	0.06	0.58	1.54	4.61	J	0.76	0.70	3.94	4.88	2/15/2001
06e	29 Essex Street	OBMW12	06e-021423	5'-15'	0.18	2.83E-05	U	0.46	1.09	0.54	0.25	UJ	0.68	0.89	0.75	2.25	UJ	0.79	1.21	1.47	2.50	2/12/2001
07a	111 Essex Street	MW-21S	07a-021591	4'-14'	12.57	1.97E-03	J	3.18	0.75	0.22	0.10	U	0.32	0.54	6.36	19.05		1.89	0.77	19.15	19.15	7/11/2001
08a	23 West Howcroft Road	B38W12A	08a-021031	7.4'-12.4'	6.79	1.07E-03		2.40	1.28	0.53	0.24	UJ	0.66	1.04	4.07	12.17		1.71	1.05	11.38	12.42	11/2/2000
08a	23 West Howcroft Road	MW-12S	08a-021068	4'-14'	0.06	9.43E-06	U	0.51	1.41	0.05	0.02	U	0.36	1.12	0.64	1.92	U	0.77	1.37	0.75	1.94	2/22/2001
08a	23 West Howcroft Road	OBMW7	08a-021413	5'-15'	1.92	3.02E-04		0.78	0.40	0.13	0.06	U	0.22	0.41	1.08	3.23	J	0.56	0.33	3.13	3.29	2/13/2001
09a	149-151 Maywood Avenue	MW-11S	09a-021066	3.5'-8.5'	0.80	1.26E-04	J	0.51	0.50	0.25	0.12	UJ	0.29	0.22	0.49	1.47	J	0.39	0.44	1.54	1.58	2/12/2001
09a	149-151 Maywood Avenue	OBMW10	09a-021418	5'-15'	1.82	2.87E-04	J	1.05	1.17	0.72	0.33	U	0.06	0.72	1.37	4.11	J	0.86	0.83	3.92	4.44	2/20/2001
09a	149-151 Maywood Avenue	OBMW11	09a-021420	5'-10'	0.42	6.60E-05	J	0.36	0.43	0.04	0.02	U	0.17	0.49	0.30	0.90	J	0.30	0.40	0.76	0.92	2/13/2001
09a	149-151 Maywood Avenue	OBMW13	09a-021424	4'-14'	1.50	2.35E-04	J	0.87	0.68	-0.04	0.00	U	0.06	0.70	0.49	1.45	J	0.48	0.56	1.98	1.45	2/7/2001
09a	149-151 Maywood Avenue	OBMW14	09a-021426	4'-14'	1.59	2.50E-04	J	0.87	0.86	0.15	0.07	U	0.32	0.72	1.38	4.13	J	0.77	0.54	3.12	4.20	2/12/2001
09a	149-151 Maywood Avenue	OBMW1	09a-021400	3'-10'	1.42	2.23E-04	J	0.78	0.91	0.34	0.16	UJ	0.38	0.50	1.08	3.24		0.64	0.63	2.84	3.39	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021015	6.7'-11.7'	0.42	6.58E-05	J	0.33	0.42	0.11	0.05	UJ	0.18	0.28	0.11	0.34	U	0.18	0.32	0.64	0.39	11/15/2000
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021590	6.7'-11.7'	8.87	1.39E-03	J	2.16	0.65	0.45	0.21	UJ	0.40	0.52	1.91	5.71		0.77	0.44	11.23	5.92	7/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-021042	10.4'-15.2'	0.37	5.80E-05	J	0.32	0.51	0.19	0.09	UJ	0.24	0.38	0.10	0.29	U	0.22	0.49	0.66	0.38	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-021044	6.7'-11.7'	0.37	5.84E-05	J	0.30	0.40	0.07	0.03	U	0.18	0.42	0.24	0.72	UJ	0.25	0.36	0.68	0.75	11/27/2000
10a	100 West Hunter Avenue (Stepan)	MW-1	10A-021611	7.17	0.28	4.39E-05	UJ	0.29	0.38	0.14	0.07	U	0.22	0.36	0.06	0.19	UJ	0.12	0.17	0.48	0.25	8/16/2001
10a	100 West Hunter Avenue (Stepan)	OBMW15	10a-021428	12'-17'	0.47	7.40E-05	J	0.43	0.67	0.56	0.26	U	0.06	0.56	0.22	0.65		0.32	0.63	1.25	0.91	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW17	10a-021432	5'-15'	0.79	1.24E-04		0.54	0.55	0.14	0.07	U	0.28	0.58	0.44	1.31	J	0.39	0.42	1.37	1.38	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW18	10a-021438	6'-11'	1.08	1.70E-04	J	0.64	0.74			R	0.07	0.65	0.66	1.98	J	0.49	0.62	1.74	1.98	2/12/2001
10a	100 West Hunter Avenue (Stepan)	OBMW19	10a-021439	8.1'-15.40'	0.49	7.65E-05	J	0.46	0.68			R	0.09	0.74	0.10	0.29		0.33	0.80	0.59	0.29	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-2S	10a-021505	31.5'-41.5'	0.36	5.61E-05	UJ	0.44	0.70	0.36	0.17	U	0.00	0.36	0.12	0.37	U	0.31	0.75	0.84	0.54	2/27/2001
10a	100 West Hunter Avenue (Stepan)	WELL 1	10a-021433	5'-15'	0.25	3.92E-05	U	0.38	0.70	0.09	0.04	U	0.27	0.72	0.37	1.12	UJ	0.44	0.65	0.71	1.16	2/20/2001
10a	100 West Hunter Avenue (Stepan)	WELL 2	10a-021434	9'-19'			R	2.01	2.44			R	0.00	1.10			R	2.55	2.15	R	0.00	2/14/2001
10a	100 West Hunter Avenue (Stepan)	WELL 5	10a-021435	5'-12'	15.37	2.41E-03		3.52	0.67	0.95	0.44		0.60	0.59	13.70	41.02		3.20	0.56	30.02	**41.46**	2/8/2001
10a	100 West Hunter Avenue (Stepan)	WELL 8	10a-021436	7'-17'	0.99	1.56E-04	J	0.85	1.06	0.29	0.14	U	0.51	0.95	0.92	2.76	J	0.79	0.86	2.21	2.89	2/14/2001
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-021024	17'-22'	0.92	1.45E-04	J	0.71	1.06	0.18	0.08	U	0.31	0.58	0.22	0.66	U	0.51	1.16	1.32	0.74	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3S	12a-021051	7'-17'	0.63	9.90E-05	J	0.46	0.53	0.20	0.09	U	0.29	0.49	0.07	0.21	U	0.24	0.59	0.90	0.30	3/15/2001
12a	NY, Susquehanna, & Western Railway	MW-20S	12a-021085	5'-15'			R	3.20	1.76			R	0.63	1.44			R	2.95	1.64	R	0.00	3/15/2001
12a	NY, Susquehanna, & Western Railway	MW-9S	22b-021062	5'-13'	0.75	1.18E-04	J	0.53	0.39	0.17	0.08	U	0.30	0.57	0.03	0.09	U	0.18	0.55	0.95	0.17	3/19/2001
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-021013	6.9'-16.9'	0.78	1.22E-04	J	0.45	0.46	0.07	0.03	U	0.18	0.42	0.31	0.92	J	0.29	0.43	1.15	0.95	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-021019	10.7'-14.6'	35.02	5.50E-03		7.22	0.87	1.96	0.91		0.97	0.61	36.50	109.28		7.49	0.57	73.48	**110.20**	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-021021	7.2'-13.2'	1.09	1.71E-04	J	0.54	0.54	0.22	0.10	UJ	0.24	0.32	0.73	2.19	J	0.44	0.50	2.03	2.29	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS07A	12b-021022	4.6'-9.6'	1.54	2.41E-04	J	0.75	0.61	0.19	0.09	U	0.31	0.62	0.50	1.49	J	0.42	0.53	2.22	1.58	3/12/2001
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-021040	12.9'-14.9'	0.72	1.13E-04	J	0.63	0.91	0.58	0.27	U	0.04	0.58	0.62	1.85	J	0.59	0.91	1.92	2.12	11/7/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-021011	13'-18'	0.28	4.36E-05	J	0.23	0.30	0.06	0.03	U	0.13	0.29	0.38	1.13	J	0.26	0.31	0.72	1.16	11/20/2000
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021570	3.5'-23.5'	1.83	2.87E-04	J	0.89	0.75	0.17	0.08	U	0.29	0.55	2.50	7.50	J	1.06	0.70	4.50	7.58	6/12/2001
12b	100 West Hunter Avenue (MISS)	MW-25S	12b-021641	6'-16'	0.035	5.50E-06	U	0.063	0.12	-0.011	0.00	U	0.015	0.15	0.004	0.01	U	0.047	0.15	0.04	0.01	1/3/2002
17a	Transect G	MW-22S	17a-021604	2'-10'	4.25	6.68E-04	J	1.28	0.40	0.08	0.04	UJ	0.15	0.21	1.30	3.90		0.62	0.40	5.63	3.93	7/24/2001
19a	Parkway	B38W14S	19a-021033	8'-13'	0.39	6.14E-05	J	0.30	0.34	0.33	0.15	J	0.30	0.32	0.36	1.07	J	0.28	0.29	1.08	1.23	11/16/2000
20a	Grove	B38W15S	20a-021035	10.5'-15.5'	0.65	1.03E-04		0.39	0.42	0.00	0.00	U	0.12	0.40	0.53	1.57		0.35	0.41	1.18	1.57	11/9/2000
20a	Grove	B38W17A	20a-021037	7.6'-12.6'	1.26	1.98E-04	J	0.76	1.00	0.12	0.06	U	0.35	0.84	0.15	0.45	U	0.32	0.72	1.53	0.51	11/2/2000
22b	Lodi Brook Drainage Basin	MW-10S	22b-021064	5'-10.8'	0.57	8.90E-05	J	0.50	0.77	0.62	0.29	U	0.07	0.62	0.27	0.81	U	0.33	0.55	1.46	1.10	2/26/2001
22b	Lodi Brook Drainage Basin	MW-17S	22b-021079	4'-10'	1.00	1.58E-04	J	0.60	0.49	0.73	0.34		0.54	0.43	0.30	0.90	UJ	0.31	0.20	2.03	1.23	2/21/2001
22b	Lodi Brook Drainage Basin	MW-18S	22b-021080	3.75'-13.75'	0.53	8.33E-05	J	0.42	0.52	0.10	0.05	U	0.24	0.58	0.34	1.02	J	0.34	0.47	0.97	1.06	2/15/2001
23b	Westerly Brook Drainage Basin	MW-2S	23b-021048	5'-13'	1.00	1.57E-04	J	0.61	0.73	0.45	0.21	U	0.04	0.45	0.65	1.96		0.46	0.52	2.11	2.17	2/21/2001
23b	Westerly Brook Drainage Basin	MW-4S	23b-021052	5'-9'	0.87	1.37E-04	J	0.55	0.56	0.24	0.11	UJ	0.30	0.39	0.88	2.65	J	0.52	0.32	2.00	2.76	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5S	23b-021054	5'15'	1.44	2.27E-04	J	0.70	0.47	0.22	0.10	U	0.31	0.53	0.65	1.94		0.47	0.50	2.31	2.04	3/12/2001
23b	Westerly Brook Drainage Basin	MW-6S	23b-021056	5'-15'	1.27	1.99E-04	J	0.63	0.39	0.15	0.07	UJ	0.23	0.37	1.79	5.36		0.76	0.35	3.21	5.43	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7S	23b-021058	5'-15'	2.01	3.15E-04	J	0.86	0.57	0.07	0.03	U	0.26	0.67	0.77	2.29		0.51	0.52	2.84	2.32	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8S	23b-021060	5'-15'	1.54	2.42E-04	J	0.76	0.61	0.07	0.03	U	0.27	0.72	0.89	2.66		0.56	0.55	2.50	2.70	3/1/2001

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Denotes Rejected Data
ND = Denotes all isotopes are non-detect
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L

TABLE 4-32
SUMMARY OF TOTAL THORIUM IN OVERBURDEN MONITORING WELLS - PHASE II

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16S	01a-021076	4'-14'	0.21	UJ	0.28	0.43	0.23	U	0.37	0.74	0.23	U	0.37	0.74	0.67	2/19/2001
02a	100 Hancock Street	MW-14S	02a-021072	4'-14'	0.01	U	0.17	0.54	0.39	U	0.43	0.73	0.21	U	0.32	0.63	0.60	2/27/2001
02d	8 Mill Street	MW-15S	02d-021074	4'-8'	0.02	U	0.15	0.47	0.53	J	0.45	0.63	0.18	U	0.26	0.43	0.73	2/19/2001
05a	99 Essex Street	MW-13S	05a-021541	4'-11'	0.32	U	0.04	0.32	0.30	J	0.27	0.40	0.08	U	0.12	0.20	0.70	4/19/2001
06a	85-101 NJ Rt. 17 North	OBMW8	06a-021415	5.5'-12.50'	0.32	U	0.38	0.64	0.83	J	0.56	0.64	0.60	J	0.46	0.51	1.75	2/13/2001
06b	137 NJ Rt. 17 North	OBMW3	06b-021405	5'-12'	0.06	U	0.21	0.55	1.32	J	0.69	0.57	0.25	UJ	0.29	0.43	1.63	2/15/2001
06e	29 Essex Street	OBMW12	06e-021423	5'-15'	0.08	U	0.20	0.48	0.28	U	0.35	0.62		R	0.09	0.67	0.36	2/12/2001
07a	111 Essex Street	MW-21S	07a-021591	4'-14'	0.23	UJ	0.27	0.40	0.29	UJ	0.30	0.40	0.19	UJ	0.23	0.30	0.71	7/11/2001
08a	23 West Howcroft Road	B38W12A	08a-021031	7.4'-12.4'	0.16	U	0.26	0.50	1.22	J	0.65	0.53	0.24	U	0.29	0.47	1.62	11/2/2000
08a	23 West Howcroft Road	MW-12S	08a-021068	4'-14'	0.06	U	0.23	0.59	0.50	J	0.47	0.74	0.17	U	0.31	0.66	0.73	2/22/2001
08a	23 West Howcroft Road	OBMW7	08a-021413	5'-15'	0.27	UJ	0.32	0.50	0.29	U	0.34	0.59	0.33	J	0.31	0.31	0.89	2/13/2001
09a	149-151 Maywood Avenue	MW-11S	09a-021066	3.5'-8.5'	0.16	U	0.25	0.45	0.72	J	0.52	0.69	0.58	U	0.15	0.58	1.46	2/12/2001
09a	149-151 Maywood Avenue	OBMW10	09a-021418	5'-15'	0.60	J	0.46	0.62	0.66	J	0.46	0.49	0.24		0.27	0.36	1.50	2/20/2001
09a	149-151 Maywood Avenue	OBMW11	09a-021420	5'-10'		R	0.08	0.65	0.58	J	0.43	0.34	0.42	J	0.37	0.40	1.00	2/13/2001
09a	149-151 Maywood Avenue	OBMW13	09a-021424	4'-14'	0.05	U	0.13	0.30	0.83	J	0.49	0.17	0.19	UJ	0.22	0.17	1.08	2/7/2001
09a	149-151 Maywood Avenue	OBMW14	09a-021426	4'-14'	0.08	U	0.22	0.51	0.41	U	0.43	0.72	0.05	U	0.22	0.59	0.54	2/12/2001
09a	149-151 Maywood Avenue	OBMW1	09a-021400	3'-10'	0.14	U	0.27	0.57	0.23	U	0.30	0.52	0.34	J	0.34	0.40	0.71	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021590		0.08	U	0.26	0.63	0.24	U	0.32	0.59	0.14	U	0.25	0.52	0.46	7/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W24S	10a-021042	10.4'-15.2'	0.38	UJ	0.10	0.38	0.33	J	0.27	0.37	0.17	U	0.20	0.34	0.87	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25S	10a-021044	6.7'-11.7'	0.19	UJ	0.21	0.33	0.39	J	0.27	0.30	0.26	J	0.22	0.27	0.84	11/27/2000
10a	100 West Hunter Avenue (Stepan)	MW-1	10A-021611	7.17	0.09	U	0.31	0.74	0.87	J	0.54	0.50	0.12	U	0.21	0.39	1.08	8/16/2001
10a	100 West Hunter Avenue (Stepan)	OBMW15	10a-021428	12'-17'	0.08	U	0.26	0.64	0.84	J	0.60	0.67	0.16	UJ	0.25	0.40	1.09	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW17	10a-021432	5'-15'	0.27	UJ	0.30	0.40	1.72	J	0.82	0.72	0.52	J	0.43	0.51	2.51	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW18	10a-021438	6'-11'	0.02	U	0.14	0.43	0.56	J	0.46	0.67	0.36	J	0.33	0.40	0.94	2/12/2001
10a	100 West Hunter Avenue (Stepan)	OBMW19	10a-021439	8.1'-15.40'	0.16		0.24	0.45	0.79	J	0.52	0.55	0.03		0.14	0.41	0.99	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-2S	10a-021505	31.5'-41.5'	0.65		0.46	0.52	0.39	J	0.36	0.52	0.17	U	0.31	0.65	1.21	2/27/2001
10a	100 West Hunter Avenue (Stepan)	WELL 1	10a-021433	5'-15'	0.27	UJ	0.31	0.50	0.44	J	0.40	0.57	0.22	UJ	0.28	0.44	0.93	2/20/2001
10a	100 West Hunter Avenue (Stepan)	WELL 2	10a-021434	9'-19'	0.22	UJ	0.27	0.35	0.59	J	0.47	0.59	0.18	U	0.27	0.49	0.98	2/14/2001
10a	100 West Hunter Avenue (Stepan)	WELL 5	10a-021435	5'-12'		R	0.07	0.54	0.63		0.45	0.54	0.50		0.38	0.43	1.14	2/8/2001
10a	100 West Hunter Avenue (Stepan)	WELL 8	10a-021436	7'-17'	0.22	UJ	0.27	0.43	0.25	U	0.30	0.51	0.23	UJ	0.27	0.40	0.70	2/14/2001
12a	NY, Susquehanna, & Western Railway	B38W01S	12a-021024	17'-22'	0.22	U	0.34	0.62	1.96	J	1.03	1.07	0.35	U	0.44	0.77	2.53	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3S	12a-021051	7'-17'	0.07	U	0.19	0.45	0.67	J	0.48	0.65	0.00	U	0.19	0.59	0.74	3/15/2001
12a	NY, Susquehanna, & Western Railway	MW-20S	12a-021085	5'-15'	0.47	U	0.05	0.47	0.52	J	0.45	0.66	0.08	U	0.21	0.51	1.07	3/15/2001
12b	100 West Hunter Avenue (MISS)	MISS02A	12b-021013	6.9'-16.9'	0.19	U	0.24	0.41	0.99	J	0.58	0.69	0.12	U	0.27	0.61	1.30	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05A	12b-021019	10.7'-14.6'	2.38		0.94	0.71	2.45	J	0.94	0.66	0.35	UJ	0.37	0.59	5.19	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS06A	12b-021021	7.2'-13.2'	0.14	U	0.21	0.39	0.35	J	0.31	0.46	0.03	U	0.15	0.40	0.52	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS07A	12b-021022	4.6'-9.6'	0.02	U	0.13	0.40	0.50	J	0.42	0.63	0.06	U	0.18	0.45	0.58	3/12/2001
12b	100 West Hunter Avenue (MISS)	B38W19S	12b-021040	12.9'-14.9'	0.00	U	0.31	0.93	1.20	J	0.77	0.74	0.27	UJ	0.35	0.54	1.46	11/7/2000
12b	100 West Hunter Avenue (MISS)	MISS01AA	12b-021011	13'-18'	0.12	U	0.23	0.50	0.56	J	0.41	0.50	0.15	U	0.23	0.43	0.83	11/20/2000
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021583	3.5'-23.5'	0.27	UJ	0.30	0.45	0.21	U	0.30	0.57	0.45	U	0.05	0.45	0.94	6/28/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021570	3.5'-23.5'	0.47	U	0.14	0.47	0.66	J	0.48	0.65	0.13	U	0.22	0.42	1.26	6/12/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021574	3.5'-23.5'	0.20	U	0.27	0.44	0.45	J	0.37	0.44	0.23	UJ	0.26	0.34	0.88	6/13/2001
12b	100 West Hunter Avenue (MISS)	MW-25S	12b-021641	6'-16'	0.12	U	0.16	0.29	0.80	J	0.34	0.16	0.13	U	0.13	0.16	1.05	1/3/2002
17a	Transect G	MW-22S	17a-021604	2'-10'	0.11		0.20	0.37	0.61	UJ	0.47	0.64	0.10	U	0.20	0.41	0.82	7/24/2001
19a	Parkway	B38W14S	19a-021033	8'-13'	0.25	U	0.02	0.25	0.44	J	0.35	0.53	0.17	U	0.24	0.46	0.85	11/16/2000
20a	Grove	B38W15S	20a-021035	10.5'-15.5'	0.01	UJ	0.08	0.26	1.36	J	0.56	0.52	0.24	J	0.23	0.35	1.61	11/9/2000
20a	Grove	B38W17A	20a-021037	7.6'-12.6'	0.18	U	0.40	0.90	2.24	J	0.96	0.70	0.83	J	0.56	0.60	3.25	11/2/2000
22b	Lodi Brook Drainage Basin	MW-9S	22b-021062	5'-13'	0.95		0.69	0.80	0.98	J	0.69	0.73	0.64	J	0.54	0.59	2.57	3/19/2001
22b	Lodi Brook Drainage Basin	MW-10S	22b-021064	5'-10.8'	0.27	U	0.32	0.54	0.53	J	0.44	0.57	0.10	U	0.20	0.42	0.90	2/26/2001
22b	Lodi Brook Drainage Basin	MW-17S	22b-021079	4'-10'	0.29	U	0.36	0.63	0.30	UJ	0.32	0.46	0.22	U	0.29	0.49	0.81	2/21/2001
22b	Lodi Brook Drainage Basin	MW-18S	22b-021080	3.75'-13.75'	0.20	U	0.29	0.54	0.87	J	0.53	0.42	0.26	U	0.32	0.54	1.33	2/15/2001
23b	Westerly Brook Drainage Basin	MW-2S	23b-021048	5'-13'	0.12	U	0.21	0.39	0.27	U	0.37	0.70	0.00	U	0.16	0.54	0.39	2/21/2001
23b	Westerly Brook Drainage Basin	MW-4S	23b-021052	5'-9'	0.12	U	0.30	0.71	0.56	J	0.45	0.56	0.05	U	0.15	0.39	0.72	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5S	23b-021054	5'15'	0.31	UJ	0.33	0.50	0.49		0.37	0.35	0.10	U	0.19	0.38	0.89	3/12/2001

TABLE 4-32
SUMMARY OF TOTAL THORIUM IN OVERBURDEN MONITORING WELLS - PHASE II

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
23b	Westerly Brook Drainage Basin	MW-6S	23b-021056	5'-15'	0.06	U	0.17	0.42	0.54	J	0.39	0.48	0.19	UJ	0.23	0.37	0.78	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7S	23b-021058	5'-15'	0.17	U	0.24	0.40	0.42	J	0.39	0.59	0.13	U	0.24	0.49	0.72	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8S	23b-021060	5'-15'	0.20	U	0.31	0.60	0.43	J	0.40	0.57	0.27	U	0.34	0.60	0.90	3/1/2001

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Denotes Rejected Data

TABLE 4-33
ADJUSTED GROSS ALPHA IN PHASE II OVERBURDEN SAMPLES

PropertyID	Property Name	GWRI Site Name	S&W Lab Sample ID	Gross Alpha (pCi/L)	Validator Qualifier:	Gross Alpha Error (pCi/L)	Total Uranium (pCi/L)	Adjusted Gross Alpha (pCi/L)	Note	Total Thorium (pCi/L)	Date Collected:
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16S	01a-021076	3.07		0.95	1.78	1.29		0.67	2/19/2001
02a	100 Hancock Street	MW-14S	02a-021072	7.39		2.36	5.53	1.86		0.60	2/27/2001
02d	8 Mill Street	MW-15S	02d-021074	1.24		0.59	1.89	ND	*	0.73	2/19/2001
05a	99 Essex Street	MW-13S	05a-021541	15.43		4.51	2.71	12.72		0.7	4/19/2001
06a	85-101 NJ Rt. 17 North	OBMW8	06a-021415	4.27		1.98	1.33	2.94		1.75	2/13/2001
06b	137 NJ Rt. 17 North	OBMW3	06b-021405	2.56	UJ	2.74	3.94	1.36	*	1.63	2/15/2001
06e	29 Essex Street	OBMW12	06e-021423	1.46	UJ	2.83	1.47	2.82	*	0.36	2/12/2001
07a	111 Essex Street	MW-21S	07a-021591	7.08	J	5.20	19.15	ND	*	0.71	7/11/2001
08a	23 West Howcroft Road	OBMW7	08a-021413	4.65		3.15	3.13	1.52		0.89	2/13/2001
08a	23 West Howcroft Road	MW-12S	08a-021068	10.46		2.56	0.75	9.71		0.73	2/22/2001
09a	149-151 Maywood Avenue	MW-11S	09a-021066	0.61	UJ	3.07	1.54	2.14	*	1.46	2/12/2001
09a	149-151 Maywood Avenue	OBMW1	09a-021400	3.88	J	1.77	2.84	1.04		0.71	2/8/2001
09a	149-151 Maywood Avenue	OBMW10	09a-021418	292.91	J	131.71	3.92	**288.99**		1.50	2/20/2001
09a	149-151 Maywood Avenue	OBMW11	09a-021420	0.15	UJ	2.30	0.76	1.69	*	1.00	2/13/2001
09a	149-151 Maywood Avenue	OBMW13	09a-021424	4.73	U	8.62	1.98	2.75		1.08	2/7/2001
09a	149-151 Maywood Avenue	OBMW14	09a-021426	4.69	UJ	9.08	3.12	1.57		0.54	2/12/2001
10a	100 West Hunter Avenue (Stepan)	MISS03A	10a-021590	1.22	UJ	1.74	11.23	ND	*	0.46	7/12/2001
10a	100 West Hunter Avenue (Stepan)	MW-1	10A-021611	2.89		2.09	0.48	2.40		1.08	8/16/2001
10a	100 West Hunter Avenue (Stepan)	OBMW15	10a-021428	2.18		1.15	1.25	0.93		1.09	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW17	10a-021432	2.15		1.01	1.37	0.78		2.51	2/7/2001
10a	100 West Hunter Avenue (Stepan)	OBMW18	10a-021438	0.31	UJ	3.08	1.74	1.65	*	0.94	2/12/2001
10a	100 West Hunter Avenue (Stepan)	OBMW19	10a-021439	6.21		1.99	0.59	5.62		0.99	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-2S	10a-021505	6.25		5.78	0.84	5.41		1.21	2/27/2001
10a	100 West Hunter Avenue (Stepan)	WELL 1	10a-021433	2.65		1.89	0.71	1.94		0.93	2/20/2001
10a	100 West Hunter Avenue (Stepan)	WELL 2	10a-021434	3.39	UJ	3.92	R	3.39		0.98	2/14/2001
10a	100 West Hunter Avenue (Stepan)	WELL 5	10a-021435	40.44		5.07	30.02	10.42		1.14	2/8/2001
10a	100 West Hunter Avenue (Stepan)	WELL 8	10a-021436	2.26		0.97	2.21	0.05		0.70	2/14/2001
12a	NY, Susquehanna, & Western Railway	MW-20S	12a-021085	7.71	UJ	14.47	R	7.71		1.07	3/15/2001
12a	NY, Susquehanna, & Western Railway	MW-3S	12a-021051	2.74	UJ	6.12	0.90	1.84		0.74	3/15/2001
12b	100 West Hunter Avenue (MISS)	MISS07A	12b-021022	0.79	UJ	1.04	2.22	ND	*	0.58	3/12/2001
12b	100 West Hunter Avenue (MISS)	MW-25S	12b-021641	7.10	J	2.40	0.04	7.06		1.05	1/3/2002
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021570	1.17	U	0.64	4.50	ND	*	1.26	6/12/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021574	5.64	UJ	5.16	1.64	4.00		0.88	6/13/2001
12b	100 West Hunter Avenue (MISS)	OVPW-1S	12b-021583	3.59	UJ	3.83	0.67	2.92		0.94	6/28/2001
17a	Transect G	MW-22S	17a-021604	1.43	UJ	4.60	5.63	0.40	*	0.82	7/24/2001
22b	Lodi Brook Drainage Basin	MW-10S	22b-021064	0.98	UJ	3.01	1.46	2.53	*	0.90	2/26/2001
22b	Lodi Brook Drainage Basin	MW-17S	22b-021079	0.80	UJ	0.95	2.03	ND	*	0.81	2/21/2001
22b	Lodi Brook Drainage Basin	MW-18S	22b-021080	1.58	UJ	1.75	0.97	0.61		1.33	2/15/2001
22b	Lodi Brook Drainage Basin	MW-9S	22b-021062	0.51	UJ	1.83	0.95	1.39	*	2.57	3/19/2001
23b	Westerly Brook Drainage Basin	MW-2S	23b-021048	1.97	UJ	3.85	2.11	3.72	*	0.40	2/21/2001
23b	Westerly Brook Drainage Basin	MW-4S	23b-021052	1.62		0.91	2.00	0.53	*	0.72	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5S	23b-021054	0.87	UJ	2.95	2.31	1.51	*	0.89	3/12/2001
23b	Westerly Brook Drainage Basin	MW-6S	23b-021056	4.38		2.57	3.21	1.18		0.78	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7S	23b-021058	2.46		2.14	2.84	1.76	*	0.72	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8S	23b-021060	2.13		1.79	2.50	1.42	*	0.9	3/1/2001

Notes:

Units = picocuries per liter (pCi/L)

J = Estimated Concentration

U = Non-Detect

UJ = Estimated Non-Detect

R = Denotes Rejected Data

surement error added to Gross Alpha result

TABLE 4-34
SUMMARY OF GROSS BETA RESULTS IN OVERBURDEN GROUNDWATER - PHASE II

Property ID Number:	Property Name:	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Gross Beta Result (pCi/L)	Gross Beta Data Qualifier	Measurement Error (pCi/L)	Potassium Result (mg/L)	Potassium Data Qualifier	Gross Beta Attributable to K-40 (pCi/L)**	Adjusted Gross Beta (pCi/L)	Note	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	MW-16S	4'-14'	10.21		1.04	2.43		1.77	8.44		2/19/2001
02a	100 Hancock Street	02a-021072	MW-14S	4'-14'	4.52	J	2.17	1.34		0.98	3.55		2/27/2001
02d	8 Mill Street	02d-021074	MW-15S	4'-8'	6.71		0.94	0.975		0.71	6.00		2/19/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	6.48	UJ	9.05	4.93		3.60	2.88		4/19/2001
06a	85-101 NJ Rt. 17 North	06a-021415	OBMW8	5.5'-12.50'	2.84	J	2.59	1.88	J	1.37	1.47		2/13/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	16.99		2.54	15.4	U	11.24	5.75		2/6/2001
06e	29 Essex Street	06e-021423	OBMW12	5'-15'	2.03	UJ	2.04	0.485	J	0.35	1.68		2/13/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	43.53		4.77	14.7	J	10.73	32.80		7/11/2001
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	47.66		3.43	47.8		34.89	12.77		2/22/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	4.30		3.38	4.57	J	3.34	0.96		2/15/2001
09a	149-151 Maywood Avenue	09a-021066	MW-11S	3.5'-8.5'	5.24		3.41	5.2	J	3.80	1.44		2/12/2001
09a	149-151 Maywood Avenue	09a-021400	OBMW1	3'-10'	17.87		2.23	14.2	J	10.37	7.50		3/19/2001
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'		R	396.45	604		440.92	R		2/8/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	7.20		2.76	5.43	J	3.96	3.24		2/20/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	30.41		6.24	37.1	J	27.08	3.32	*	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	18.61		10.24	19	J	13.87	4.74		2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	15.13		2.99	20.4	J	14.89	0.23	*	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	MW-1	7'-17'	5.94		1.54	8.1	J	5.91	0.03	*	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	OBMW15	12'-17'	1.89		1.87	0.836	J	0.61	1.28		2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	1.21	UJ	1.90	2.59	J	1.89	1.22	*	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	5.48		2.65	5.27	J	3.85	1.63		2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	9.56		1.70	6.42	J	4.69	4.87		2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	52.99		6.53	49.4		36.06	16.93		6/28/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	WELL 1	5'-15'	52.71		3.38	57.9		42.27	10.45		2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	WELL 2	9'-19'	34.37		3.73	30.4	J	22.19	12.18		2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	WELL 5	5'-12'	9.30		3.38	3.38	J	2.47	6.83		2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	WELL 8	7'-17'	2.07	J	0.97	0.965	J	0.70	1.37		2/8/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	4.90	UJ	18.18	13.9		10.15	12.93	*	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	49.74	J	8.47	29.7		21.68	28.06		2/21/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	MISS07A	4.6'-9.6'	1.95		1.20	1.3		0.95	1.00		3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	1.57	U	0.95	0.0353	UJ	0.03	1.57		2/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021574	OVPW-1S	3.5'-23.5'	81.98		3.75	83.2	J	60.74	21.24		6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021583	OVPW-1S	3.5'-23.5'	62.12		10.02	53.7	J	39.20	22.92		6/13/2001
17a	Transect G	17a-021604	MW-22S	2'-10'	3.14	UJ	3.44	5.3	J	3.87	2.71	*	7/24/2001
22b	Lodi Brook Drainage Basin	22b-021064	MW-10S	5'-10.8'	2.30	UJ	3.86	6.95		5.07	1.09	*	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021079	MW-17S	4'-10'	1.91	J	1.37	3		2.19	1.09	*	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021080	MW-18S	3.75'-13.75'	0.30	UJ	2.76	1.34	J	0.98	2.08	*	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021062	MW-9S	5'-13'	3.49		2.59	6.18		4.51	1.57	*	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	26.30		3.21	33.4		24.38	1.92	*	1/3/2002
23b	Westerly Brook Drainage Basin	23b-021052	MW-4S	5'-9'	0.46	UJ	1.25	1.15		0.84	0.87	*	3/15/2001
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	2.51		2.35	2.8		2.04	0.47		2/20/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	1.91	UJ	3.18	2.9		2.12	2.97	*	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	2.11	J	1.87	3.48		2.54	1.44	*	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021060	MW-8S	5'-15'	2.72	UJ	2.69	1.44		1.05	1.67		2/28/2001

Notes:
pCi/L = Picocuries per liter
mg/L = Milligrams per liter
ft bgs = Feet below ground surface
MDA = Minimum Detectable Activity
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
ND = Non-Detect
R = Rejected
* - Measurement Error for Gross Beta was added to sample result in order to have a net positive result
** - Potassium results were multiplied by 0.73 to obtain Gross Beta attributable to K-40 which accounts for beta decay solely.

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Aluminum, Total	21.8		12.4	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Barium, Total	111		0.20	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Beryllium, Total	0.15		0.10	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Boron, Total	44.6		2.1	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Calcium, Total	69600		11.4	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Cobalt, Total	0.72		0.70	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Copper, Total	1.1		0.60	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Iron, Total	235		17.4	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Lithium, Total	52.1		0.20	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Magnesium, Total	19100		5.9	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Manganese, Total	482		0.20	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Potassium, Total	2430		20.9	2/19/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	4'-14'	MW-16S	Sodium, Total	51500		2.6	2/19/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Aluminum, Total	60.1		12.4	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Barium, Total	51.4		0.20	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Boron, Total	94.4		2.1	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Calcium, Total	85700		11.4	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Chromium, Total	1.6		0.70	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Copper, Total	1.4		0.60	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Iron, Total	126		17.4	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Lithium, Total	617		0.20	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Magnesium, Total	28500		5.9	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Manganese, Total	59.4		0.20	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Nickel, Total	2.3		1.1	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Potassium, Total	1340		20.9	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Sodium, Total	45400		2.6	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Vanadium, Total	2.4		0.60	2/27/2001
02a	100 Hancock Street	02a-021072	4'-14'	MW-14S	Zinc, Total	7.9		0.50	2/27/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Aluminum, Total	39.2		12.4	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Barium, Total	164		0.20	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Boron, Total	20.4		2.1	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Calcium, Total	20800		11.4	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Chromium, Total	0.76		0.70	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Cobalt, Total	11.4		0.70	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Copper, Total	1.1		0.60	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Iron, Total	10500		17.4	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Lithium, Total	1.1		0.20	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Magnesium, Total	3300		5.9	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Manganese, Total	608		0.20	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Nickel, Total	2.6		1.1	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Potassium, Total	975		20.9	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Sodium, Total	31000		2.6	2/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Aluminum, Total	25.9		12.7	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Arsenic, Total	42.9		2.3	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Barium, Total	2310		0.20	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Boron, Total	264		2.1	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Calcium, Total	247000		8.1	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Iron, Total	19700		15.7	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Lithium, Total	13.3		0.20	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Magnesium, Total	32200		8.8	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Manganese, Total	6420		0.10	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Nickel, Total	4.5		1.2	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Potassium, Total	4930		35.3	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Sodium, Total	459000		17.0	4/19/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Barium, Total	197		0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Beryllium, Total	0.11		0.10	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Boron, Total	28.3		2.1	2/13/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Cadmium, Total	0.79		0.30	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Calcium, Total	33400		11.4	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Chromium, Total	10.3		0.70	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Cobalt, Total	1.9		0.70	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Copper, Total	9.7		0.60	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Iron, Total	1910		17.4	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Lithium, Total	1.1	J	0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Magnesium, Total	4290		5.9	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Manganese, Total	337		0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Nickel, Total	16.1		1.1	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Potassium, Total	1880	J	20.9	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Sodium, Total	66000		2.6	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Vanadium, Total	4.8		0.60	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021415	12.50'	OBMW8	Zinc, Total	6.3	J	0.50	2/13/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Barium, Total	196		0.20	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Boron, Total	360		2.1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Cadmium, Total	0.94		0.30	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Calcium, Total	74500		11.4	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Chromium, Total	10.1		0.70	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Cobalt, Total	0.8		0.70	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Copper, Total	12.6		0.60	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Iron, Total	2600		17.4	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Lead, Total	3.1		2.2	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Lithium, Total	245	J	0.20	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Magnesium, Total	19200		5.9	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Manganese, Total	2250		0.20	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Nickel, Total	5.3		1.1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Sodium, Total	27400		2.6	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Vanadium, Total	2.8		0.60	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	5'-12'	OBMW3	Zinc, Total	15.4	J	0.50	2/15/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Arsenic, Total	18.8		3.2	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Barium, Total	406		0.20	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Beryllium, Total	0.11		0.10	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Boron, Total	24.8		2.1	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Cadmium, Total	0.3		0.30	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Calcium, Total	141000		11.4	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Chromium, Total	55.5		0.70	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Cobalt, Total	9.6		0.70	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Iron, Total	14200		17.4	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Lead, Total	4.6		2.2	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Lithium, Total	4.1	J	0.20	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Magnesium, Total	13800		5.9	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Manganese, Total	16900		0.20	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Nickel, Total	45.5		1.1	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Potassium, Total	485	J	20.9	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Sodium, Total	35200		2.6	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Vanadium, Total	7.8		0.60	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Zinc, Total	8.2		0.50	2/12/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Barium, Total	192		0.20	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Boron, Total	84.1		2.1	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Calcium, Total	79700		8.1	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Copper, Total	2.7	J	0.70	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Iron, Total	1880		15.7	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Lithium, Total	23.6	J	0.20	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Magnesium, Total	19600		8.8	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Manganese, Total	1270		0.10	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Nickel, Total	3.8		1.2	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Potassium, Total	14700	J	35.3	7/11/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Sodium, Total	274000		8.5	7/11/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Vanadium, Total	2.1		0.70	7/11/2001
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Aluminum, Total	454		22.7	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Arsenic, Total	13.7		2.4	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Boron, Total	28.8		2.7	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Cadmium, Total	0.33		0.30	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Calcium, Total	716000		192	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Cobalt, Total	7.1		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Copper, Total	4.8		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Iron, Total	11000		21.8	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Lead, Total	4.7		2.1	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Lithium, Total	123		0.20	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Magnesium, Total	10700		6.7	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Manganese, Total	1170		0.20	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Nickel, Total	39.8		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Potassium, Total	2630		303	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Sodium, Total	44300		4.1	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Vanadium, Total	20.1		0.80	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Zinc, Total	12.4		0.40	11/2/2000
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Aluminum, Total	73.8		12.4	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Arsenic, Total	13.2		3.2	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Barium, Total	186		0.20	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Boron, Total	113		2.1	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Calcium, Total	103000		11.4	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Chromium, Total	1.7		0.70	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Cobalt, Total	17.7		0.70	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Copper, Total	0.95		0.60	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Iron, Total	3410		17.4	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Lithium, Total	67.9		0.20	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Magnesium, Total	59700		5.9	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Manganese, Total	2710		0.20	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Nickel, Total	22.5		1.1	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Potassium, Total	47800		20.9	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Sodium, Total	39900		2.6	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Vanadium, Total	2.6		0.60	2/22/2001
08a	23 West Howcroft Road	08a-021068	4'-14'	MW-12S	Zinc, Total	5.8		0.50	2/22/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Barium, Total	205		0.20	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Boron, Total	883		2.1	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Cadmium, Total	0.34		0.30	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Calcium, Total	182000		11.4	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Chromium, Total	36.6		0.70	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Cobalt, Total	6.4		0.70	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Copper, Total	9.2		0.60	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Iron, Total	1910		17.4	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Lithium, Total	15.1	J	0.20	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Magnesium, Total	16100		5.9	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Manganese, Total	3090		0.20	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Nickel, Total	39.7		1.1	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Potassium, Total	4570	J	20.9	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Sodium, Total	37200		2.6	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Vanadium, Total	1.6		0.60	2/13/2001
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Zinc, Total	5.4	J	0.50	2/13/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Barium, Total	155		0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Boron, Total	98.9		2.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Calcium, Total	135000		11.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Iron, Total	92.2		17.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Lithium, Total	4.4	J	0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Magnesium, Total	14000		5.9	2/12/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Manganese, Total	196		0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Nickel, Total	1.9		1.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Potassium, Total	5200	J	20.9	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Sodium, Total	66600		2.6	2/12/2001
09a	149-151 Maywood Avenue	09a-021066	3.5'-8.5'	MW-11S	Zinc, Total	15.1		0.50	2/12/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Aluminum, Total	27.8		12.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Barium, Total	136		0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Boron, Total	72.3		2.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Calcium, Total	82500		11.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Lithium, Total	163	J	0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Magnesium, Total	9780		5.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Manganese, Total	146		0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Potassium, Total	14200	J	20.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Selenium, Total	3.1		3.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021400	3'-10'	OBMW1	Sodium, Total	162000		13.0	2/8/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Aluminum, Total	652		62.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Arsenic, Total	19.8		16.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Barium, Total	1300		1.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Beryllium, Total	0.67		0.50	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Boron, Total	160		10.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Cadmium, Total	2.5		1.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Calcium, Total	1420000		57.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Chromium, Total	33.9		3.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Cobalt, Total	4.9		3.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Copper, Total	34.5		3.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Iron, Total	25600		87.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Lithium, Total	97.2		1.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Magnesium, Total	348000		29.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Manganese, Total	28000		1.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Nickel, Total	30.7		5.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Potassium, Total	604000		836	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Silver, Total	4.2		3.0	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Sodium, Total	3.3E+07		2490	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Zinc, Total	60.9		2.5	2/20/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Aluminum, Total	923		12.4	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Barium, Total	86.1		0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Boron, Total	49.7		2.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Calcium, Total	129000		11.4	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Chromium, Total	26.5		0.70	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Cobalt, Total	4		0.70	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Iron, Total	1830		17.4	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Lead, Total	2.6		2.2	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Lithium, Total	11.9	J	0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Magnesium, Total	9740		5.9	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Manganese, Total	3740		0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Nickel, Total	24.8		1.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Potassium, Total	5430	J	20.9	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Sodium, Total	23600		2.6	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Vanadium, Total	1.7		0.60	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Zinc, Total	13	J	0.50	2/13/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Aluminum, Total	212		22.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Arsenic, Total	3.8		2.4	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Barium, Total	446		0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Beryllium, Total	0.26		0.10	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Boron, Total	405		2.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Cadmium, Total	16		0.30	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Calcium, Total	196000		19.2	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Cobalt, Total	2.2		0.90	2/7/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Copper, Total	4.5		0.90	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Iron, Total	10300		21.8	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Lead, Total	2.2		2.1	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Lithium, Total	2860	J	0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Magnesium, Total	21000		6.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Manganese, Total	2440		0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Potassium, Total	37100	J	40.9	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Sodium, Total	252000		20.5	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Vanadium, Total	2.7		0.80	2/7/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Arsenic, Total	55.2		3.2	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Barium, Total	359		0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Boron, Total	173		2.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Calcium, Total	499000		11.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Iron, Total	14000		17.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Lithium, Total	1620	J	0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Magnesium, Total	14000		5.9	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Manganese, Total	4040		0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Nickel, Total	3.1		1.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Potassium, Total	19000	J	20.9	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Sodium, Total	80800		2.6	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Zinc, Total	8		0.50	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Barium, Total	40.4		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Beryllium, Total	1.2		0.10	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Boron, Total	94.6		2.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Calcium, Total	48800		19.2	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Iron, Total	32700		21.8	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Lithium, Total	27.9		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Magnesium, Total	7090		6.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Manganese, Total	4090		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Potassium, Total	7750		303	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	15.2'	B38W24S	Sodium, Total	13100		4.1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Aluminum, Total	41.4		22.7	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Arsenic, Total	18.5		2.4	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Barium, Total	140	J	0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Boron, Total	107		2.7	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Calcium, Total	162000		19.2	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Chromium, Total	11.1		0.60	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Cobalt, Total	5.9	J	0.90	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Copper, Total	2.6		0.90	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Iron, Total	17900	J	21.8	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Lithium, Total	763	J	0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Magnesium, Total	6210		6.7	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Manganese, Total	4060		0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Nickel, Total	11.3		0.90	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Potassium, Total	65100	J	40.9	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Sodium, Total	26900		4.1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Arsenic, Total	218		2.3	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Arsenic, Total	240		2.4	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Barium, Total	42.5		0.20	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Barium, Total	50.1		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Boron, Total	107		2.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Boron, Total	90.6		2.1	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Cadmium, Total	0.62		0.30	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Calcium, Total	41700		8.1	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Calcium, Total	43900		19.2	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Iron, Total	96600		15.7	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Iron, Total	113000		21.8	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Lithium, Total	195		0.20	11/15/2000

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Lithium, Total	154	J	0.20	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Magnesium, Total	4750		6.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Magnesium, Total	4370		8.8	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Manganese, Total	1290		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Manganese, Total	1050		0.10	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Nickel, Total	1.2		1.2	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Potassium, Total	26200		303	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Potassium, Total	20400	J	35.3	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	6.7'-11.7'	MISS03A	Sodium, Total	14800		4.1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Sodium, Total	11000		1.7	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	6.7'-11.7'	MISS03A	Vanadium, Total	1.9		0.70	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Barium, Total	147	J	0.10	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Boron, Total	101	J	1.6	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Cadmium, Total	0.43		0.30	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Calcium, Total	53100	J	7.8	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Chromium, Total	2.9		1.4	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Cobalt, Total	16.3		0.90	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Iron, Total	2030		15.6	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Lead, Total	5.4		2.4	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Lithium, Total	17.4		0.10	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Magnesium, Total	4950		8.0	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Manganese, Total	2230		0.10	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Nickel, Total	3		1.7	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Potassium, Total	8100	J	10.7	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	7.17	MW-1	Sodium, Total	148000	J	32.0	8/16/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Aluminum, Total	61.4		22.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Barium, Total	185		0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Beryllium, Total	0.16		0.10	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Boron, Total	33.9		2.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Calcium, Total	71100		19.2	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Chromium, Total	104		0.60	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Copper, Total	1.2		0.90	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Iron, Total	396		21.8	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Lithium, Total	4.4	J	0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Magnesium, Total	5550		6.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Manganese, Total	10		0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Nickel, Total	62.6		0.90	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Potassium, Total	836	J	40.9	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Sodium, Total	23400		4.1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021428	12'-17'	OBMW15	Vanadium, Total	1		0.80	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Aluminum, Total	57.6		22.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Barium, Total	118		0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Beryllium, Total	0.25		0.10	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Boron, Total	49.8		2.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Calcium, Total	48500		19.2	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Cobalt, Total	3.2		0.90	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Iron, Total	267		21.8	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Magnesium, Total	6330		6.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Manganese, Total	1230		0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Nickel, Total	21		0.90	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Potassium, Total	2590	J	40.9	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	5'-15'	OBMW17	Sodium, Total	38800		4.1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Barium, Total	228		0.20	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Boron, Total	858		2.1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Calcium, Total	68800		11.4	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Iron, Total	6280		17.4	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Lead, Total	2.5		2.2	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Lithium, Total	1590	J	0.20	2/12/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Magnesium, Total	7010		5.9	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Manganese, Total	5060		0.20	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Potassium, Total	5270	J	20.9	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Sodium, Total	90000		2.6	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Barium, Total	113		0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Beryllium, Total	0.12		0.10	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Boron, Total	87.2		2.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Calcium, Total	69500		19.2	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Chromium, Total	32.8		0.60	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Copper, Total	1.3		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Iron, Total	16100		21.8	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Lithium, Total	44.2	J	0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Magnesium, Total	8100		6.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Manganese, Total	593		0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Potassium, Total	6420	J	40.9	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Sodium, Total	31800		4.1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	15.40'	OBMW19	Vanadium, Total	2.9		0.80	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Aluminum, Total	96.9		12.4	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Arsenic, Total	3.9		3.2	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Barium, Total	174		0.20	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Beryllium, Total	0.14		0.10	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Boron, Total	103		2.1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Calcium, Total	161000		11.4	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Chromium, Total	32.7		0.70	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Copper, Total	4.2		0.60	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Iron, Total	42800		17.4	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Lead, Total	3.4		2.2	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Lithium, Total	499		0.20	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Magnesium, Total	52200		5.9	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Manganese, Total	12200		0.20	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Nickel, Total	1.8		1.1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Potassium, Total	49400		20.9	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Sodium, Total	101000		13.0	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Vanadium, Total	1.6		0.60	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	41.5'	PT-2S	Zinc, Total	5.7		0.50	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Aluminum, Total	49.1		12.4	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Arsenic, Total	3.8		3.2	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Barium, Total	82.8		0.20	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Beryllium, Total	0.12		0.10	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Boron, Total	103		2.1	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Calcium, Total	57200		11.4	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Cobalt, Total	0.96		0.70	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Copper, Total	0.7		0.60	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Iron, Total	3010		17.4	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Lithium, Total	8.3		0.20	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Magnesium, Total	34800		5.9	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Manganese, Total	2470		0.20	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Nickel, Total	1.2		1.1	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Potassium, Total	57900		20.9	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Sodium, Total	34000		2.6	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Vanadium, Total	2.2		0.60	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Arsenic, Total	15		3.2	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Barium, Total	146		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Boron, Total	165		2.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Calcium, Total	227000		11.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Chromium, Total	22.4		0.70	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Cobalt, Total	1.1		0.70	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Iron, Total	26400		17.4	2/14/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Lithium, Total	103	J	0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Magnesium, Total	102000		5.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Manganese, Total	2690		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Nickel, Total	18.1		1.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Potassium, Total	30400	J	20.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Sodium, Total	11500		2.6	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Vanadium, Total	2.4		0.60	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Zinc, Total	5.1	J	0.50	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Aluminum, Total	33.3		12.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Arsenic, Total	5.9		3.2	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Barium, Total	96		0.20	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Boron, Total	401		2.1	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Calcium, Total	232000		11.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Cobalt, Total	4.4		0.70	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Iron, Total	1100		17.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Lead, Total	2.7		2.2	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Lithium, Total	69.6	J	0.20	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Magnesium, Total	21100		5.9	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Manganese, Total	16300		0.20	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Potassium, Total	3380	J	20.9	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Sodium, Total	31100		2.6	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Aluminum, Total	11800		12.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Barium, Total	19.2		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Beryllium, Total	2.2		0.10	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Boron, Total	396		2.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Calcium, Total	4900		11.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Iron, Total	125		17.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Lithium, Total	14400	J	0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Magnesium, Total	1640		5.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Manganese, Total	59.1		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Potassium, Total	965	J	20.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Sodium, Total	16400		2.6	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	7'-17'	WELL 8	Vanadium, Total	0.68		0.60	2/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Aluminum, Total	650		22.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Beryllium, Total	2.4		0.10	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Boron, Total	290		2.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Cadmium, Total	0.97		0.30	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Calcium, Total	403000		19.2	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Cobalt, Total	2.3		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Copper, Total	3.9		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Iron, Total	36300		21.8	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Lead, Total	5.8		2.1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Lithium, Total	1510		0.20	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Magnesium, Total	31000		6.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Manganese, Total	2650		0.20	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Nickel, Total	22.1		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Potassium, Total	44200		303	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Sodium, Total	40000		4.1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Vanadium, Total	1.6		0.80	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	17'-22'	B38W01S	Zinc, Total	11.3		0.40	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Aluminum, Total	2970		12.4	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Arsenic, Total	465		3.2	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Barium, Total	34.7		0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Boron, Total	840		2.1	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Calcium, Total	758000		250	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Chromium, Total	15.6		0.70	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Cobalt, Total	2.7		0.70	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Copper, Total	5		0.60	3/15/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Iron, Total	79700		17.4	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Lead, Total	27.7		2.2	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Lithium, Total	6560	J	0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Magnesium, Total	49600		5.9	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Manganese, Total	4030		0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Nickel, Total	11.2		1.1	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Potassium, Total	13900		20.9	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Silver, Total	1.3		0.60	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Sodium, Total	397000		249	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Vanadium, Total	2.6		0.60	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Zinc, Total	14.2		0.50	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Aluminum, Total	14.6		12.4	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Arsenic, Total	831		3.2	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Barium, Total	24.9		0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Boron, Total	207		2.1	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Cadmium, Total	0.41		0.30	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Calcium, Total	512000		250	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Cobalt, Total	1.4		0.70	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Iron, Total	5650		17.4	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Lithium, Total	1650	J	0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Magnesium, Total	20800		5.9	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Manganese, Total	1040		0.20	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Nickel, Total	1.4		1.1	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Potassium, Total	29700		20.9	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Sodium, Total	67000		2.6	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Thallium, Total	3.9		3.0	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Vanadium, Total	1.6		0.60	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	7'-17'	MW-3S	Zinc, Total	5.4		0.50	3/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Aluminum, Total	37.4		22.7	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Arsenic, Total	31.8		2.4	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Boron, Total	919		2.7	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Calcium, Total	634000		192	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Chromium, Total	1.4		0.60	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Iron, Total	1430		21.8	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Lithium, Total	1730		0.20	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Magnesium, Total	52100		6.7	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Manganese, Total	1180		0.20	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Potassium, Total	45900		303	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Sodium, Total	22700		4.1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	14.9'	B38W19S	Vanadium, Total	0.85		0.80	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Aluminum, Total	108		22.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Arsenic, Total	3.6		2.4	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Barium, Total	9.4		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Boron, Total	313		2.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Calcium, Total	637000		192	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Chromium, Total	8		0.60	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Copper, Total	3.8		0.90	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Iron, Total	930		21.8	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Lithium, Total	284		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Magnesium, Total	31500		6.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Manganese, Total	395		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Nickel, Total	6.1		0.90	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Potassium, Total	1940		40.9	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Sodium, Total	6290		4.1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Vanadium, Total	1.4		0.80	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Zinc, Total	8.4		0.40	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Aluminum, Total	156		22.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Arsenic, Total	2600		2.4	11/21/2000

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Barium, Total	3.7	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Boron, Total	1930		2.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Calcium, Total	146000		19.2	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Chromium, Total	46.9		0.60	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Cobalt, Total	1.2	J	0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Copper, Total	20.5		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Iron, Total	4760	J	21.8	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Lithium, Total	10100	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Magnesium, Total	13300		6.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Manganese, Total	212		0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Mercury, Total	0.16		0.10	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Nickel, Total	10.1		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Potassium, Total	13000	J	40.9	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Sodium, Total	792000		41.0	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Vanadium, Total	3.1		0.80	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Zinc, Total	7.4		0.40	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Aluminum, Total	46.3		22.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Arsenic, Total	2.4		2.4	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Boron, Total	475		2.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Calcium, Total	659000		192	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Chromium, Total	1.2		0.60	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Cobalt, Total	8.1		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Copper, Total	2		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Iron, Total	1420		21.8	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Lithium, Total	1130		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Magnesium, Total	76900		6.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Manganese, Total	799		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Nickel, Total	6		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Potassium, Total	73700		303	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Sodium, Total	27600		4.1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	14.6'	MISS05A	Zinc, Total	23.7		0.40	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Aluminum, Total	27.8		22.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Barium, Total	28.5		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Boron, Total	116		2.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Cadmium, Total	1.6		0.30	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Calcium, Total	160000		19.2	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Copper, Total	11.2		0.90	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Iron, Total	327		21.8	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Lead, Total	2.3		2.1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Lithium, Total	705		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Magnesium, Total	9160		6.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Manganese, Total	43.7		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Potassium, Total	9540		40.9	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Sodium, Total	11000		4.1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	7.2-13'	MISS06A	Zinc, Total	1740		0.40	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Aluminum, Total	61.5		12.4	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Barium, Total	20.6		0.20	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Boron, Total	36.3		2.1	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Calcium, Total	36000		11.4	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Iron, Total	78.6		17.4	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Lithium, Total	84.3	J	0.20	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Magnesium, Total	2530		5.9	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Manganese, Total	2.6		0.20	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Nickel, Total	1.6		1.1	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Potassium, Total	1300		20.9	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Sodium, Total	6950		2.6	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	4.6'-9.6'	MISS07A	Vanadium, Total	0.82		0.60	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Boron, Total	8		2.1	6/12/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Calcium, Total	74.9		8.1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Chromium, Total	12.1		0.90	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Copper, Total	2.1		0.70	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Iron, Total	92		15.7	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Magnesium, Total	23.4		8.8	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Manganese, Total	2.1		0.10	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Nickel, Total	8.9		1.2	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Sodium, Total	79.7		1.7	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	3.5'-23.5'	OVPW-1S	Zinc, Total	2.7		0.30	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Aluminum, Total	916		14.0	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Barium, Total	51.3		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Beryllium, Total	0.16		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Boron, Total	91.2		1.8	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Calcium, Total	59100		8.9	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Chromium, Total	6.4		0.60	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Cobalt, Total	7.2		0.80	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Iron, Total	1350		17.3	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Lead, Total	2.3		1.9	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Lithium, Total	6.1	J	0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Magnesium, Total	24300		4.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Manganese, Total	1520		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Nickel, Total	9.4		1.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Potassium, Total	11100		378	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Selenium, Total	3		2.2	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Sodium, Total	9750		35.4	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Vanadium, Total	1.9		0.50	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Zinc, Total	28.2		0.30	1/3/2002
17a	Transect G	17a-021604	2'-10'	MW-22S	Aluminum, Total	49.7	J	16.0	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Antimony, Total	2.3		2.3	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Barium, Total	93.9		0.10	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Boron, Total	130		1.6	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Calcium, Total	141000		7.8	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Cobalt, Total	2.4		0.90	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Copper, Total	3.1	J	0.50	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Iron, Total	165		15.6	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Lithium, Total	498	J	0.10	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Magnesium, Total	29100		8.0	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Manganese, Total	1410		0.10	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Nickel, Total	5.5		1.7	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Potassium, Total	5300	J	10.7	7/24/2001
17a	Transect G	17a-021604	2'-10'	MW-22S	Sodium, Total	96500	J	1.6	7/24/2001
19a	Parkway	19a-021033	8'-13'	B38W14S	Aluminum, Total	275		22.7	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Barium, Total	244		0.20	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Boron, Total	160		2.7	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Cadmium, Total	1.7		0.30	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Calcium, Total	69200		19.2	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Chromium, Total	200		0.60	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Copper, Total	13.5		0.90	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Iron, Total	743		21.8	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Lead, Total	5.5		2.1	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Lithium, Total	33.8		0.20	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Magnesium, Total	13100		6.7	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Manganese, Total	158		0.20	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Nickel, Total	30.6		0.90	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Potassium, Total	21800		303	11/16/2000
19a	Parkway	19a-021033	8'-13'	B38W14S	Sodium, Total	42800		4.1	11/16/2000
20a	Grove	20a-021035	15.5'	B38W15S	Arsenic, Total	4.1		2.4	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Barium, Total	46.6		0.20	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Boron, Total	801		2.7	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Calcium, Total	94800		19.2	11/9/2000

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
20a	Grove	20a-021035	15.5'	B38W15S	Iron, Total	648		21.8	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Lithium, Total	3240		0.20	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Magnesium, Total	29900		6.7	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Manganese, Total	2630		0.20	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Potassium, Total	180000		409	11/9/2000
20a	Grove	20a-021035	15.5'	B38W15S	Sodium, Total	303000		41.0	11/9/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Aluminum, Total	32.6		22.7	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Barium, Total	63.7		0.20	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Boron, Total	88.3		2.7	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Calcium, Total	118000		19.2	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Cobalt, Total	2.1		0.90	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Copper, Total	3.9		0.90	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Iron, Total	444		21.8	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Lithium, Total	336		0.20	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Magnesium, Total	11300		6.7	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Manganese, Total	881		0.20	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Nickel, Total	73.7		0.90	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Potassium, Total	28500		303	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Sodium, Total	53900		4.1	11/2/2000
20a	Grove	20a-021037	7.6'-12.6'	B38W17A	Zinc, Total	11.2		0.40	11/2/2000
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Aluminum, Total	32.9		12.4	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Barium, Total	160		0.20	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Boron, Total	136		2.1	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Calcium, Total	117000		11.4	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Copper, Total	1.3		0.60	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Iron, Total	34.3		17.4	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Lithium, Total	1		0.20	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Magnesium, Total	11400		5.9	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Manganese, Total	14		0.20	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Nickel, Total	1.5		1.1	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Potassium, Total	6950		20.9	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Sodium, Total	149000		26.0	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	5'-10.8'	MW-10S	Zinc, Total	6.9		0.50	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Aluminum, Total	607		12.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Arsenic, Total	3.8		3.2	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Barium, Total	69.8		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Beryllium, Total	0.22		0.10	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Boron, Total	48.2		2.1	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Calcium, Total	63700		11.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Chromium, Total	1.5		0.70	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Cobalt, Total	0.85		0.70	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Copper, Total	1.6		0.60	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Iron, Total	977		17.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Lithium, Total	0.82		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Magnesium, Total	10700		5.9	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Manganese, Total	189		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Nickel, Total	1.3		1.1	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Potassium, Total	3000		20.9	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Sodium, Total	39800		2.6	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Vanadium, Total	1.6		0.60	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Barium, Total	110		0.20	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Boron, Total	45.1		2.1	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Calcium, Total	58100		11.4	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Chromium, Total	24.3		0.70	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Iron, Total	613		17.4	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Lithium, Total	3.2	J	0.20	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Magnesium, Total	8310		5.9	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Manganese, Total	40.8		0.20	2/15/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Nickel, Total	18.3		1.1	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Potassium, Total	1340	J	20.9	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Sodium, Total	44900		2.6	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021080	13.75'	MW-18S	Vanadium, Total	0.92		0.60	2/15/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Barium, Total	92.8		0.20	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Boron, Total	37.8		2.1	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Calcium, Total	80400		11.4	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Magnesium, Total	8860		5.9	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Manganese, Total	14.8		0.20	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Nickel, Total	1.8		1.1	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Potassium, Total	6180		20.9	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Sodium, Total	37200		2.6	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021062	5'-13'	MW-9S	Zinc, Total	5.4		0.50	3/19/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Aluminum, Total	101		12.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Barium, Total	78.3		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Beryllium, Total	0.2		0.10	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Boron, Total	187		2.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Calcium, Total	85900		11.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Chromium, Total	0.76		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Cobalt, Total	2.3		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Copper, Total	2.1		0.60	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Iron, Total	135		17.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Lithium, Total	1860		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Magnesium, Total	19200		5.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Manganese, Total	1120		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Nickel, Total	5.9		1.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Potassium, Total	33400		20.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Sodium, Total	152000		24.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	5'-13'	MW-2S	Vanadium, Total	0.8		0.60	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Aluminum, Total	450		12.4	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Barium, Total	78.5		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Beryllium, Total	0.13		0.10	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Boron, Total	22.9		2.1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Calcium, Total	82700		11.4	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Chromium, Total	3.6		0.70	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Cobalt, Total	1		0.70	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Copper, Total	2.3		0.60	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Iron, Total	861		17.4	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Lithium, Total	2.8		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Magnesium, Total	7910		5.9	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Manganese, Total	538		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Nickel, Total	4.1		1.1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Potassium, Total	1150		20.9	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Sodium, Total	32000		2.6	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021052	5'-9'	MW-4S	Vanadium, Total	1.4		0.60	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Aluminum, Total	256		12.4	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Barium, Total	139		0.20	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Calcium, Total	89000		11.4	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Iron, Total	389		17.4	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Magnesium, Total	9200		5.9	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Manganese, Total	55.6		0.20	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Nickel, Total	2.5		1.1	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Potassium, Total	2800		20.9	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Sodium, Total	75000		2.6	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	5'15'	MW-5S	Zinc, Total	11.6		0.50	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Aluminum, Total	758		12.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Arsenic, Total	5.6		3.2	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Barium, Total	486		0.20	2/21/2001

TABLE 4-35A
SUMMARY OF DETECTABLE TAL METALS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Beryllium, Total	0.21		0.10	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Boron, Total	55.8		2.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Calcium, Total	136000		11.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Chromium, Total	2.5		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Cobalt, Total	4.4		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Copper, Total	0.65		0.60	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Iron, Total	3880		17.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Lithium, Total	9.4		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Magnesium, Total	25100		5.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Manganese, Total	5830		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Nickel, Total	6.9		1.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Potassium, Total	2900		20.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Sodium, Total	116000		24.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Aluminum, Total	25.3		12.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Barium, Total	78.1		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Boron, Total	78.2		2.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Cadmium, Total	0.69		0.30	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Calcium, Total	137000		11.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Cobalt, Total	23.6		0.70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Copper, Total	1.8		0.60	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Iron, Total	80.9		17.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Lithium, Total	4.2		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Magnesium, Total	17000		5.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Manganese, Total	1940		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Nickel, Total	28.7		1.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Potassium, Total	3480		20.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Sodium, Total	45600		2.6	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	5'-15'	MW-7S	Zinc, Total	46.8		0.50	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Aluminum, Total	17.8		12.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Barium, Total	97.8		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Boron, Total	129		2.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Calcium, Total	154000		11.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Cobalt, Total	1.7		0.70	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Copper, Total	1.6		0.60	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Lithium, Total	8.3		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Magnesium, Total	24900		5.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Manganese, Total	1410		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Nickel, Total	12		1.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Potassium, Total	1440		20.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Sodium, Total	37000		2.6	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	5'-15'	MW-8S	Zinc, Total	4.6		0.50	3/1/2001

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface

TABLE 4-35B
SUMMARY OF TAL METALS IN OVERBURDEN GROUNDWATER EXCEEDING GROUNDWATER STANDARDS SORTED BY CHEMICAL - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria	Greater of NJ GWQS & PQL	Greater of NJ GWQC & PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021436	WELL 8	7'-17'	Aluminum, Total	11800		12.4	200	200	200	200	NA	2/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Aluminum, Total	2970		12.4	200	200	200	200	NA	3/15/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	Aluminum, Total	923		12.4	200	200	200	200	NA	2/13/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Aluminum, Total	758		12.4	200	200	200	200	NA	2/21/2001
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'	Aluminum, Total	652		62.0	200	200	200	200	NA	2/20/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Aluminum, Total	650		22.7	200	200	200	200	NA	11/8/2000
22b	Lodi Brook Drainage Basin	22b-021079	MW-17S	4'-10'	Aluminum, Total	607		12.4	200	200	200	200	NA	2/21/2001
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Aluminum, Total	454		22.7	200	200	200	200	NA	11/2/2000
23b	Westerly Brook Drainage Basin	23b-021052	MW-4S	5'-9'	Aluminum, Total	450		12.4	200	200	200	200	NA	2/20/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	Aluminum, Total	275		22.7	200	200	200	200	NA	11/16/2000
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Aluminum, Total	256		12.4	200	200	200	200	NA	3/12/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Aluminum, Total	212		22.7	200	200	200	200	NA	2/7/2001
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Aluminum, Total	916		14.0	200	200	200	200	NA	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Arsenic, Total	2600		2.4	10	0.02	8	8	NA	11/21/2000
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Arsenic, Total	831		3.2	10	0.02	8	8	NA	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Arsenic, Total	465		3.2	10	0.02	8	8	NA	3/15/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	MISS03A	6.7'-11.7'	Arsenic, Total	240		2.4	10	0.02	8	8	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	Arsenic, Total	218		2.3	10	0.02	8	8	NA	7/12/2001
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	Arsenic, Total	55.2		3.2	10	0.02	8	8	NA	2/12/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Arsenic, Total	42.9		2.3	10	0.02	8	8	NA	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Arsenic, Total	31.8		2.4	10	0.02	8	8	NA	11/7/2000
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'	Arsenic, Total	19.8		16.0	10	0.02	8	8	NA	2/20/2001
06e	29 Essex Street	06e-021423	OBMW12	5'-15'	Arsenic, Total	18.8		3.2	10	0.02	8	8	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Arsenic, Total	18.5		2.4	10	0.02	8	8	NA	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021434	WELL 2	9'-19'	Arsenic, Total	15		3.2	10	0.02	8	8	NA	2/14/2001
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Arsenic, Total	13.7		2.4	10	0.02	8	8	NA	11/2/2000
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	Arsenic, Total	13.2		3.2	10	0.02	8	8	NA	2/22/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Barium, Total	2310		0.20	2000	2000	200	2000	NA	4/19/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Cadmium, Total	16		0.30	5	4	2	4	NA	2/7/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	Chromium, Total	200		0.60	100	100	10	100	NA	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021428	OBMW15	12'-17'	Chromium, Total	104		0.60	100	100	10	100	NA	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	MISS03A	6.7'-11.7'	Iron, Total	113000		21.8	300	300	100	300	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	Iron, Total	96600		15.7	300	300	100	300	NA	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Iron, Total	79700		17.4	300	300	100	300	NA	3/15/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Iron, Total	42800		17.4	300	300	100	300	NA	2/27/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Iron, Total	36300		21.8	300	300	100	300	NA	11/8/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	B38W24S	10.4'-15.2'	Iron, Total	32700		21.8	300	300	100	300	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021434	WELL 2	9'-19'	Iron, Total	26400		17.4	300	300	100	300	NA	2/14/2001
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'	Iron, Total	25600		87.0	300	300	100	300	NA	2/20/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Iron, Total	19700		15.7	300	300	100	300	NA	4/19/2001
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Iron, Total	17900	J	21.8	300	300	100	300	NA	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	Iron, Total	16100		21.8	300	300	100	300	NA	2/6/2001
06e	29 Essex Street	06e-021423	OBMW12	5'-15'	Iron, Total	14200		17.4	300	300	100	300	NA	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	Iron, Total	14000		17.4	300	300	100	300	NA	2/12/2001
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Iron, Total	11000		21.8	300	300	100	300	NA	11/2/2000

TABLE 4-35B
SUMMARY OF TAL METALS IN OVERBURDEN GROUNDWATER EXCEEDING GROUNDWATER STANDARDS SORTED BY CHEMICAL - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria	Greater of NJ GWQS & PQL	Greater of NJ GWQC & PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
02d	8 Mill Street	02d-021074	MW-15S	4'-8'	Iron, Total	10500		17.4	300	300	100	300	NA	2/19/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Iron, Total	10300		21.8	300	300	100	300	NA	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Iron, Total	6280		17.4	300	300	100	300	NA	2/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021574	OVPW-1S	3.5'-23.5'	Iron, Total	6250		15.7	300	300	100	300	NA	6/13/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Iron, Total	5650		17.4	300	300	100	300	NA	3/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Iron, Total	4760	J	21.8	300	300	100	300	NA	11/21/2000
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Iron, Total	3880		17.4	300	300	100	300	NA	2/21/2001
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	Iron, Total	3410		17.4	300	300	100	300	NA	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	WELL 1	5'-15'	Iron, Total	3010		17.4	300	300	100	300	NA	2/20/2001
12b	100 West Hunter Avenue (MISS)	12b-021583	OVPW-1S	3.5'-23.5'	Iron, Total	2640		15.7	300	300	100	300	NA	6/28/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Iron, Total	2600		17.4	300	300	100	300	NA	2/15/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	MW-1	7'-17'	Iron, Total	2030		15.6	300	300	100	300	NA	8/16/2001
06a	85-101 NJ Rt. 17 North	06a-021415	OBMW8	5.5'-12.50'	Iron, Total	1910		17.4	300	300	100	300	NA	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Iron, Total	1910		17.4	300	300	100	300	NA	2/13/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Iron, Total	1880		15.7	300	300	100	300	NA	7/11/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	Iron, Total	1830		17.4	300	300	100	300	NA	2/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Iron, Total	1430		21.8	300	300	100	300	NA	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	MISS05A	10.7'-14.6'	Iron, Total	1420		21.8	300	300	100	300	NA	11/6/2000
10a	100 West Hunter Avenue (Stepan)	10a-021435	WELL 5	5'-12'	Iron, Total	1100		17.4	300	300	100	300	NA	2/8/2001
22b	Lodi Brook Drainage Basin	22b-021079	MW-17S	4'-10'	Iron, Total	977		17.4	300	300	100	300	NA	2/21/2001
12b	100 West Hunter Avenue (MISS)	12b-021303	MISS01AA	13'-18'	Iron, Total	930		21.8	300	300	100	300	NA	12/21/2000
23b	Westerly Brook Drainage Basin	23b-021052	MW-4S	5'-9'	Iron, Total	861		17.4	300	300	100	300	NA	2/20/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	Iron, Total	743		21.8	300	300	100	300	NA	11/16/2000
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Iron, Total	648		21.8	300	300	100	300	NA	11/9/2000
22b	Lodi Brook Drainage Basin	22b-021080	MW-18S	3.75'-13.75'	Iron, Total	613		17.4	300	300	100	300	NA	2/15/2001
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Iron, Total	444		21.8	300	300	100	300	NA	11/2/2000
10a	100 West Hunter Avenue (Stepan)	10a-021428	OBMW15	12'-17'	Iron, Total	396		21.8	300	300	100	300	NA	2/7/2001
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Iron, Total	389		17.4	300	300	100	300	NA	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021304	MISS06A	7.2-13'	Iron, Total	327		21.8	300	300	100	300	NA	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Iron, Total	1350		17.3	300	300	100	300	NA	1/3/2002
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Lead, Total	27.7		2.2	15	5	10	10		3/15/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	WELL 8	7'-17'	Lithium, Total	14400	J	0.20	NA			NA	730	2/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Lithium, Total	10100	J	0.20	NA			NA	730	11/21/2000
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Lithium, Total	6560	J	0.20	NA			NA	730	3/15/2001
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Lithium, Total	3240		0.20	NA			NA	730	11/9/2000
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Lithium, Total	2860	J	0.20	NA			NA	730	2/7/2001
12b	100 West Hunter Avenue (MISS)	12b-021583	OVPW-1S	3.5'-23.5'	Lithium, Total	1970	J	0.20	NA			NA	730	6/28/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Lithium, Total	1860		0.20	NA			NA	730	2/21/2001
12b	100 West Hunter Avenue (MISS)	12b-021574	OVPW-1S	3.5'-23.5'	Lithium, Total	1740		0.20	NA			NA	730	6/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Lithium, Total	1730		0.20	NA			NA	730	11/7/2000
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Lithium, Total	1650	J	0.20	NA			NA	730	3/15/2001
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	Lithium, Total	1620	J	0.20	NA			NA	730	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Lithium, Total	1590	J	0.20	NA			NA	730	2/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Lithium, Total	1510		0.20	NA			NA	730	11/8/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	MISS05A	10.7'-14.6'	Lithium, Total	1130		0.20	NA			NA	730	11/6/2000

TABLE 4-35B
SUMMARY OF TAL METALS IN OVERBURDEN GROUNDWATER EXCEEDING GROUNDWATER STANDARDS SORTED BY CHEMICAL - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria	Greater of NJ GWQS & PQL	Greater of NJ GWQC & PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Lithium, Total	763	J	0.20	NA			NA	730	11/27/2000
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'	Manganese, Total	28000		1.0	50	50	6	50	NA	2/20/2001
06e	29 Essex Street	06e-021423	OBMW12	5'-15'	Manganese, Total	16900		0.20	50	50	6	50	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	WELL 5	5'-12'	Manganese, Total	16300		0.20	50	50	6	50	NA	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Manganese, Total	12200		0.20	50	50	6	50	NA	2/27/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Manganese, Total	6420		0.10	50	50	6	50	NA	4/19/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Manganese, Total	5830		0.20	50	50	6	50	NA	2/21/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Manganese, Total	5060		0.20	50	50	6	50	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021042	B38W24S	10.4'-15.2'	Manganese, Total	4090		0.20	50	50	6	50	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Manganese, Total	4060		0.20	50	50	6	50	NA	11/27/2000
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	Manganese, Total	4040		0.20	50	50	6	50	NA	2/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Manganese, Total	4030		0.20	50	50	6	50	NA	3/15/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	Manganese, Total	3740		0.20	50	50	6	50	NA	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Manganese, Total	3090		0.20	50	50	6	50	NA	2/13/2001
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	Manganese, Total	2710		0.20	50	50	6	50	NA	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	WELL 2	9'-19'	Manganese, Total	2690		0.20	50	50	6	50	NA	2/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Manganese, Total	2650		0.20	50	50	6	50	NA	11/8/2000
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Manganese, Total	2630		0.20	50	50	6	50	NA	11/9/2000
10a	100 West Hunter Avenue (Stepan)	10a-021433	WELL 1	5'-15'	Manganese, Total	2470		0.20	50	50	6	50	NA	2/20/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Manganese, Total	2440		0.20	50	50	6	50	NA	2/7/2001
12b	100 West Hunter Avenue (MISS)	12b-021574	OVPW-1S	3.5'-23.5'	Manganese, Total	2270		0.10	50	50	6	50	NA	6/13/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Manganese, Total	2250		0.20	50	50	6	50	NA	2/15/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	MW-1	7'-17'	Manganese, Total	2230		0.10	50	50	6	50	NA	8/16/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Manganese, Total	1940		0.20	50	50	6	50	NA	2/28/2001
17a	Transect G	17a-021604	MW-22S	2'-10'	Manganese, Total	1410		0.10	50	50	6	50	NA	7/24/2001
23b	Westerly Brook Drainage Basin	23b-021060	MW-8S	5'-15'	Manganese, Total	1410		0.20	50	50	6	50	NA	3/1/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	MISS03A	6.7'-11.7'	Manganese, Total	1290		0.20	50	50	6	50	NA	11/15/2000
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Manganese, Total	1270		0.10	50	50	6	50	NA	7/11/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	Manganese, Total	1230		0.20	50	50	6	50	NA	2/7/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Manganese, Total	1180		0.20	50	50	6	50	NA	11/7/2000
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Manganese, Total	1170		0.20	50	50	6	50	NA	11/2/2000
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Manganese, Total	1120		0.20	50	50	6	50	NA	2/21/2001
12b	100 West Hunter Avenue (MISS)	12b-021583	OVPW-1S	3.5'-23.5'	Manganese, Total	1100		0.10	50	50	6	50	NA	6/28/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	Manganese, Total	1050		0.10	50	50	6	50	NA	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Manganese, Total	1040		0.20	50	50	6	50	NA	3/15/2001
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Manganese, Total	881		0.20	50	50	6	50	NA	11/2/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	MISS05A	10.7'-14.6'	Manganese, Total	799		0.20	50	50	6	50	NA	11/6/2000
02d	8 Mill Street	02d-021074	MW-15S	4'-8'	Manganese, Total	608		0.20	50	50	6	50	NA	2/19/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	Manganese, Total	593		0.20	50	50	6	50	NA	2/6/2001
23b	Westerly Brook Drainage Basin	23b-021052	MW-4S	5'-9'	Manganese, Total	538		0.20	50	50	6	50	NA	2/20/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	MW-16S	4'-14'	Manganese, Total	482		0.20	50	50	6	50	NA	2/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021303	MISS01AA	13'-18'	Manganese, Total	395		0.20	50	50	6	50	NA	12/21/2000
06a	85-101 NJ Rt. 17 North	06a-021415	OBMW8	5.5'-12.50'	Manganese, Total	337		0.20	50	50	6	50	NA	2/13/2001
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Manganese, Total	212		0.20	50	50	6	50	NA	11/21/2000
09a	149-151 Maywood Avenue	09a-021066	MW-11S	3.5'-8.5'	Manganese, Total	196		0.20	50	50	6	50	NA	2/12/2001

TABLE 4-35B
SUMMARY OF TAL METALS IN OVERBURDEN GROUNDWATER EXCEEDING GROUNDWATER STANDARDS SORTED BY CHEMICAL - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screen Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL (ug/L)	NJGW Quality Criteria	Greater of NJ GWQS & PQL	Greater of NJ GWQC & PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
22b	Lodi Brook Drainage Basin	22b-021079	MW-17S	4'-10'	Manganese, Total	189		0.20	50	50	6	50	NA	2/21/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	Manganese, Total	158		0.20	50	50	6	50	NA	11/16/2000
09a	149-151 Maywood Avenue	09a-021400	OBMW1	3'-10'	Manganese, Total	146		0.20	50	50	6	50	NA	2/8/2001
02a	100 Hancock Street	02a-021072	MW-14S	4'-14'	Manganese, Total	59.4		0.20	50	50	6	50	NA	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021436	WELL 8	7'-17'	Manganese, Total	59.1		0.20	50	50	6	50	NA	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Manganese, Total	55.6		0.20	50	50	6	50	NA	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Manganese, Total	1520		0.10	50	50	6	50	NA	1/3/2002
09a	149-151 Maywood Avenue	09a-021418	OBMW10	5'-15'	Sodium, Total	3.3E+07		2490	NA	50000	400	50000	NA	2/20/2001
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Sodium, Total	792000		41.0	NA	50000	400	50000	NA	11/21/2000
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Sodium, Total	459000		17.0	NA	50000	400	50000	NA	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	MW-20S	5'-15'	Sodium, Total	397000		249	NA	50000	400	50000	NA	3/15/2001
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Sodium, Total	303000		41.0	NA	50000	400	50000	NA	11/9/2000
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Sodium, Total	274000		8.5	NA	50000	400	50000	NA	7/11/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Sodium, Total	252000		20.5	NA	50000	400	50000	NA	2/7/2001
09a	149-151 Maywood Avenue	09a-021400	OBMW1	3'-10'	Sodium, Total	162000		13.0	NA	50000	400	50000	NA	2/8/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Sodium, Total	152000		24.9	NA	50000	400	50000	NA	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021064	MW-10S	5'-10.8'	Sodium, Total	149000		26.0	NA	50000	400	50000	NA	2/26/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	MW-1	7'-17'	Sodium, Total	148000	J	32.0	NA	50000	400	50000	NA	8/16/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Sodium, Total	116000		24.9	NA	50000	400	50000	NA	2/21/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Sodium, Total	101000		13.0	NA	50000	400	50000	NA	2/27/2001
17a	Transect G	17a-021604	MW-22S	2'-10'	Sodium, Total	96500	J	1.6	NA	50000	400	50000	NA	7/24/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Sodium, Total	90000		2.6	NA	50000	400	50000	NA	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	OBMW14	4'-14'	Sodium, Total	80800		2.6	NA	50000	400	50000	NA	2/12/2001
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Sodium, Total	75000		2.6	NA	50000	400	50000	NA	3/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Sodium, Total	67000		2.6	NA	50000	400	50000	NA	3/15/2001
09a	149-151 Maywood Avenue	09a-021066	MW-11S	3.5'-8.5'	Sodium, Total	66600		2.6	NA	50000	400	50000	NA	2/12/2001
06a	85-101 NJ Rt. 17 North	06a-021415	OBMW8	5.5'-12.50'	Sodium, Total	66000		2.6	NA	50000	400	50000	NA	2/13/2001
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Sodium, Total	53900		4.1	NA	50000	400	50000	NA	11/2/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021076	MW-16S	4'-14'	Sodium, Total	51500		2.6	NA	50000	400	50000	NA	2/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Thallium, Total	3.9		3.0	2	0.5	10	10	NA	3/15/2001

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-36
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screened Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Dysprosium, Total	5.2		3.1	2/19/2001
02d	8 Mill Street	02d-021074	4'-8'	MW-15S	Yttrium, Total	4.3		1.9	2/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Dysprosium, Total	8.4		3.1	4/19/2001
05a	99 Essex Street	05a-021541	4'-11'	MW-13S	Neodymium, Total	17.5		13.2	4/19/2001
06a	85-101 NJ Rt. 17 North	06a-021415	5.5'-12.50'	OBMW8	Yttrium, Total	4.3		1.9	2/13/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Dysprosium, Total	25.2		3.1	2/12/2001
06e	29 Essex Street	06e-021423	5'-15'	OBMW12	Yttrium, Total	5.3		1.9	2/12/2001
07a	111 Essex Street	07a-021591	4'-14'	MW-21S	Cerium, Total	36.8		35.3	7/11/2001
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Neodymium, Total	26.3		13.2	11/2/2000
08a	23 West Howcroft Road	08a-021031	7.4'-12.4'	B38W12A	Yttrium, Total	4.8		1.9	11/2/2000
08a	23 West Howcroft Road	08a-021413	5'-15'	OBMW7	Dysprosium, Total	4.6	J	3.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Dysprosium, Total	12.1		3.1	2/20/2001
09a	149-151 Maywood Avenue	09a-021418	5'-15'	OBMW10	Neodymium, Total	57.4		13.2	2/20/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Dysprosium, Total	7.5		3.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Neodymium, Total	18.1		13.2	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	5'-10'	OBMW11	Yttrium, Total	2.4		1.9	2/13/2001
09a	149-151 Maywood Avenue	09a-021424	4'-14'	OBMW13	Dysprosium, Total	4.9		3.1	2/7/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Dysprosium, Total	5.7		3.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021426	4'-14'	OBMW14	Neodymium, Total	24.1		13.2	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021044	6.7'-11.7'	B38W25S	Lanthanum, Total	60.8		33.8	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021438	6'-11'	OBMW18	Dysprosium, Total	7.5		3.1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	31.5'-41.5'	PT-2S	Neodymium, Total	14.7		13.2	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Dysprosium, Total	7.4		3.1	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	5'-15'	WELL 1	Neodymium, Total	16.2		13.2	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Dysprosium, Total	4.6		3.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021434	9'-19'	WELL 2	Neodymium, Total	18.3		13.2	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Dysprosium, Total	22.7		3.1	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021435	5'-12'	WELL 5	Neodymium, Total	16.2		13.2	2/8/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Dysprosium, Total	6.2		3.1	3/15/2001
12a	NY, Susquehanna, & Western Railway	12a-021085	5'-15'	MW-20S	Neodymium, Total	23.9		13.2	3/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	12.9'-14.9'	B38W19S	Dysprosium, Total	3.4		3.1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	12.9'-14.9'	B38W19S	Neodymium, Total	28.1		13.2	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	12.9'-14.9'	B38W19S	Yttrium, Total	2		1.9	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	13'-18'	MISS01AA	Neodymium, Total	14.7		13.2	12/21/2000

TABLE 4-36
SUMMARY OF DETECTABLE RARE EARTH ELEMENTS IN OVERBURDEN GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Screened Interval (ft bgs)	Well	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021013	6.9'-16.9'	MISS02A	Lanthanum, Total	38.3		33.8	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	10.7'-14.6'	MISS05A	Neodymium, Total	18.8		13.2	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021019	10.7'-14.6'	MISS05A	Yttrium, Total	2.8		1.9	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021641	6'-16'	MW-25S	Yttrium, Total	2.1		1.9	1/3/2002
22b	Lodi Brook Drainage Basin	22b-021079	4'-10'	MW-17S	Yttrium, Total	2		1.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	5'-15'	MW-6S	Dysprosium, Total	9.2		3.1	2/21/2001

Notes:

J = Estimated Concentration

ft bgs = Feet below ground surface

TABLE 4-37
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Acetone	2	J	5	4/19/2001
05a	99 Essex Street	05a-021541	MW-13S	4'-11'	Total Xylene	0.7	J	1	4/19/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	1,1,2-Trichloroethane	3		1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	1,2-Dichloroethene (total)	0.5	J	1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Benzene	63	D	5	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Ethylbenzene	60	D	5	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Tetrachloroethene	3		1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Toluene	2		1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Total Xylene	19		1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Trichloroethene	0.6	J	1	2/15/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	1,2-Dichloroethene (total)	0.7	J	1	7/11/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Chloroform	0.1	J	1	7/11/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Tetrachloroethene	0.4	J	1	7/11/2001
07a	111 Essex Street	07a-021591	MW-21S	4'-14'	Trichloroethene	0.2	J	1	7/11/2001
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Acetone	4	JB	5	11/2/2000
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Toluene	0.1	J	1	11/2/2000
08a	23 West Howcroft Road	08a-021031	B38W12A	7.4'-12.4'	Total Xylene	0.1	J	1	11/2/2000
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	1,2-Dichloroethene (total)	1		1	2/22/2001
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	Total Xylene	0.2	J	1	2/22/2001
08a	23 West Howcroft Road	08a-021068	MW-12S	4'-14'	Vinyl Chloride	1	J	2	2/22/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	1,1-Dichloroethane	0.1	J	1	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Chloroform	0.1	J	1	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Total Xylene	0.3	J	1	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Trichloroethene	1	J	1	2/13/2001
09a	149-151 Maywood Avenue	09a-021066	MW-11S	3.5'-8.5'	Chloroform	0.6	J	1	2/12/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	Trichloroethene	0.7	J	1	2/13/2001
09a	149-151 Maywood Avenue	09a-021420	OBMW11	5'-10'	Vinyl Chloride	0.2	J	2	2/13/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	1,2-Dichloroethane	0.3	J	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	1,2-Dichloroethene (total)	0.3	J	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Total Xylene	0.2	J	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021424	OBMW13	4'-14'	Vinyl Chloride	0.3	J	2	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021015	MISS03A	6.7'-11.7'	Toluene	0.4	J	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021015	MISS03A	6.7'-11.7'	Total Xylene	0.5	J	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	B38W24S	10.4'-15.2'	Ethylbenzene	0.1	J	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	B38W24S	10.4'-15.2'	Toluene	0.7	J	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021042	B38W24S	10.4'-15.2'	Total Xylene	0.9	J	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Chlorobenzene	0.1	J	1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Ethylbenzene	0.2	J	1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Toluene	0.7	J	1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021044	B38W25S	6.7'-11.7'	Total Xylene	0.9	J	1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021428	OBMW15	12'-17'	Chloroform	0.8	J	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	1,2-Dichloroethene (total)	0.8	J	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	Chloroform	0.7	J	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	Tetrachloroethene	0.4	J	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	WELL 1	5'-15'	1,2-Dichloroethene (total)	1		1	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021433	WELL 1	5'-15'	Vinyl Chloride	0.2	J	2	2/20/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Ethylbenzene	1100	D	100	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Methylene Chloride	1200	BD	200	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Tetrachloroethene	0.2	J	1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Toluene	39	J	1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Total Xylene	4900	BD	100	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	1,2-Dichloroethene (total)	0.3	J	1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	Benzene	0.2	J	1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	Total Xylene	0.2	J	1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021439	OBMW19	8.1'-15.40'	Trichloroethene	0.5	J	1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	1,2-Dichloroethene (total)	6	J	1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Benzene	2500	D	100	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Chlorobenzene	3	J	1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Ethylbenzene	260	D	100	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Toluene	14	J	1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Total Xylene	280	D	100	2/27/2001

TABLE 4-37
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Trichloroethene	0.5	J	1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Vinyl Chloride	2	J	2	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	2-Chlorotoluene	0.2	J	1	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021590	MISS03A	6.7'-11.7'	4-Chlorotoluene	0.1	J	1	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Ethylbenzene	0.1	J	1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021024	B38W01S	17'-22'	Total Xylene	0.7	J	1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021051	MW-3S	7'-17'	Toluene	0.2	J	1	3/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Ethylbenzene	0.1	J	1	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Toluene	0.6	J	1	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021013	MISS02A	6.9'-16.9'	Total Xylene	0.8	J	1	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021022	MISS07A	4.6'-9.6'	Acetone	1	J	5	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021022	MISS07A	4.6'-9.6'	Toluene	0.7	J	1	3/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Ethylbenzene	0.2	J	1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Toluene	0.7	J	1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021040	B38W19S	12.9'-14.9'	Total Xylene	1	J	1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	MISS01AA	13'-18'	Acetone	1	J	5	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	MISS01AA	13'-18'	Toluene	0.1	J	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021303	MISS01AA	13'-18'	Total Xylene	0.1	J	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	MISS06A	7.2-13'	Acetone	1	J	5	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021304	MISS06A	7.2-13'	Chloroform	0.3	J	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	1,1,2-Trichloroethane	0.1	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	1,2-Dichloroethane	0.1	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	2-Butanone	2	J	5	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	2-Chlorotoluene	0.2	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	4-Chlorotoluene	0.1	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	Benzene	0.3	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	Chloroform	0.1	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	Chloromethane	0.1	J	2	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	Toluene	0.5	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021570	OVPW-1S	3.5'-23.5'	Total Xylene	0.2	J	1	6/12/2001
12b	100 West Hunter Avenue (MISS)	12b-021632	OVPZ-17	3'-18'	2-Chlorotoluene	0.5	J	1	1/2/2002
12b	100 West Hunter Avenue (MISS)	12b-021632	OVPZ-17	3'-18'	4-Chlorotoluene	0.2	J	1	1/2/2002
12b	100 West Hunter Avenue (MISS)	12b-021632	OVPZ-17	3'-18'	Trichloroethene	0.1	J	1	1/2/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	2-Chlorotoluene	0.3	J	1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	4-Chlorotoluene	0.1	J	1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Benzene	0.4	J	1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Bromodichloromethane	0.1	J	1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Chloroform	0.3	J	1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021641	MW-25S	6'-16'	Ethylbenzene	0.1	J	1	1/3/2002
17a	Transect G	17a-021604	MW-22S	2'-10'	1,2-Dichloroethene (total)	0.6	J	1	7/24/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	1,1-Dichloroethane	0.2	J	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Benzene	0.2	J	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Ethylbenzene	0.1	J	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Toluene	0.4	J	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Total Xylene	0.7	J	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Vinyl Chloride	0.1	J	2	11/16/2000
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Benzene	0.2	J	1	11/9/2000
20a	Grove	20a-021035	B38W15S	10.5'-15.5'	Ethylbenzene	0.4	J	1	11/9/2000
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Acetone	20	B	5	11/2/2000
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Benzene	0.1	J	1	11/2/2000
20a	Grove	20a-021037	B38W17A	7.6'-12.6'	Ethylbenzene	0.3	J	1	11/2/2000
22b	Lodi Brook Drainage Basin	22b-021062	MW-9S	5'-13'	Chloroform	0.4	J	1	3/19/2001
22b	Lodi Brook Drainage Basin	22b-021064	MW-10S	5'-10.8'	Chloroform	0.9	J	1	2/26/2001
22b	Lodi Brook Drainage Basin	22b-021064	MW-10S	5'-10.8'	Trichloroethene	0.3	J	1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	1,1-Dichloroethane	0.2	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	1,2-Dichloroethene (total)	6		1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Tetrachloroethene	5		1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Trichloroethene	1		1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Vinyl Chloride	0.4	J	2	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021052	MW-4S	5'-9'	Tetrachloroethene	0.2	J	1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Acetone	2	J	5	3/12/2001

TABLE 4-37
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021054	MW-5S	5'15'	Chloroform	0.4	J	1	3/12/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Benzene	0.5	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Ethylbenzene	0.2	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Tetrachloroethene	0.2	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Toluene	0.1	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021056	MW-6S	5'-15'	Total Xylene	0.4	J	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,1,1-Trichloroethane	0.8	J	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,1-Dichloroethane	0.5	J	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,1-Dichloroethene	0.2	J	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,2-Dichloroethene (total)	28		1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,2-Dichloropropane	0.2	J	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Chloroform	0.3	J	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Tetrachloroethene	200		10	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Trichloroethene	65		10	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Vinyl Chloride	0.4	J	2	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021060	MW-8S	5'-15'	1,2-Dichloroethene (total)	1		1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	MW-8S	5'-15'	Chloroform	0.1	J	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021060	MW-8S	5'-15'	Tetrachloroethene	0.6	J	1	3/1/2001

Notes:
J = Estimated Concentration
B = Detected in laboratory blank
D = Sample required dilution
ft bgs = Feet below ground surface

TABLE 4-38
JMMARY OF VOLATILE ORGANIC COMPOUNDS IN OVERBURDEN GROUNDWATER SAMPLES EXCEEDING GROUNDWATER STANDARDS - PHASI

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Lower of Federal/State MCL (ug/L)	Greater of NJ GWQC OR NJ PQL (ug/L)	Date of Sample Collection
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	1,1,2-Trichloroethane	3		1	3	3	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Benzene	63	D	5	1	1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021405	OBMW3	5'-12'	Tetrachloroethene	3		1	1	1	2/15/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Tetrachloroethene	2		1	1	1	2/13/2001
08a	23 West Howcroft Road	08a-021413	OBMW7	5'-15'	Trichloroethene	1	J	1	1	1	2/13/2001
10a	100 West Hunter Avenue (Stepan)	10a-021432	OBMW17	5'-15'	Trichloroethene	2		1	1	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Ethylbenzene	1100	D	100	700	700	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021438	OBMW18	6'-11'	Total Xylene	4900	BD	100	1000	40	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Benzene	2500	D	100	1	1	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Total Xylene	280	D	100	1000	40	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10a-021505	PT-2S	31.5'-41.5'	Vinyl Chloride	2	J	2	2	5	2/27/2001
10a	100 West Hunter Avenue (Stepan)	10A-021611	MW-1	7'-17'	Total Xylene	160		4	1000	40	8/16/2001
19a	Parkway	19a-021033	B38W14S	8'-13'	1,2-Dichloroethene (total)	10		1	70 (a)	10 (a)	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Chloroform	6		1		6	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Tetrachloroethene	6		1	1	1	11/16/2000
19a	Parkway	19a-021033	B38W14S	8'-13'	Trichloroethene	5		1	1	1	11/16/2000
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Tetrachloroethene	5		1	1	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021048	MW-2S	5'-13'	Trichloroethene	1		1	1	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	1,2-Dichloroethene (total)	28		1	70 (a)	10 (a)	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Tetrachloroethene	200		10	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021058	MW-7S	5'-15'	Trichloroethene	65		10	1	1	2/28/2001

Notes:
J = Estimated Concentration
B = Detected in laboratory blank
D = Sample required dilution
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
(a) = standard is for cis 1,2-dichloroethene

TABLE 4-39
SUMMARY OF TOTAL RADIUM IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name:	Well	S&W Lab Sample ID	Screened Interval (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021499	48'-73'	1.24		0.56	0.72	0.84	UJ	0.75	0.84	2.08	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021077	48'-73'	0.49	J	0.36	0.86	0.07	UJ	0.70	0.78	0.56	2/21/2001
02a	100 Hancock Street	MW-14D	02a-021073	27'-52'	0.21	J	0.19	0.39	1.10		0.81	0.85	1.31	2/27/2001
02d	8 Mill Street	MW-15D	02d-021075	36'-61'	0.64	J	0.24	0.18	0.16	UJ	0.65	0.71	0.80	2/19/2001
05a	99 Essex Street	MW-13D	05a-021542	25'-50'	0.90	J	0.36	0.43	0.40	UJ	0.76	0.82	1.31	4/19/2001
06a	85-101 NJ Rt. 17 North	BRMW8	06a-021416	32'-42'	0.26	J	0.16	0.16	0.51	UJ	0.78	0.85	0.77	2/13/2001
06b	137 NJ Rt. 17 North	BRMW3	06b-021406	20'-30'	0.36	U	0.37	0.69	0.80	UJ	2.20	2.41	1.16	2/15/2001
06e	29 Essex Street	BRMW12	06e-021422	38'-48'	0.13	U	0.17	0.39	1.03	UJ	0.93	1.03	1.16	2/12/2001
06e	29 Essex Street	BRMW9	06e-021417	13.5'-23.5'	0.41	J	0.28	0.52	0.52	UJ	0.70	0.76	0.94	2/8/2001
08a	23 West Howcroft Road	B38W12B	08a-021032	34.5'-44.9'	0.52	J	0.20	0.19	0.79	UJ	0.83	0.89	1.31	11/2/2000
08a	23 West Howcroft Road	MW-12D	08a-021069	29'-54'	0.52	J	0.25	0.31	0.66	UJ	0.72	0.77	1.18	3/13/2001
09a	149-151 Maywood Avenue	BRMW11	09a-021421	23'-33'	0.07	U	0.09	0.22	0.05	UJ	0.99	1.09	0.12	2/13/2001
09a	149-151 Maywood Avenue	BRMW13	09a-021425	23'-33'	0.13	U	0.18	0.45	0.31	UJ	0.93	1.02	0.44	2/8/2001
09a	149-151 Maywood Avenue	BRMW14	09a-021427	27'-37'	0.03	U	0.13	0.44	0.45	UJ	0.75	0.81	0.48	2/12/2001
09a	149-151 Maywood Avenue	BRMW1	09a-021401	37'-37	0.45	J	0.25	0.37	0.90	UJ	0.80	0.90	1.35	2/7/2001
09a	149-151 Maywood Avenue	BRMW6	09a-021412	17'-27'	0.07	U	0.17	0.52	0.82	UJ	0.72	0.82	0.89	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021592	20'-50'	0.20	UJ	0.14	0.21	1.37	J	0.66	0.67	1.57	7/12/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021016	20'-50'	1.63		0.51	0.46	0.11	UJ	0.91	1.01	1.74	11/13/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-021018	17'-47'	0.52	J	0.24	0.26	0.08	UJ	0.72	0.79	0.60	11/14/2000
10a	100 West Hunter Avenue (Stepan)	PT-1DA	10a-021403	31.5'-41.5'	1.85		0.50	0.46	0.20	UJ	0.79	0.87	2.05	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-1DB	10a-021404	31.5'-41.5'	1.30		0.40	0.22	0.48	UJ	0.73	0.79	1.78	2/5/2001
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-021043	22'-27'	1.56	J	0.60	0.55	0.24	UJ	0.79	0.88	1.80	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-021045	21.6'-26.6'	0.69	J	0.28	0.23	0.12	UJ	0.68	0.75	0.81	11/27/2000
10a	100 West Hunter Avenue (Stepan)	BRMW10	10a-021419	30'-40	0.42		0.21	0.16	0.89	UJ	0.79	0.89	1.31	2/14/2001
10a	100 West Hunter Avenue (Stepan)	BRMW15	10a-021429	20'-30'	0.27	J	0.20	0.36	0.77		0.64	0.68	1.04	2/7/2001
10a	100 West Hunter Avenue (Stepan)	BRMW16	10a-021430	20'-30'	0.27	U	0.06	0.27	0.09	UJ	0.63	0.69	0.36	2/8/2001
10a	100 West Hunter Avenue (Stepan)	BRMW17	10a-021431	25'-35'	0.56		0.29	0.42	0.46	UJ	0.60	0.65	1.02	2/6/2001
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021026	29.50'-39.50'	0.60	J	0.23	0.26	0.70	UJ	0.78	0.84	1.30	11/16/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021463	29.5'-39.50	0.69	J	0.27	0.29	0.98	UJ	0.88	0.98	1.67	2/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-021464	22.7'-27.7'	0.75		0.37	0.35	1.03	UJ	0.92	1.03	1.78	2/22/2001
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-021028	22.7'-33'	1.05	J	0.44	0.45	0.82	UJ	0.89	0.96	1.88	11/17/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-021029	15.9'-20.90'	0.30	J	0.18	0.23	0.59	UJ	0.65	0.70	0.89	11/29/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-021030	18.5'-28.8'	1.16	J	0.34	0.21	1.85	J	0.96	0.99	3.01	11/7/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-021025	37'-42'	0.21	J	0.13	0.17	1.02	UJ	0.91	1.02	1.23	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3D	12a-021543	30'-55'	1.31	J	0.47	0.50	1.08		0.74	0.78	2.40	4/19/2001
12a	NY, Susquehanna, & Western Railway	MW-20D	12a-021086	30'-55'	0.46	J	0.28	0.43	1.20	J	0.92	0.98	1.66	3/14/2001
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-021012	23'-53.5'	0.47	J	0.23	0.23	0.39	UJ	0.93	1.02	0.86	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-021014	28.5'-58.5'	0.05	U	0.09	0.21	0.54	UJ	0.69	0.75	0.60	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-021020	25'-55'	0.17	J	0.13	0.21	2.02	J	0.80	0.81	2.19	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-021023	19'-49'	0.35	J	0.16	0.13	0.32	UJ	0.66	0.72	0.67	11/6/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-021039	35'-40'	2.87		0.65	0.44	16.53		1.42	1.01	**19.40**	11/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-021041	21.7'-31.9'	0.59	J	0.24	0.21	0.38	UJ	0.77	0.85	0.97	11/7/2000
12b	100 West Hunter Avenue (MISS)	MW-23D	12b-021584	51'-71'	0.65	J	0.31	0.40	0.71	UJ	0.80	0.86	1.36	7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-23DD	12b-021585	83'-103'	0.31	J	0.21	0.39	0.25	UJ	0.94	1.03	0.55	7/9/2001

TABLE 4-39
SUMMARY OF TOTAL RADIUM IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name:	Well	S&W Lab Sample ID	Screened Interval (ft bgs)	RA 226 Result (pCi/L)	Ra-226 Qualifier	Ra-226 Error (pCi/L)	Ra-226 MDA (pCi/L)	RA-228 Result (pCi/L)	Ra-228 Qualifier	Ra-228 Error (pCi/L)	Ra-228 MDA (pCi/L)	Total Radium (pCi/L)	Date Collected
12b	100 West Hunter Avenue (MISS)	MW-24D	12b-021621	45'-70'	0.42	J	0.21	0.25	0.93		0.77	0.82	1.35	9/6/2001
12b	100 West Hunter Avenue (MISS)	MW-24DD	12b-021622	80'-105'	0.54	J	0.24	0.24	0.56	UJ	0.72	0.78	1.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-2RE	12b-021607	44'-64'	2.28		0.55	0.30	1.06	J	0.66	0.69	3.34	8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-3RE	12b-021608	39'-59'	0.65	J	0.29	0.30	0.81	J	0.56	0.59	1.46	8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-4	12b-021596	40'-61'	0.24	J	0.18	0.30	0.93	UJ	0.83	0.93	1.17	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021575	102'-112'	0.37	J	0.21	0.27	1.22		0.85	0.90	1.59	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021576	69'-79'	0.27	UJ	0.20	0.29	0.98		0.85	0.90	1.25	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021577	45'-55'	0.41	J	0.22	0.25	2.08		1.12	1.17	2.49	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-7	12b-021562	84'-109'	0.46		0.23	0.28	1.78	J	0.67	0.67	2.24	6/4/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-9	12b-021597	32'-57'	0.14	J	0.12	0.22	0.97	J	0.63	0.66	1.10	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1DRE	12b-021610	92'-112'	0.12	U	0.13	0.26	0.22	UJ	0.64	0.71	0.33	8/15/2001
12b	100 West Hunter Avenue (MISS)	MW-25D	12b-021639	35'-60'	0.18	U	0.21	0.35	0.29	U	0.56	0.95	0.47	1/3/2002
12b	100 West Hunter Avenue (MISS)	MW-26D	12b-021642	35'-60'	-2.3	UR	1.3	0.2	1.42	U	0.53	0.78	1.42	1/3/2002
19a	Parkway	B38W14D	19a-021034	46'-51.5'	0.14	U	0.18	0.43	4.73	J	1.01	0.93	4.87	11/16/2000
20a	Grove	B38W15D	20a-021036	40'-45'	0.25	J	0.18	0.26	0.49	UJ	0.90	0.98	0.75	11/9/2000
20a	Grove	B38W17B	20a-021038	18.7'-29'	1.45	J	0.49	0.45	0.74		0.69	0.73	2.19	11/1/2000
22b	Lodi Brook Drainage Basin	MW-9D	22b-021063	22-47'	0.13	U	0.14	0.31	0.47	UJ	0.70	0.76	0.61	3/13/2001
22b	Lodi Brook Drainage Basin	MW-10D	22b-021065	21'-46'	1.25		0.56	0.70	1.03	UJ	0.92	1.03	2.28	2/21/2001
22b	Lodi Brook Drainage Basin	MW-17D	22b-021078	22'-46'	0.51	J	0.34	0.61	0.93	UJ	0.82	0.93	1.44	2/22/2001
22b	Lodi Brook Drainage Basin	MW-18D	22b-021081	32'-57'	0.34	J	0.21	0.36	0.51	UJ	0.58	0.62	0.85	2/19/2001
23b	Westerly Brook Drainage Basin	MW-1D	23b-021047	21'-46'	0.17	J	0.14	0.23	0.31	UJ	0.69	0.76	0.49	2/26/2001
23b	Westerly Brook Drainage Basin	MW-2D	23b-021049	22'-48.5'	0.24	J	0.16	0.24	0.99	UJ	0.89	0.99	1.23	2/14/2001
23b	Westerly Brook Drainage Basin	MW-4D	23b-021053	18'-43'	0.11	U	0.13	0.25	0.88	UJ	0.79	0.88	0.99	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5D	23b-021055	32'-52'	0.09	U	0.14	0.37	0.91		0.60	0.64	1.00	2/15/2001
23b	Westerly Brook Drainage Basin	MW-6D	23b-021057	29'-54'	0.36	J	0.30	0.68	0.80	UJ	0.71	0.80	1.16	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7D	23b-021059	21'-46'	0.71		0.31	0.31	0.32	UJ	0.70	0.76	1.03	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8D	23b-021061	27'-52'	0.28	J	0.18	0.22	1.31	UJ	1.16	1.31	1.59	3/1/2001
23b	Westerly Brook Drainage Basin	MW-19D	23b-021083	17'-42'	0.87		0.41	0.62	0.11	UJ	0.77	0.85	0.98	2/28/2001
23b	Westerly Brook Drainage Basin	MW-19DD	23b-021510	51'-76'	0.63	J	0.27	0.28	0.60	UJ	0.72	0.77	1.23	3/1/2001

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Denotes Rejected Data
* = Denotes filtered result
Federal/State MCL for Total Radium = 5

TABLE 4-40
SUMMARY OF TOTAL URANIUM IN BEDROCK MONITORING WELL GROUNDWATER SAMPLES - PHASE II

Property ID Number:	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021499	48'-73'	4.07	6.40E-04		1.29	0.49	0.40	0.19	J	0.40	0.47	2.32	6.96		0.92	0.61	6.80	11.21	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021077*	48'-73'	3.85	6.05E-04		1.22	0.53	0.13	0.06	U	0.29	0.65	2.42	7.25		0.90	0.35	6.41	11.17	2/21/2001
02a	100 Hancock Street	MW-14D	02a-021073	27'-52'	2.67	4.19E-04	J	0.96	0.38	0.30	0.14	UJ	0.32	0.36	0.91	2.71		0.51	0.38	3.87	5.52	2/27/2001
02d	8 Mill Street	MW-15D	02d-021075	36'-61'	5.10	8.01E-04		1.58	0.55	0.19	0.09	U	0.31	0.61	2.34	7.01		0.95	0.49	7.63	12.19	2/19/2001
05a	99 Essex Street	MW-13D	05a-021542	25'-50'	1.48	2.32E-04	J	0.66	0.49	0.07	0.03	UJ	0.14	0.18	0.43	1.29	J	0.36	0.51	1.98	2.80	4/19/2001
06a	85-101 NJ Rt. 17 North	BRMW8	06a-021416	32'-42'	3.65	5.73E-04		1.21	0.48	0.30	0.14	UJ	0.35	0.51	2.37	7.10	J	0.92	0.37	6.32	10.88	2/13/2001
06b	137 NJ Rt. 17 North	BRMW3	06b-021406	20'-30'	3.68	5.78E-04	J	1.25	0.59	0.47	0.22	U	0.04	0.47	2.31	6.92	J	0.94	0.63	6.46	10.81	2/15/2001
06e	29 Essex Street	BRMW12	06e-021422	38'-48'	0.53	8.33E-05	J	0.53	0.92	0.16	0.07	U	0.27	0.51	0.41	1.23	UJ	0.42	0.64	1.10	1.83	2/12/2001
06e	29 Essex Street	BRMW9	06e-021417	13.5'-23.5'	0.60	9.49E-05	J	0.45	0.53	0.01	0.01	U	0.18	0.59	0.19	0.57	U	0.28	0.53	0.81	1.18	2/8/2001
08a	23 West Howcroft Road	B38W12B	08a-021032	34.5'-44.9'	1.09	1.71E-04	J	0.68	0.79	0.25	0.11	U	0.35	0.59	0.70	2.10	J	0.53	0.62	2.04	3.30	11/2/2000
08a	23 West Howcroft Road	MW-12D	08a-021069	29'-54'	1.04	1.63E-04	J	0.68	0.73	0.46	0.21	UJ	0.51	0.77	1.61	4.83	J	0.84	0.62	3.11	6.08	3/13/2001
09a	149-151 Maywood Avenue	BRMW11	09a-021421	23'-33'	0.65	1.02E-04		0.48	0.64	0.11	0.05	U	0.24	0.53	0.34	1.02	U	0.36	0.60	1.10	1.72	2/13/2001
09a	149-151 Maywood Avenue	BRMW13	09a-021425	23'-33'	2.22	3.48E-04	J	0.88	0.40	0.22	0.10	UJ	0.29	0.44	1.22	3.65		0.62	0.40	3.65	5.97	2/8/2001
09a	149-151 Maywood Avenue	BRMW14	09a-021427	27'-37'	10.76	1.69E-03		2.70	0.42	0.06	0.03	U	0.18	0.47	4.99	14.94		1.52	0.42	15.81	25.73	2/12/2001
09a	149-151 Maywood Avenue	BRMW1	09a-021401	37'-37	2.79	4.38E-04	J	1.02	0.46	0.42	0.20	J	0.40	0.40	0.90	2.71	J	0.56	0.55	4.11	5.69	2/7/2001
09a	149-151 Maywood Avenue	BRMW6	09a-021412	17'-27'	0.40	6.35E-05	J	0.37	0.50	0.08	0.04	UJ	0.17	0.23	0.36	1.07	J	0.34	0.44	0.85	1.51	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021592	20'-50'	2.71	4.26E-04	J	0.97	0.44	0.11	0.05	U	0.21	0.44	0.76	2.28		0.50	0.64	3.58	5.04	7/12/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021016	20'-50'	1.23	1.93E-04	J	0.53	0.47	0.12	0.06	UJ	0.18	0.30	0.35	1.06	J	0.27	0.31	1.71	2.35	11/13/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-021018	17'-47'	0.50	7.79E-05	J	0.37	0.39	0.20	0.09	UJ	0.26	0.40	0.05	0.15	U	0.12	0.27	0.74	0.73	11/14/2000
10a	100 West Hunter Avenue (Stepan)	PT-1DA	10a-021403	31.5'-41.5'	0.06	9.26E-06	U	0.33	0.85	0.51	0.24	U	0.05	0.51	0.14	0.41	U	0.32	0.73	0.71	0.70	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-1DB	10a-021404	31.5'-41.5'	1.10	1.73E-04	J	0.67	0.59	0.28	0.13	UJ	0.37	0.56	1.00	2.99	J	0.69	0.91	2.38	4.22	2/5/2001
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-021043	22'-27'	0.47	7.38E-05	J	0.33	0.30	0.10	0.05	U	0.18	0.33	0.06	0.17	U	0.14	0.35	0.63	0.69	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-021045	21.6'-26.6'	0.39	6.17E-05	J	0.32	0.42	0.14	0.06	U	0.23	0.44	0.19	0.56	U	0.24	0.42	0.72	1.01	11/27/2000
10a	100 West Hunter Avenue (Stepan)	BRMW10	10a-021419	30'-40	3.29	5.17E-04	J	1.21	0.77	0.18	0.08	U	0.33	0.68	2.69	8.04	J	1.05	0.65	6.16	11.41	2/14/2001
10a	100 West Hunter Avenue (Stepan)	BRMW15	10a-021429	20'-30'	0.67	1.06E-04		0.43	0.39	0.11	0.05	U	0.21	0.44	0.32	0.97	J	0.30	0.36	1.11	1.69	2/7/2001
10a	100 West Hunter Avenue (Stepan)	BRMW16	10a-021430	20'-30'	5.28	8.30E-04		1.65	0.52	0.35	0.16	UJ	0.37	0.42	4.94	14.79		1.58	0.58	10.57	20.24	2/8/2001
10a	100 West Hunter Avenue (Stepan)	BRMW17	10a-021431	25'-35'	0.75	1.17E-04	J	0.56	0.73	0.06	0.03	U	0.19	0.51	0.75	2.25	U	0.24	0.75	1.56	3.02	2/6/2001
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021026	29.50'-39.50'	0.34	5.38E-05	U	0.34	0.61	0.13	0.06	U	0.24	0.51	0.21	0.63	U	0.26	0.48	0.69	1.03	11/16/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021463	29.5'-39.50	0.57	8.95E-05	J	0.46	0.57	0.10	0.05	U	0.27	0.63	0.06	0.18	U	0.22	0.57	0.73	0.80	2/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-021027	22.7'-27.7'	1.55	2.43E-04	J	0.62	0.33	0.19	0.09	UJ	0.22	0.33	0.51	1.52		0.32	0.27	2.25	3.16	11/17/2000
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-021464	22.7'-27.7'	0.98	1.54E-04	J	0.63	0.61	0.55	0.25	U	0.05	0.55	0.56	1.68	J	0.48	0.64	2.09	2.91	2/22/2001
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-021028	22.7'-33'	1.24	1.94E-04	J	0.50	0.41	0.11	0.05	U	0.16	0.30	0.38	1.13	J	0.28	0.40	1.72	2.42	11/17/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-021029	15.9'-20.90'	0.48	7.55E-05	J	0.33	0.33	0.04	0.02	U	0.12	0.32	0.10	0.30	U	0.17	0.33	0.62	0.80	11/29/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-021030	18.5'-28.8'	1.26	1.99E-04	J	0.80	0.73			R	0.37	0.35	0.60	1.80	J	0.57	0.81	1.87	3.07	11/7/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-021025	37'-42'	0.57	8.99E-05	J	0.57	0.95	0.00	0.00	U	0.00	0.30	0.42	1.26	UJ	0.46	0.74	0.99	1.83	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3D	12a-021543	30'-55'	0.13	1.98E-05	U	0.24	0.52	0.38	0.18	U	0.04	0.38	0.00	0.00	U	0.19	0.55	0.51	0.30	4/19/2001
12a	NY, Susquehanna, & Western Railway	MW-20D	12a-021086	30'-55'	1.17	1.84E-04		0.74	0.75	0.11	0.05	U	0.34	0.85	0.69	2.07	J	0.58	0.78	1.98	3.29	3/14/2001
12a	NY, Susquehanna, & Western Railway	MW-9D	22b-021063	22-47'	0.65	1.02E-04	J	0.53	0.78	0.36	0.17	UJ	0.39	0.44	0.38	1.14	UJ	0.39	0.57	1.39	1.95	3/13/2001
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-021012	23'-53.5'	1.06	1.66E-04	J	1.05	1.66	1.32	0.61	U	0.14	1.32	0.86	2.58	U	0.98	1.69	3.24	4.24	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-021014	28.5'-58.5'	0.28	4.33E-05	U	0.34	0.65	0.00	0.00	U	0.14	0.47	0.21	0.62	U	0.28	0.54	0.48	0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-021020	25'-55'	3.65	5.74E-04		1.33	0.58	0.49	0.23	UJ	0.50	0.66	0.19	0.57	U	0.31	0.62	4.33	4.45	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-021023	19'-49'	5.33	8.38E-04		1.70	0.48	0.62	0.29		0.56	0.60	2.27	6.79	J	1.00	0.54	8.23	12.42	11/6/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-021039	35'-40'	1.54	2.42E-04	J	0.64	0.58	0.35	0.16	J	0.33	0.49	1.00	3.01	J	0.49	0.45	2.89	4.71	11/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-021041	21.7'-31.9'	0.69	1.08E-04	J	0.56	0.73	0.18	0.09	U	0.32	0.60	0.09	0.26	U	0.27	0.66	0.96	1.04	11/7/2000
12b	100 West Hunter Avenue (MISS)	MW-23D	12b-021584	51'-71'	3.93	6.17E-04		1.26	0.49	0.04	0.02	U	0.18	0.52	3.03	9.06	J	1.07	0.42	6.99	13.01	7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-23DD	12b-021585	83'-103'	4.37	6.86E-04		1.35	0.52	0.45	0.21	U	0.04	0.45	1.75	5.25	J	0.77	0.47	6.57	9.83	7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-24D	12b-021621	45'-70'	8.66	1.36E-03		2.35	0.67	0.00	0.00	U	0.19	0.65	3.64	10.91		1.28	0.76	12.30	19.56	9/6/2001
12b	100 West Hunter Avenue (MISS)	MW-24DD	12b-021622	80'-105'	1.26	1.98E-04		0.67	0.60	0.25	0.12	UJ	0.30	0.23	0.64	1.91		0.48	0.60	2.15	3.29	9/6/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-2RE	12b-021607	44'-64'	5.10	8.01E-04		1.58	0.57	0.07	0.03	U	0.18	0.42	1.78	5.34		0.81	0.44	6.96	10.47	8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-3RE	12b-021608	39'-59'	1.16	1.83E-04	J	0.61	0.65	0.18	0.08	U	0.26	0.44	0.67	2.02		0.43	0.35	2.02	3.26	8/14/2001

TABLE 4-40
SUMMARY OF TOTAL URANIUM IN BEDROCK MONITORING WELL GROUNDWATER SAMPLES - PHASE II

Property ID Number:	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	U-234 Result (pCi/L)	Calculated U-234 Result (ug/L) (1)	U-234 Qualifier	U-234 Error (pCi/L)	U-234 MDA (pCi/L)	U-235 Result (pCi/L)	Calculated U-235 Result (ug/L) (1)	U-235 Qualifier	U-235 Error (pCi/L)	U-235 MDA (pCi/L)	U-238 Result (pCi/L)	Calculated U-238 Result (ug/L) (1)	U-238 Qualifier	U-238 Error (pCi/L)	U-238 MDA (pCi/L)	Total Uranium (pCi/L)	Calculated Total Uranium Result (ug/L) (1)	Date Collected
12b	100 West Hunter Avenue (MISS)	BRPZ-4	12b-021596	40'-61'	11.01	1.73E-03	J	2.76	0.61	0.26	0.12	UJ	0.33	0.43	2.11	6.31	J	0.90	0.56	13.38	17.44	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021575	102'-112'	7.48	1.17E-03		2.02	0.39	0.16	0.08	UJ	0.26	0.41	2.98	8.92		1.08	0.43	10.62	16.47	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021576	69'-79'	9.39	1.47E-03		2.41	0.82	0.24	0.11	UJ	0.29	0.39	5.01	15.01		1.51	0.41	14.64	24.51	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021577	45'-55'	6.75	1.06E-03		1.86	0.47	0.18	0.08	U	0.29	0.58	3.33	9.98		1.14	0.47	10.27	16.82	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-7	12b-021562	84'-109'			R	1.42	0.54	0.20	0.09	UJ	0.29	0.27	1.93	5.77		0.88	0.44	2.13	5.86	6/4/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-9	12b-021597	32'-57'	7.14	1.12E-03	J	2.08	0.57	0.65	0.30		0.54	0.29	1.12	3.35	J	0.69	0.68	8.91	10.79	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1D	12b-021556	40'-115'	3.38	5.31E-04	J	1.18	0.40	0.41	0.19	J	0.38	0.22	2.08	6.21	J	0.87	0.47	5.87	9.78	5/29/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1D	12b-021610	92'-112'	3.28	5.15E-04		1.10	0.49	0.06	0.03	U	0.15	0.34	1.24	3.72		0.60	0.28	4.58	7.03	8/15/2001
12b	100 West Hunter Avenue (MISS)	MW-25D	12b-021639	35'-60'	0.23	3.61E-05	J	0.17	0.14	-0.029	0.00	U	0.03	0.25	0.024	0.07	U	0.06	0.14	0.25	0.30	1/3/2002
12b	100 West Hunter Avenue (MISS)	MW-26D	12b-021642	35'-60'	0.59	9.27E-05	J	0.26	0.11	0.039	0.02	U	0.082	0.18	0.39	1.17	J	0.21	0.14	1.02	1.78	1/3/2002
19a	Parkway	B38W14D	19a-021034	46'-51.5'	1.23	1.92E-04	J	0.50	0.26	0.23	0.11	J	0.23	0.27	0.60	1.79		0.33	0.19	2.05	3.12	11/16/2000
20a	Grove	B38W15D	20a-021036	40'-45'	5.29	8.31E-04		1.41	0.28	0.28	0.13	J	0.25	0.30	2.38	7.13	J	0.79	0.32	7.95	12.54	11/9/2000
22b	Lodi Brook Drainage Basin	MW-10D	22b-021065	21'-46'	1.06	1.66E-04	J	0.68	0.79	0.10	0.05	UJ	0.20	0.28	0.72	2.16	U	0.19	0.72	1.88	3.26	2/21/2001
22b	Lodi Brook Drainage Basin	MW-17D	22b-021078	22'-46'	0.90	1.41E-04	J	0.60	0.66	0.26	0.12	UJ	0.34	0.52	0.63	1.89	J	0.51	0.70	1.79	2.91	2/22/2001
22b	Lodi Brook Drainage Basin	MW-18D	22b-021081	32'-57'	1.20	1.89E-04	J	0.71	0.79	0.51	0.24	J	0.49	0.63	0.59	1.77	J	0.51	0.77	2.30	3.20	2/19/2001
23b	Westerly Brook Drainage Basin	MW-1D	23b-021047	21'-46'	0.81	1.27E-04	J	0.62	0.86	0.02	0.01	U	0.23	0.74	0.45	1.35	UJ	0.47	0.74	1.27	2.16	2/26/2001
23b	Westerly Brook Drainage Basin	MW-2D	23b-021049	22'-48.5'	3.85	6.05E-04		1.19	0.43	0.08	0.03	UJ	0.15	0.20	2.45	7.33		0.89	0.40	6.37	11.21	2/14/2001
23b	Westerly Brook Drainage Basin	MW-4D	23b-021053	18'-43'	1.16	1.83E-04	J	0.63	0.47	0.23	0.11	UJ	0.31	0.48	0.54	1.63	J	0.41	0.38	1.94	2.90	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5D	23b-021055	32'-52'	0.26	4.08E-05	U	0.37	0.72	0.70	0.32	U	0.20	0.70	0.09	0.27	U	0.26	0.63	1.05	0.85	2/15/2001
23b	Westerly Brook Drainage Basin	MW-6D	23b-021057	29'-54'	1.30	2.05E-04	J	0.61	0.47	0.13	0.06		0.20	0.33	0.56	1.69		0.38	0.27	2.00	3.05	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7D	23b-021059	21'-46'	0.44	6.93E-05	J	0.36	0.47	0.53	0.25	U	0.06	0.53	0.41	1.23		0.34	0.40	1.38	1.92	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8D	23b-021061	27'-52'	0.32	5.03E-05	J	0.31	0.43	0.06	0.03	U	0.15	0.35	0.40	1.20	J	0.33	0.37	0.78	1.55	3/1/2001
23b	Westerly Brook Drainage Basin	MW-19D	23b-021083	17'-42'	0.51	7.98E-05		0.40	0.47	0.43	0.20	U	0.04	0.43	0.15	0.44	U	0.23	0.41	1.08	1.15	2/28/2001
23b	Westerly Brook Drainage Basin	MW-19DD	23b-021510	51'-76'	0.38	5.97E-05	J	0.37	0.55	0.00	0.00	U	0.18	0.62	0.08	0.24	U	0.20	0.47	0.46	0.62	3/1/2001

Note:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected Result
* = Field Filtered Sample
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334. If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L

TABLE 4-41
SUMMARY OF TOTAL THORIUM IN BEDROCK MONITORING WELL GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021499	48'-73'	0.53		0.44	0.52	0.86	J	0.58	0.73	0.01	U	0.16	0.52	1.40	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	01a-021077	48'-73'	0.43	J	0.36	0.45	0.70	J	0.46	0.52	0.51		0.38	0.40	1.64	2/21/2001
02a	100 Hancock Street	MW-14D	02a-021073	27'-52'	0.00	U	0.16	0.53	0.73	J	0.55	0.76	0.35	UJ	0.36	0.56	1.07	2/27/2001
02d	8 Mill Street	MW-15D	02d-021075	36'-61'	0.23	U	0.34	0.63	0.55	J	0.48	0.63	0.09	U	0.34	0.86	0.87	2/19/2001
05a	99 Essex Street	MW-13D	05a-021542	25'-50'	0.23	U	0.02	0.23	0.20	U	0.22	0.39	0.21	UJ	0.21	0.32	0.64	4/19/2001
06a	85-101 NJ Rt. 17 North	BRMW8	06a-021416	32'-42'		R	0.07	0.56	0.58	J	0.45	0.50	0.12	U	0.21	0.39	0.70	2/13/2001
06b	137 NJ Rt. 17 North	BRMW3	06b-021406	20'-30'	0.05	U	0.15	0.39	0.79	J	0.55	0.70	0.00	U	0.16	0.54	0.84	2/15/2001
06e	29 Essex Street	BRMW12	06e-021422	38'-48'	0.05	U	0.23	0.61	1.01	J	0.62	0.63	0.10	U	0.27	0.66	1.16	2/12/2001
06e	29 Essex Street	BRMW9	06e-021417	13.5'-23.5'	0.10	U	0.28	0.66	1.04		0.60	0.35	0.05	U	0.15	0.41	1.19	2/8/2001
08a	23 West Howcroft Road	B38W12B	08a-021032	34.5'-44.9'	0.28	UJ	0.33	0.48	1.16	J	0.69	0.68	0.21	U	0.33	0.65	1.66	11/2/2000
08a	23 West Howcroft Road	MW-12D	08a-021069	29'-54'	0.07	U	0.17	0.41	0.41	J	0.37	0.55	0.11	U	0.21	0.46	0.58	3/13/2001
09a	149-151 Maywood Avenue	BRMW11	09a-021421	23'-33'	0.11	U	0.24	0.53	0.34	J	0.33	0.46	0.56	J	0.40	0.35	1.01	2/13/2001
09a	149-151 Maywood Avenue	BRMW13	09a-021425	23'-33'	0.62	U	0.16	0.62	0.55		0.41	0.33	0.05	U	0.15	0.38	1.22	2/8/2001
09a	149-151 Maywood Avenue	BRMW14	09a-021427	27'-37'	0.81		0.56	0.59	0.61	J	0.53	0.79	0.01	U	0.24	0.72	1.43	2/12/2001
09a	149-151 Maywood Avenue	BRMW1	09a-021401	37'-37	0.07	U	0.21	0.51	0.94	J	0.58	0.68	0.63	J	0.48	0.62	1.64	2/7/2001
09a	149-151 Maywood Avenue	BRMW6	09a-021412	17'-27'	0.53	U	0.14	0.53	0.57		0.42	0.53	0.25	UJ	0.28	0.43	1.35	2/8/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021592	20'-50'	0.08	U	0.24	0.56	0.62	J	0.42	0.35	0.16	U	0.23	0.39	0.86	7/12/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10a-021016	20'-50'	0.09	UJ	0.18	0.40	0.37	J	0.27	0.32	0.14	UJ	0.16	0.21	0.61	11/13/2000
10a	100 West Hunter Avenue (Stepan)	MISS04B	10a-021018	17'-47'	0.26	J	0.25	0.36	0.59	J	0.35	0.38	0.10	U	0.15	0.27	0.95	11/14/2000
10a	100 West Hunter Avenue (Stepan)	PT-1DA	10a-021403	31.5'-41.5'	0.02	U	0.21	0.58	0.70	J	0.44	0.47	0.05	U	0.21	0.52	0.77	2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-1DB	10a-021404	31.5'-41.5'	0.48	U	0.05	0.48	0.40	U	0.46	0.84	0.06	U	0.22	0.57	0.94	2/5/2001
10a	100 West Hunter Avenue (Stepan)	B38W24D	10a-021043	22'-27'	0.25	UJ	0.28	0.42	0.01	U	0.18	0.55	0.21	UJ	0.25	0.36	0.47	11/15/2000
10a	100 West Hunter Avenue (Stepan)	B38W25D	10a-021045	21.6'-26.6'	1.27	J	0.50	0.28	0.79	J	0.39	0.34	0.16	U	0.18	0.30	2.22	11/27/2000
10a	100 West Hunter Avenue (Stepan)	BRMW10	10a-021419	30'-40	0.17	U	0.26	0.46	0.28	U	0.39	0.77	0.60	U	0.16	0.60	1.05	2/14/2001
10a	100 West Hunter Avenue (Stepan)	BRMW15	10a-021429	20'-30'	0.59	U	0.07	0.59	0.86	J	0.58	0.62	0.34		0.44	0.83	1.79	2/7/2001
10a	100 West Hunter Avenue (Stepan)	BRMW16	10a-021430	20'-30'	0.76	U	0.09	0.76	0.31	UJ	0.40	0.68	0.01	U	0.21	0.68	1.08	2/8/2001
10a	100 West Hunter Avenue (Stepan)	BRMW17	10a-021431	25'-35'		R	0.07	0.57	0.34	U	0.40	0.72	0.41	J	0.37	0.39	0.75	2/6/2001
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021026	29.50'-39.50'	1.57	J	0.60	0.30	0.53	J	0.33	0.38	0.15	U	0.19	0.32	2.25	11/16/2000
10a	100 West Hunter Avenue (Stepan)	B38W03B	10a-021463	29.5'-39.50	0.11	U	0.21	0.43	0.34	U	0.42	0.79	0.21	U	0.33	0.66	0.66	2/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-021027	22.7'-27.7'	0.06	U	0.19	0.45	1.06	J	0.50	0.35	0.51	J	0.33	0.27	1.63	11/17/2000
10a	100 West Hunter Avenue (Stepan)	B38W04B	10a-021464	22.7'-27.7'	0.05	U	0.27	0.71	0.71	J	0.50	0.56	0.48		0.39	0.39	1.24	2/22/2001
10a	100 West Hunter Avenue (Stepan)	B38W05B	10a-021028	22.7'-33'	0.10	U	0.17	0.33	0.37	J	0.26	0.26	0.15	U	0.18	0.31	0.62	11/17/2000
10a	100 West Hunter Avenue (Stepan)	B38W06B	10a-021029	15.9'-20.90'	0.15	UJ	0.18	0.29	0.32	J	0.26	0.29	0.07	U	0.13	0.24	0.54	11/29/2000
10a	100 West Hunter Avenue (Stepan)	B38W07B	10a-021030	18.5'-28.8'	3.56		1.32	0.84	2.03	J	0.92	0.50	0.23	U	0.34	0.64	5.82	11/7/2000
12a	NY, Susquehanna, & Western Railway	B38W02D	12a-021025	37'-42'	1.70		0.79	0.60	1.40	J	0.71	0.58	0.45	J	0.39	0.47	3.55	11/8/2000
12a	NY, Susquehanna, & Western Railway	MW-3D	12a-021543	30'-55'	0.26	J	0.25	0.30	0.35	J	0.32	0.48	0.04	U	0.16	0.43	0.65	4/19/2001
12a	NY, Susquehanna, & Western Railway	MW-20D	12a-021086	30'-55'	0.04	U	0.20	0.54	0.41	J	0.37	0.47	0.17	U	0.24	0.40	0.62	3/14/2001
12b	100 West Hunter Avenue (MISS)	MISS01B	12b-021012	23'-53.5'	0.05	U	0.14	0.36	0.57	J	0.38	0.45	0.04	U	0.14	0.37	0.66	11/20/2000
12b	100 West Hunter Avenue (MISS)	MISS02B	12b-021014	28.5'-58.5'	0.12	U	0.18	0.33	0.62	U	0.17	0.62	0.09	U	0.21	0.48	0.83	11/21/2000
12b	100 West Hunter Avenue (MISS)	MISS05B	12b-021020	25'-55'	1.59		0.80	0.81	0.56	J	0.43	0.45	0.23	U	0.31	0.52	2.38	11/6/2000
12b	100 West Hunter Avenue (MISS)	MISS07B	12b-021023	19'-49'	0.39	UJ	0.04	0.39	1.19	J	0.62	0.59	0.01	U	0.14	0.46	1.58	11/6/2000
12b	100 West Hunter Avenue (MISS)	B38W18D	12b-021039	35'-40'	6.89	J	1.79	0.35	1.71	J	0.69	0.39	7.53		1.92	0.49	**16.14**	11/13/2000
12b	100 West Hunter Avenue (MISS)	B38W19D	12b-021041	21.7'-31.9'	0.82	U	0.23	0.82	1.07	J	0.74	0.74	0.00	U	0.23	0.78	1.88	11/7/2000
12b	100 West Hunter Avenue (MISS)	MW-23D	12b-021584	51'-71'	0.39	U	0.04	0.39	0.47	J	0.40	0.44	0.11	U	0.21	0.44	0.97	7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-23DD	12b-021585	83'-103'	0.39	UJ	0.36	0.42	0.89	J	0.56	0.57	0.01	U	0.15	0.49	1.29	7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-24D	12b-021621	45'-70'		R	2.21	5.58		R	3.54	4.43		R	2.86	5.23	R	9/6/2001
12b	100 West Hunter Avenue (MISS)	MW-24DD	12b-021622	80'-105'	0.34	UJ	0.34	0.53	0.76	J	0.47	0.44	0.27	UJ	0.29	0.41	1.37	9/6/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-2RE	12b-021607	44'-64'	0.31	UJ	0.33	0.50	0.95	J	0.55	0.50	0.22	UJ	0.26	0.39	1.49	8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-3RE	12b-021608	39'-59'	0.20	U	0.26	0.43	0.28	U	0.34	0.63	0.45		0.36	0.40	0.92	8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-4	12b-021596	40'-61'	0.66		0.50	0.51	0.16	U	0.37	0.83	0.02	U	0.29	0.81	0.84	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021575	102'-112'	0.36	UJ	0.41	0.64	0.70		0.54	0.60	0.33	UJ	0.35	0.40	1.39	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021576	69'-79'	0.09	U	0.24	0.56	0.57		0.42	0.50	0.44	J	0.35	0.30	1.09	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5	12b-021577	45'-55'	0.27	U	0.42	0.82	0.93		0.64	0.72	0.29	U	0.41	0.77	1.49	6/19/2001

TABLE 4-41
SUMMARY OF TOTAL THORIUM IN BEDROCK MONITORING WELL GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	Well	S&W Lab Sample ID	Screen Interval (ft bgs)	Th-228 Result (pCi/L)	Th-228 Qualifier	Th-228 Error (pCi/L)	Th-228 MDA (pCi/L)	Th-230 Result (pCi/L)	Th-230 Qualifier	Th-230 Error (pCi/L)	Th-230 MDA (pCi/L)	Th-232 Result (pCi/L)	Th-232 Qualifier	Th-232 Error (pCi/L)	Th-232 MDA (pCi/L)	Total Thorium (pCi/L)	Date Collected
12b	100 West Hunter Avenue (MISS)	BRPZ-7	12b-021562	84'-109'	0.45	UJ	0.47	0.72	0.84	J	0.61	0.69	0.43	UJ	0.43	0.50	1.72	6/4/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-9	12b-021597	32'-57'	0.16	U	0.29	0.59	0.26	U	0.37	0.70	0.62	U	0.18	0.62	1.04	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1D	12b-021556	40'-115'	0.15	UJ	0.18	0.29	0.26	U	0.29	0.53	0.23	UJ	0.22	0.29	0.64	5/29/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1DRE	12b-021610	92'-112'	0.75	U	0.24	0.75	0.56	UJ	0.49	0.71	0.39		0.36	0.21	1.70	8/15/2001
12b	100 West Hunter Avenue (MISS)	MW-25D	12b-021639	35'-60'	0.02	UJ	0.048	0.063	0.39	UJ	0.21	0.13	0.02	U	0	0.06	0.43	1/3/2002
12b	100 West Hunter Avenue (MISS)	MW-26D	12b-021642	35'-60'	0.03	UJ	0.062	0.082	0.48	UJ	0.26	0.15	0.03	UJ	0.061	0.082	0.54	1/3/2002
19a	Parkway	B38W14D	19a-021034	46'-51.5'		R	0.04	0.39	1.51	J	0.71	0.67	0.68		0.46	0.58	2.20	11/16/2000
20a	Grove	B38W15D	20a-021036	40'-45'	0.34	UJ	0.09	0.34	0.65	J	0.38	0.41	0.10	U	0.15	0.27	1.09	11/9/2000
20a	Grove	B38W17B	20a-021038	18.7'-29'	0.11	U	0.19	0.39	1.37	J	0.58	0.36	0.37	J	0.30	0.43	1.86	11/1/2000
22b	Lodi Brook Drainage Basin	MW-9D	22b-021063	22-47'	0.42	J	0.40	0.52	0.02	U	0.30	0.82	0.00	U	0.17	0.59	0.45	3/13/2001
22b	Lodi Brook Drainage Basin	MW-10D	22b-021065	21'-46'	0.57	U	0.08	0.57	0.51	J	0.38	0.45	0.21	UJ	0.24	0.31	1.29	2/21/2001
22b	Lodi Brook Drainage Basin	MW-17D	22b-021078	22'-46'	0.47	U	0.05	0.47	2.01	J	0.89	0.57	0.37	UJ	0.39	0.60	2.85	2/22/2001
22b	Lodi Brook Drainage Basin	MW-18D	22b-021081	32'-57'	0.46	J	0.39	0.52	0.18	U	0.28	0.54	0.46	J	0.42	0.62	1.10	2/19/2001
23b	Westerly Brook Drainage Basin	MW-1D	23b-021047	21'-46'	0.24	UJ	0.27	0.35	0.51	J	0.43	0.63	0.32	UJ	0.33	0.48	1.07	2/26/2001
23b	Westerly Brook Drainage Basin	MW-2D	23b-021049	22'-48.5'	0.02	U	0.14	0.43	0.38	J	0.36	0.51	0.24	UJ	0.27	0.35	0.64	2/14/2001
23b	Westerly Brook Drainage Basin	MW-4D	23b-021053	18'-43'	0.08	U	0.25	0.62	0.78	J	0.50	0.45	0.22	U	0.28	0.48	1.07	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5D	23b-021055	32'-52'	0.23	U	0.30	0.55	0.53	J	0.39	0.43	0.45	J	0.34	0.32	1.21	2/15/2001
23b	Westerly Brook Drainage Basin	MW-6D	23b-021057	29'-54'	0.13	U	0.27	0.60	0.84	J	0.51	0.48	0.49		0.38	0.35	1.46	2/21/2001
23b	Westerly Brook Drainage Basin	MW-7D	23b-021059	21'-46'	0.61		0.47	0.60	0.77	J	0.51	0.56	0.24	U	0.31	0.54	1.62	2/28/2001
23b	Westerly Brook Drainage Basin	MW-8D	23b-021061	27'-52'	0.04	U	0.19	0.51	0.52	J	0.46	0.74		R	0.05	0.47	0.56	3/1/2001
23b	Westerly Brook Drainage Basin	MW-19D	23b-021083	17'-42'	0.02	U	0.13	0.40	0.82	J	0.49	0.40	0.17	UJ	0.22	0.28	1.02	2/28/2001
23b	Westerly Brook Drainage Basin	MW-19DD	23b-021510	51'-76'	0.63	U	0.18	0.63	0.07	U	0.24	0.63		R	0.11	0.80	0.70	3/1/2001

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Denotes Rejected Data
* = Denotes field filtered sample

TABLE 4-42
SUMMARY OF ADJUSTED GROSS ALPHA RESULTS IN BEDROCK MONITORING WELLS - PHASE II

Property ID	Easting	Northing	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Gross Alpha Analytical Result (pCi/L)	Data Qualifier	MDA (pCi/L)	Measurement Error (pCi/L)	Total Uranium (pCi/L)	Adjusted Gross Alpha (pCi/L)	Note	Total Thorium (pCi/L)	Date Collected
01a	2161867.92	746558.73	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	4.48		1.86	2.04	6.41	0.11	*	1.64	2/21/2001
01a	2161867.92	746558.73	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	5.18		1.96	2.16	6.8	0.54	*	1.4	2/21/2001
02a	2163270.57	748465.08	100 Hancock Street	02a-021073	MW-14D	27'-52'	5.33		2.09	2.34	3.87	1.46		1.07	2/27/2001
02d	2162997.44	747624.14	8 Mill Street	02d-021075	MW-15D	36'-61'	9.95		0.22	1.77	7.63	2.32		0.87	2/19/2001
05a	2164491.85	750415.84	99 Essex Street	05a-021542	MW-13D	25'-50'	3.85		2.06	2.20	1.98	1.87		0.64	4/19/2001
06A	2164812.06	750153.63	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	5.50		3.36	3.51	0.81	4.69		0.7	2/13/2001
06B	2164516.50	750930.87	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	5.50		1.14	1.49	6.46	0.53	*	0.84	2/15/2001
06E	2165323.00	750214.40	29 Essex Street	06e-021422	BRMW12	38'-48'	1.35	UJ	1.72	1.70	1.10	0.25		1.16	2/12/2001
06E	2165161.44	749653.74	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	2.91		1.62	1.74	0.81	2.10		1.19	2/8/2001
08a	2164982.99	750749.19	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	5.64		1.90	2.18	3.11	2.53		0.58	3/13/2001
09A	2164251.45	751655.79	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	7.10		4.12	4.40	4.11	2.98		1.64	2/7/2001
09A	2165432.00	751298.88	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	2.13		1.34	1.32	1.1	1.03		1.01	2/13/2001
09A	2164576.93	751233.02	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	0.37	UJ	0.48	0.46	3.65	ND	*	1.22	2/8/2001
09A	2164412.37	751184.88	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	14.26		4.27	4.86	15.81	3.31	*	1.43	2/12/2001
09A	2165788.45	751013.86	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	4.46	J	1.30	1.62	0.85	3.61		1.35	2/8/2001
10a	2164513.81	752253.19	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	8.62	UJ	8.62	7.92	0.73	7.89		0.66	2/12/2001
10a	2164950.28	752093.58	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	2.77		1.84	1.91	2.09	0.68		1.24	2/22/2001
10A	2165026.84	751630.56	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	7.23		2.01	2.32	6.16	1.07		1.05	2/14/2001
10A	2165410.21	752303.63	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	2.07		0.58	0.76	1.11	0.97		1.79	2/7/2001
10A	2165253.45	752023.72	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	11.23		1.49	2.34	10.57	0.66		1.08	2/8/2001
10A	2165431.92	751738.57	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	1.55		1.53	1.30	1.56	1.29	*	0.75	2/6/2001
10a	2164451.46	752296.78	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	3.59	J	1.81	2.02	3.58	0.00		0.86	7/12/2001
10A	2164647.22	752072.32	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	3.12	UJ	3.32	3.30	0.71	2.42		0.77	2/6/2001
10A	2164646.88	752072.58	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	4.02	UJ	4.02	3.75	2.38	1.64		0.94	2/5/2001
12a	2164653.88	752834.07	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'		R	36.34	33.39	1.98	NA		0.62	3/14/2001
12a	2164441.13	752924.81	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	18.93	UJ	18.93	17.19	0.51	**18.42**		0.65	4/19/2001
12b	2164183.13	752417.60	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	11.40	UJ	11.40	10.50	4.58	6.82		1.70	8/15/2001
12b	2164172.40	752389.35	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	33.96		24.28	25.03	6.96	**27.00**		1.49	8/14/2001
12b	2164147.24	752329.71	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	9.28	UJ	17.54	17.09	2.02	7.26		0.92	8/14/2001
12B	2164174.11	752421.33	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	5.12	UJ	17.69	16.38	13.38	8.12	*	0.84	7/19/2001
12B	2164154.60	752429.14	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	25.52	UJ	25.52	24.01	10.62	14.90		1.49	6/19/2001
12B	2164154.60	752429.14	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	22.92	UJ	22.92	21.56	14.64	8.28		1.09	6/19/2001
12B	2164154.60	752429.14	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	67.74		4.30	20.25	10.27	**57.47**		1.39	6/19/2001
12B	2164211.31	752407.35	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	13.75	J	9.20	9.56	2.13	11.62		1.72	6/4/2001
12B	2164157.36		100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	18.64	UJ	21.48	21.10	8.91	9.74		1.04	7/19/2001
12b	2164293.61	752285.98	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	12.08	J	8.11	8.40	6.99	5.09		0.97	7/9/2001
12b	2164297.41	752302.16	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	15.13	UJ	19.40	19.16	6.57	8.56		1.29	7/9/2001
12b	2164077.51	752191.14	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	23.31	J	11.67	12.56	12.30	11.01		R	9/6/2001
12b	2164078.39	752182.33	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	11.07	UJ	11.07	10.02	2.15	8.92		1.37	9/6/2001
12b	2164312.62	752405.13	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	2.70	U	8.6	4.9	0.25	2.45		0.43	1/3/2002
12b	2164344.93	752645.90	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	1.00	U	40	20	1.02	ND	*	0.54	1/3/2002
22b	2165930.32	751700.30	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	1.00	UJ	1.53	1.50	1.88	0.62	*	1.29	2/21/2001
22b	2161403.13	747286.60	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	0.42	UJ	1.58	1.52	1.79	0.15	*	2.85	2/22/2001

TABLE 4-42
SUMMARY OF ADJUSTED GROSS ALPHA RESULTS IN BEDROCK MONITORING WELLS - PHASE II

Property ID	Easting	Northing	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Gross Alpha Analytical Result (pCi/L)	Data Qualifier	MDA (pCi/L)	Measurement Error (pCi/L)	Total Uranium (pCi/L)	Adjusted Gross Alpha (pCi/L)	Note	Total Thorium (pCi/L)	Date Collected
22b	2161793.10	748690.56	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	2.47		0.19	0.82	2.3	0.17		1.1	2/19/2001
22b	2165984.88	752001.86	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	2.62		1.20	1.34	1.39	1.23		0.45	3/13/2001
23b	2163867.98	753683.02	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	2.85		2.24	2.28	1.08	1.77		1.02	2/28/2001
23b	2163866.03	753677.54	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	1.37	UJ	2.03	1.96	0.46	0.91		0.70	3/1/2001
23b	2163478.57	753086.12	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	3.53		0.16	0.90	1.27	2.26		1.07	2/26/2001
23b	2163419.43	752048.51	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	6.89		2.61	3.02	6.37	0.51		0.64	2/14/2001
23b	2162939.56	752897.45	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	1.47		1.24	1.27	1.94	0.80	*	1.07	2/20/2001
23b	2162621.72	753031.61	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	2.06		0.60	0.78	1.05	1.01		1.21	2/15/2001
23b	2162589.04	752349.98	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	1.53	UJ	1.66	1.66	2.00	1.20	*	1.46	2/21/2001
23b	2163836.17	753178.19	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	13.73		2.83	3.55	1.38	12.34		1.62	2/28/2001
23b	2164130.36	753342.74	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	0.00	UJ	3.19	2.98	0.78	2.20	*	0.56	3/1/2001

Notes:
pCi/L = picocuries per liter
ft bgs = Feet below ground surface
MDA = Minimum Detectable Activity
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected data
ND = Non-Detect
Bolded values denote exceedance of Gross Alpha MCL of 15
* = Denotes measurement error added to Gross Alpha concentration in order to make a positive value

TABLE 4-43
ADJUSTED GROSS BETA IN BEDROCK - PHASE II

PropertyID	PropertytName	GWRI Site Name	Gross Beta Analytic Result (pCi/L)	Measurement Error (pCi/L)	Data Qualifier by Validator	Potassium (ug/L)	Result Qualifier	Calculated K-40 (pCi/L)**	Adjusted Gross Beta (pCi/L)	Note	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16D	11.04	2.04		7030		5.13	5.91		2/21/2001
02a	100 Hancock Street	MW-14D	9.20	2.78		9230		6.74	2.46		2/27/2001
02d	8 Mill Street	MW-15D	16.19	1.43		3320		2.42	13.77		2/19/2001
05a	99 Essex Street	MW-13D	84.75	3.56		21600		15.77	**68.98**		4/19/2001
06a	85-101 NJ Rt. 17 North	BRMW8	5.43	3.21		4690	J	3.42	2.01		2/13/2001
06b	137 NJ Rt. 17 North	BRMW3	3.24	2.27		2480	J	1.81	1.43		2/15/2001
06e	29 Essex Street	BRMW12	4.15	1.88		3960	J	2.89	1.26		2/12/2001
06e	29 Essex Street	BRMW9	2.10	2.35	UJ	1370	J	1.00	1.10		2/8/2001
08a	23 West Howcroft Road	MW-12D	10.46	2.99	J	6760		4.93	5.52		3/13/2001
09a	149-151 Maywood Avenue	BRMW1	7.47	6.37		13400	J	9.78	4.07	*	2/7/2001
09a	149-151 Maywood Avenue	BRMW11	4.53	2.16		2640	J	1.93	2.60		2/13/2001
09a	149-151 Maywood Avenue	BRMW13	0.02	1.35	UJ	4430	J	3.23	ND	*	2/8/2001
09a	149-151 Maywood Avenue	BRMW14	6.13	6.29	UJ	3540	J	2.58	3.55		2/12/2001
09a	149-151 Maywood Avenue	BRMW6	5.99	1.80		5000	J	3.65	2.34		2/8/2001
10a	100 West Hunter Avenue (Stepan)	B38W03B	7.51	8.21	UJ	14300	J	10.44	5.28	*	2/12/2001
10a	100 West Hunter Avenue (Stepan)	B38W04B	3.31	1.69		3420		2.50	0.81		2/22/2001
10a	100 West Hunter Avenue (Stepan)	BRMW10	8.07	1.64		7920	J	5.78	2.29		2/14/2001
10a	100 West Hunter Avenue (Stepan)	BRMW15	4.65	1.79		851	J	0.62	4.03		2/7/2001
10a	100 West Hunter Avenue (Stepan)	BRMW16	4.47	2.26		1740	J	1.27	3.20		2/8/2001
10a	100 West Hunter Avenue (Stepan)	BRMW17	2.41	1.74		1100	J	0.80	1.60		2/6/2001
10a	100 West Hunter Avenue (Stepan)	MISS03B	10.94	3.45		9360	J	6.83	4.11		7/12/2001
10a	100 West Hunter Avenue (Stepan)	PT-1DA	8.35	3.93		10200	J	7.45	0.90		2/6/2001
10a	100 West Hunter Avenue (Stepan)	PT-1DB	5.90	4.09		10500	J	7.67	2.33	*	2/5/2001
12a	NY, Susquehanna, & Western Railway	MW-20D	47.76	35.08	J	53000		38.69	9.07		3/14/2001
12a	NY, Susquehanna, & Western Railway	MW-3D	151.28	21.36		227000		165.71	6.93	*	4/19/2001
12b	100 West Hunter Avenue (MISS)	BRPW-1DRE	17.25	8.14		16600	J	12.12	5.13		8/15/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-2RE	473.16	39.98	J	418000	J	305.14	**168.02**		8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-3RE	59.44	18.56	J	78000	J	56.94	2.50		8/14/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-4	110.59	36.93		216000	J	157.68	ND	*	7/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5 (45'-55')	205.98	49.22		209000	J	152.57	**53.41**		6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5 (69'-79')	12.98	12.69	J	23200	J	16.94	8.73	*	6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-5 (102'-112')	68.02	22.57		84500	J	61.69	6.34		6/19/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-7	2.38	12.24	UJ	7020	J	5.12	9.50	*	6/4/2001
12b	100 West Hunter Avenue (MISS)	BRPZ-9	387.99	43.96		664000	J	484.72	ND	*	7/19/2001
12b	100 West Hunter Avenue (MISS)	MW-23D	52.90	7.52	J	58800	J	42.92	9.98		7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-23DD	19.06	19.27	UJ	16700	J	12.19	6.87		7/9/2001
12b	100 West Hunter Avenue (MISS)	MW-24D	16.46	12.60	J	7640	J	5.58	10.89		9/6/2001
12b	100 West Hunter Avenue (MISS)	MW-24DD		13.42	R	5540	J	4.04	R		9/6/2001
12b	100 West Hunter Avenue (MISS)	MW-25D	99.00	12.00		103000		75.19	23.81		1/3/2002
12b	100 West Hunter Avenue (MISS)	MW-26D	711.00	84.00		813000		593.49	**117.51**		1/3/2002
22b	Lodi Brook Drainage Basin	MW-10D	14.07	2.00		15900		11.61	2.47		2/21/2001
22b	Lodi Brook Drainage Basin	MW-17D	0.50	1.90	UJ	1960		1.43	0.97	*	2/22/2001
22b	Lodi Brook Drainage Basin	MW-18D	5.83	0.67		2090		1.53	4.30		2/19/2001
22b	Lodi Brook Drainage Basin	MW-9D	8.55	1.63		7130		5.20	3.34		3/13/2001
23b	Westerly Brook Drainage Basin	MW-19D	2.75	1.89		1560		1.14	1.62		2/28/2001
23b	Westerly Brook Drainage Basin	MW-19DD	79.25	3.81		87900		64.17	15.08		3/1/2001
23b	Westerly Brook Drainage Basin	MW-1D	5.63	2.03		4120		3.01	2.62		2/26/2001
23b	Westerly Brook Drainage Basin	MW-2D	12.12	4.02		12300	J	8.98	3.14		2/14/2001
23b	Westerly Brook Drainage Basin	MW-4D	0.04	1.45	UJ	942		0.69	0.81	*	2/20/2001
23b	Westerly Brook Drainage Basin	MW-5D	5.84	1.03		5980	U	4.37	1.47		2/15/2001
23b	Westerly Brook Drainage Basin	MW-6D	1.05	1.75	UJ	1420		1.04	0.01		2/21/2001
23b	Westerly Brook Drainage Basin	MW-7D	5.25	3.23		4980		3.64	1.62		2/28/2001
23b	Westerly Brook Drainage Basir	MW-8D	4.27	3.06		4400		3.21	1.06		3/1/2001

Notes:
pCi/L = picocuries per liter
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
R = Rejected data
ND = Non-Detect
Bolded values denote exceedance of Screening Standard of 50 pCi/L
* = Denotes measurement error added to Gross Alpha concentration in order to make a positive value
** - Potassium results were multiplied by 0.73 to obtain Gross Beta attributable to K-40 which accounts for beta decay solely.

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Barium, Total	37.2		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Beryllium, Total	0.21		0.10	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Boron, Total	44		2.1	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Calcium, Total	53900		11.4	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Copper, Total	1.5		0.60	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Iron, Total	12500		17.4	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Lithium, Total	118		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Magnesium, Total	52400		5.9	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Manganese, Total	228		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Potassium, Total	7030		20.9	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Sodium, Total	20800		2.6	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Zinc, Total	33.4		0.50	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Barium, Soluble	59.6		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Beryllium, Soluble	0.17		0.10	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Boron, Soluble	50.1		2.1	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Calcium, Soluble	68200		11.4	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Cobalt, Soluble	1.3		0.70	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Copper, Soluble	0.91		0.60	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Iron, Soluble	1260		17.4	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Lithium, Soluble	112		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Magnesium, Soluble	55100		5.9	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Manganese, Soluble	167		0.20	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Potassium, Soluble	4440		20.9	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Silicon, Soluble	6870		5.6	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Sodium, Soluble	19500		2.6	2/21/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Aluminum, Total	107		12.4	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Arsenic, Total	3.6		3.2	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Barium, Total	58.7		0.20	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Boron, Total	107		2.1	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Calcium, Total	81600		11.4	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Copper, Total	3.1		0.60	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Iron, Total	9940		17.4	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Lithium, Total	751		0.20	2/27/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Magnesium, Total	32700		5.9	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Manganese, Total	117		0.20	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Nickel, Total	4.8		1.1	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Potassium, Total	9230		20.9	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Selenium, Total	3.1		3.1	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Sodium, Total	49800		2.6	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Vanadium, Total	1.3		0.60	2/27/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Zinc, Total	8.4		0.50	2/27/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Arsenic, Total	4.2		3.2	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Barium, Total	247		0.20	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Beryllium, Total	0.14		0.10	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Boron, Total	68.9		2.1	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Calcium, Total	112000		11.4	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Iron, Total	2420		17.4	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Lithium, Total	265		0.20	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Magnesium, Total	64200		5.9	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Manganese, Total	18.6		0.20	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Potassium, Total	3320		20.9	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Sodium, Total	34400		2.6	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Thallium, Total	3.1		3.0	2/19/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Vanadium, Total	2.6		0.60	2/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Aluminum, Total	43.3		16.8	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Barium, Total	372		0.20	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Boron, Total	333		2.1	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Calcium, Total	112000		8.1	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Chromium, Total	4.3		0.90	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Cobalt, Total	2.2		0.80	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Iron, Total	4060		15.7	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Lithium, Total	725		0.20	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Magnesium, Total	30500		8.8	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Manganese, Total	1340		0.10	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Nickel, Total	9.9		1.2	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Potassium, Total	21600		35.3	4/19/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Sodium, Total	66900		1.7	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Zinc, Total	2.1		0.30	4/19/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Barium, Total	78.4		0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Boron, Total	90.2		2.1	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Calcium, Total	142000		11.4	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Cobalt, Total	3		0.70	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Copper, Total	7.6		0.60	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Lithium, Total	31.3	J	0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Magnesium, Total	57100		5.9	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Manganese, Total	883		0.20	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Nickel, Total	9.5		1.1	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Potassium, Total	4690	J	20.9	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Sodium, Total	31100		2.6	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Vanadium, Total	1.1		0.60	2/13/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Arsenic, Total	4.3		3.2	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Barium, Total	82.2		0.20	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Boron, Total	425		2.1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Calcium, Total	55100		11.4	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Iron, Total	31.9		17.4	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Lithium, Total	207	J	0.20	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Magnesium, Total	27900		5.9	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Potassium, Total	2480	J	20.9	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Sodium, Total	17600		2.6	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Vanadium, Total	4		0.60	2/15/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Aluminum, Total	21.1		12.4	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Barium, Total	118		0.20	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Boron, Total	42.8		2.1	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Calcium, Total	131000		11.4	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Chromium, Total	160		0.70	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Cobalt, Total	0.73		0.70	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Iron, Total	798		17.4	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Lithium, Total	5.8	J	0.20	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Magnesium, Total	11000		5.9	2/8/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Manganese, Total	32.7		0.20	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Nickel, Total	72.8		1.1	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Potassium, Total	1370	J	20.9	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Sodium, Total	56900		2.6	2/8/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Vanadium, Total	0.86		0.60	2/8/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Barium, Total	145		0.20	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Boron, Total	30.4		2.1	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Calcium, Total	92500		11.4	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Iron, Total	22		17.4	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Lithium, Total	14.9	J	0.20	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Magnesium, Total	15100		5.9	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Nickel, Total	1.7		1.1	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Potassium, Total	3960	J	20.9	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Sodium, Total	25600		2.6	2/12/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Aluminum, Total	32.6		22.7	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Arsenic, Total	5		2.4	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Barium, Total	120		0.20	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Boron, Total	37.4		2.7	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Calcium, Total	105000		19.2	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Chromium, Total	513		0.60	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Cobalt, Total	9.4		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Copper, Total	16.4		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Iron, Total	4270		21.8	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Lithium, Total	3.3		0.20	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Magnesium, Total	23500		6.7	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Manganese, Total	83.8		0.20	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Nickel, Total	160		0.90	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Potassium, Total	2490		303	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Sodium, Total	28100		4.1	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Vanadium, Total	4.1		0.80	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Zinc, Total	7		0.40	11/2/2000
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Arsenic, Total	3.6		3.2	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Barium, Total	280		0.20	3/13/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Boron, Total	50.2		2.1	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Calcium, Total	91400		11.4	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Cobalt, Total	13.6		0.70	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Iron, Total	10300		17.4	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Lithium, Total	23.3	J	0.20	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Magnesium, Total	46700		5.9	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Manganese, Total	590		0.20	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Nickel, Total	19		1.1	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Potassium, Total	6760		20.9	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Sodium, Total	38200		2.6	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Vanadium, Total	1.5		0.60	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Zinc, Total	7.3		0.50	3/13/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Aluminum, Total	63.6		22.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Barium, Total	41.6		0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Beryllium, Total	0.26		0.10	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Boron, Total	166		2.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Calcium, Total	202000		19.2	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Cobalt, Total	3.5		0.90	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Copper, Total	12.5		0.90	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Lithium, Total	4260	J	0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Magnesium, Total	63600		6.7	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Manganese, Total	2870		0.20	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Nickel, Total	19.2		0.90	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Potassium, Total	13400	J	40.9	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Sodium, Total	214000		20.5	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Vanadium, Total	1.2		0.80	2/7/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Aluminum, Total	26.7		12.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Barium, Total	146		0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Boron, Total	47.9		2.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Calcium, Total	101000		11.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Chromium, Total	689		0.70	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Cobalt, Total	1.2		0.70	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Copper, Total	8.1		0.60	2/8/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Iron, Total	1990		17.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Lithium, Total	3.2	J	0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Magnesium, Total	13000		5.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Nickel, Total	27.2		1.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Potassium, Total	5000	J	20.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Selenium, Total	4		3.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Sodium, Total	48500		2.6	2/8/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Vanadium, Total	5.6		0.60	2/8/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Barium, Total	115		0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Boron, Total	35.7		2.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Calcium, Total	94300		11.4	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Chromium, Total	32.1		0.70	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Cobalt, Total	4.9		0.70	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Iron, Total	295		17.4	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Lithium, Total	3	J	0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Magnesium, Total	10200		5.9	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Manganese, Total	997		0.20	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Nickel, Total	15.4		1.1	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Potassium, Total	2640	J	20.9	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Sodium, Total	19600		2.6	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Vanadium, Total	1.4		0.60	2/13/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Aluminum, Total	31.5		12.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Barium, Total	85		0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Boron, Total	717		2.1	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Calcium, Total	65100		11.4	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Chromium, Total	18.3		0.70	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Lithium, Total	503	J	0.20	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Magnesium, Total	22400		5.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Potassium, Total	4430	J	20.9	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Sodium, Total	35300		2.6	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Thallium, Total	4.4		3.0	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Vanadium, Total	2.9		0.60	2/8/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Barium, Total	163		0.20	2/12/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Boron, Total	789		2.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Cadmium, Total	0.91		0.30	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Calcium, Total	64000		11.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Chromium, Total	6.4		0.70	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Copper, Total	19		0.60	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Iron, Total	329		17.4	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Lithium, Total	421	J	0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Magnesium, Total	31200		5.9	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Manganese, Total	97.6		0.20	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Nickel, Total	13		1.1	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Potassium, Total	3540	J	20.9	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Sodium, Total	50300		2.6	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Vanadium, Total	5.9		0.60	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Zinc, Total	12.6		0.50	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Aluminum, Total	51.1		22.7	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Arsenic, Total	6.8		2.4	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Barium, Total	17.7		0.20	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Beryllium, Total	0.18		0.10	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Boron, Total	113		2.7	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Cadmium, Total	0.35		0.30	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Calcium, Total	188000		19.2	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Chromium, Total	6.8		0.60	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Cobalt, Total	18.5		0.90	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Iron, Total	18500		21.8	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Lithium, Total	78		0.20	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Magnesium, Total	10100		6.7	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Manganese, Total	7540		0.20	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Nickel, Total	20.9		0.90	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Potassium, Total	9430		40.9	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Sodium, Total	46300		4.1	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Zinc, Total	64.1	J	0.40	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Aluminum, Total	24.8		22.7	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Barium, Total	105		0.20	11/14/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Boron, Total	128		2.7	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Calcium, Total	148000		19.2	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Chromium, Total	9.8		0.60	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Cobalt, Total	5.4		0.90	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Iron, Total	17500		21.8	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Lithium, Total	37.9		0.20	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Magnesium, Total	18900		6.7	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Manganese, Total	6160		0.20	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Nickel, Total	9.5		0.90	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Potassium, Total	25300		40.9	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Sodium, Total	92900		4.1	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Barium, Total	15.4		0.20	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Beryllium, Total	0.33		0.10	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Boron, Total	110		2.7	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Cadmium, Total	0.65		0.30	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Calcium, Total	369000		19.2	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Iron, Total	30800		21.8	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Lead, Total	3.9		2.1	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Lithium, Total	54.6		0.20	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Magnesium, Total	43800		6.7	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Manganese, Total	6880		0.20	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Potassium, Total	15700		303	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Sodium, Total	83800		4.1	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Aluminum, Total	35.9		22.7	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Arsenic, Total	3.1		2.4	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Barium, Total	307	J	0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Boron, Total	1710		2.7	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Cadmium, Total	0.37	J	0.30	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Calcium, Total	69200		19.2	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Chromium, Total	2		0.60	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Copper, Total	1.4		0.90	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Iron, Total	2960	J	21.8	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Lead, Total	3.5		2.1	11/17/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Lithium, Total	2710	J	0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Magnesium, Total	7650		6.7	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Manganese, Total	5600		0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Nickel, Total	3.4		0.90	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Potassium, Total	4960	J	40.9	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Sodium, Total	86800		4.1	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Aluminum, Total	26.3		22.7	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Barium, Total	139	J	0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Calcium, Total	65000		19.2	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Chromium, Total	173		0.60	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Cobalt, Total	2.2	J	0.90	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Copper, Total	6.1		0.90	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Iron, Total	1440	J	21.8	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Lithium, Total	9.7	J	0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Magnesium, Total	7130		6.7	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Manganese, Total	25.2		0.20	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Nickel, Total	35.2		0.90	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Potassium, Total	895	J	40.9	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Sodium, Total	20900		4.1	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Vanadium, Total	2		0.80	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Aluminum, Total	26.7		22.7	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Arsenic, Total	2.5		2.4	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Barium, Total	148	J	0.20	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Boron, Total	175		2.7	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Cadmium, Total	0.3	J	0.30	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Calcium, Total	156000		19.2	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Chromium, Total	3.2		0.60	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Iron, Total	11800	J	21.8	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Lithium, Total	424	J	0.20	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Magnesium, Total	15700		6.7	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Manganese, Total	2690		0.20	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Nickel, Total	1.1		0.90	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Potassium, Total	17600	J	40.9	11/29/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Sodium, Total	90200		4.1	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Aluminum, Total	207		22.7	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Barium, Total	120		0.20	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Boron, Total	82.3		2.7	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Calcium, Total	58700		19.2	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Chromium, Total	6.4		0.60	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Cobalt, Total	3.3		0.90	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Copper, Total	8.5		0.90	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Iron, Total	308		21.8	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Lithium, Total	72.3		0.20	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Magnesium, Total	3890		6.7	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Manganese, Total	3210		0.20	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Nickel, Total	15.5		0.90	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Potassium, Total	10600		303	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Sodium, Total	26100		4.1	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Vanadium, Total	2.5		0.80	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Zinc, Total	6.4		0.40	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Aluminum, Total	59.8		22.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Barium, Total	62		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Beryllium, Total	0.41		0.10	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Boron, Total	98.1		2.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Cadmium, Total	1.2		0.30	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Calcium, Total	98700		19.2	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Chromium, Total	5		0.60	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Iron, Total	27100		21.8	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Lithium, Total	49.7		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Magnesium, Total	12200		6.7	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Manganese, Total	5730		0.20	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Potassium, Total	14500		303	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Sodium, Total	36700		4.1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Aluminum, Total	25.1		22.7	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Barium, Total	53.4	J	0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Boron, Total	155		2.7	11/27/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Calcium, Total	89000		19.2	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Chromium, Total	1.1		0.60	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Iron, Total	4030	J	21.8	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Lithium, Total	1100	J	0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Magnesium, Total	4340		6.7	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Manganese, Total	1160		0.20	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Nickel, Total	1.3		0.90	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Potassium, Total	55700	J	40.9	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Sodium, Total	26300		4.1	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Aluminum, Total	107		22.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Barium, Total	113		0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Beryllium, Total	0.18		0.10	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Boron, Total	99		2.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Cadmium, Total	0.38		0.30	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Calcium, Total	97400		19.2	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Chromium, Total	6.1		0.60	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Cobalt, Total	3.4		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Copper, Total	1.1		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Iron, Total	1150		21.8	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Lithium, Total	5100	J	0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Magnesium, Total	13600		6.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Manganese, Total	3600		0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Nickel, Total	18.8		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Potassium, Total	10200	J	40.9	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Sodium, Total	158000		20.5	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Aluminum, Total	132		22.7	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Barium, Total	104		0.20	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Beryllium, Total	0.25		0.10	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Boron, Total	91.5		2.7	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Cadmium, Total	0.78		0.30	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Calcium, Total	94700		19.2	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Cobalt, Total	2		0.90	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Iron, Total	1160		21.8	2/5/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Lithium, Total	3930	J	0.20	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Magnesium, Total	13100		6.7	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Manganese, Total	3390		0.20	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Potassium, Total	10500	J	40.9	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Sodium, Total	150000		20.5	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Vanadium, Total	1		0.80	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Aluminum, Total	13.6		12.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Barium, Total	77.2		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Boron, Total	94.1		2.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Calcium, Total	103000		11.4	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Lithium, Total	13	J	0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Magnesium, Total	29800		5.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Manganese, Total	307		0.20	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Nickel, Total	9.6		1.1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Potassium, Total	7920	J	20.9	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Sodium, Total	24700		2.6	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Vanadium, Total	0.72		0.60	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Zinc, Total	4.3	J	0.50	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Aluminum, Total	26.3		22.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Barium, Total	202		0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Beryllium, Total	0.16		0.10	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Boron, Total	31.1		2.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Calcium, Total	74300		19.2	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Chromium, Total	50.3		0.60	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Iron, Total	164		21.8	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Lithium, Total	5.2	J	0.20	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Magnesium, Total	6050		6.7	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Nickel, Total	10.2		0.90	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Potassium, Total	851	J	40.9	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Sodium, Total	25600		4.1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Vanadium, Total	0.83		0.80	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Aluminum, Total	38.6		12.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Barium, Total	34.9		0.20	2/8/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Boron, Total	205		2.1	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Calcium, Total	133000		11.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Chromium, Total	12.3		0.70	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Cobalt, Total	1.4		0.70	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Iron, Total	62.8		17.4	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Lithium, Total	51.4	J	0.20	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Magnesium, Total	11900		5.9	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Manganese, Total	1890		0.20	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Potassium, Total	1740	J	20.9	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Sodium, Total	32500		2.6	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Vanadium, Total	0.63		0.60	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Barium, Total	146		0.20	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Boron, Total	32.1		2.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Calcium, Total	77500		19.2	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Chromium, Total	160		0.60	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Cobalt, Total	0.91		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Iron, Total	388		21.8	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Magnesium, Total	8140		6.7	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Nickel, Total	11.6		0.90	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Potassium, Total	1100	J	40.9	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Sodium, Total	20500		4.1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Vanadium, Total	1.6		0.80	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Barium, Total	13.6		0.20	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Beryllium, Total	0.47		0.10	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Boron, Total	108		2.1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Calcium, Total	364000		11.4	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Iron, Total	31500		17.4	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Lithium, Total	58	J	0.20	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Magnesium, Total	45900		5.9	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Manganese, Total	6740		0.20	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Nickel, Total	1.7		1.1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Potassium, Total	14300	J	20.9	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Sodium, Total	79500		2.6	2/12/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Aluminum, Total	16.5		12.4	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Arsenic, Total	6.8		3.2	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Barium, Total	248		0.20	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Beryllium, Total	0.2		0.10	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Boron, Total	1320		2.1	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Calcium, Total	58800		11.4	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Chromium, Total	1.5		0.70	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Copper, Total	1.1		0.60	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Iron, Total	1720		17.4	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Lead, Total	3.8		2.2	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Lithium, Total	2490		0.20	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Magnesium, Total	6180		5.9	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Manganese, Total	4640		0.20	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Nickel, Total	2.1		1.1	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Potassium, Total	3420		20.9	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Sodium, Total	75900		2.6	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Barium, Total	15.8		0.20	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Boron, Total	99.6		2.1	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Calcium, Total	202000		8.1	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Chromium, Total	2.3		0.90	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Cobalt, Total	22.5		0.80	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Iron, Total	15200		15.7	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Lithium, Total	82.1	J	0.20	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Magnesium, Total	9720		8.8	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Manganese, Total	7530		0.10	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Nickel, Total	9.2		1.2	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Potassium, Total	9360	J	35.3	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Silver, Total	1.1		1.0	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Sodium, Total	44100		1.7	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Vanadium, Total	0.75		0.70	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Zinc, Total	23.5		0.30	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Aluminum, Total	246		22.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Barium, Total	407		0.20	11/8/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Boron, Total	26.1		2.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Calcium, Total	103000		19.2	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Chromium, Total	25.7		0.60	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Cobalt, Total	0.9		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Copper, Total	2.1		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Iron, Total	354		21.8	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Lithium, Total	13.7		0.20	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Magnesium, Total	4950		6.7	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Manganese, Total	1750		0.20	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Nickel, Total	16.8		0.90	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Potassium, Total	1070		303	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Sodium, Total	9530		4.1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Vanadium, Total	1.2		0.80	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Barium, Total	17.9		0.20	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Beryllium, Total	0.51		0.10	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Boron, Total	3700		2.1	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Calcium, Total	180000		11.4	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Chromium, Total	34.9		0.70	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Cobalt, Total	2.9		0.70	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Iron, Total	23700		17.4	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Lithium, Total	13700	J	0.20	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Magnesium, Total	18200		5.9	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Manganese, Total	1820		0.20	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Nickel, Total	14.6		1.1	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Potassium, Total	53000		2440	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Sodium, Total	1470000		124	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Vanadium, Total	13.9		0.60	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Aluminum, Total	29.6		12.7	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Barium, Total	13.8		0.20	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Boron, Total	143		2.1	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Calcium, Total	459000		8.1	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Chromium, Total	5		0.90	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Cobalt, Total	1.2		0.80	4/19/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Iron, Total	54200		15.7	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Lead, Total	33.9		2.6	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Lithium, Total	5060		0.20	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Magnesium, Total	57300		8.8	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Manganese, Total	3170		0.10	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Nickel, Total	6.6		1.2	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Potassium, Total	227000		353	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Sodium, Total	475000		17.0	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Vanadium, Total	2.6		0.70	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Zinc, Total	119		0.30	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Aluminum, Total	128		22.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Barium, Total	12.8	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Beryllium, Total	1.1		0.10	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Boron, Total	2890		2.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Calcium, Total	205000		19.2	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Chromium, Total	12.6		0.60	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Cobalt, Total	2.4	J	0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Copper, Total	1.7		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Iron, Total	6050	J	21.8	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Lithium, Total	16100	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Magnesium, Total	26700		6.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Manganese, Total	2550		0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Nickel, Total	10.8		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Potassium, Total	72700	J	40.9	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Sodium, Total	1060000		41.0	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Vanadium, Total	5.5		0.80	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Zinc, Total	6.5		0.40	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Aluminum, Total	102		22.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Arsenic, Total	5.9		2.4	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Barium, Total	9750		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Beryllium, Total	0.46		0.10	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Boron, Total	439		2.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Calcium, Total	1090000		192	11/6/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Chromium VI	38	J	20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Chromium, Total	16.8	J	0.60	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Cobalt, Total	9.3		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Copper, Total	5.7		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Iron, Total	34200		21.8	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Lithium, Total	7400		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Magnesium, Total	325000		6.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Manganese, Total	12400		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Nickel, Total	12		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Potassium, Total	702000		409	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Sodium, Total	1550000		41.0	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Vanadium, Total	10.5		0.80	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Zinc, Total	46.3		0.40	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Aluminum, Total	49.3		22.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Arsenic, Total	72.4		2.4	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Beryllium, Total	0.14		0.10	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Boron, Total	1750		2.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Calcium, Total	245000		19.2	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Chromium, Total	3.2		0.60	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Cobalt, Total	4.9		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Copper, Total	3		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Iron, Total	10500		21.8	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Lithium, Total	7740		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Magnesium, Total	84700		6.7	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Manganese, Total	4290		0.20	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Nickel, Total	8.9		0.90	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Potassium, Total	52500		303	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Sodium, Total	1380000		41.0	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Vanadium, Total	15.8		0.80	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Zinc, Total	16.4		0.40	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Aluminum, Total	131		22.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Arsenic, Total	12.5		2.4	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Barium, Total	26		0.20	11/13/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Beryllium, Total	0.75		0.10	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Boron, Total	408		2.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Calcium, Total	133000		19.2	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Chromium, Total	30.6		0.60	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Cobalt, Total	13.7		0.90	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Iron, Total	11600		21.8	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Lead, Total	4.5		2.1	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Lithium, Total	2990		0.20	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Magnesium, Total	11500		6.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Manganese, Total	3340		0.20	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Nickel, Total	37.5		0.90	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Potassium, Total	6960		40.9	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Sodium, Total	34900		4.1	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Zinc, Total	80.5	J	0.40	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Arsenic, Total	89.1		2.4	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Boron, Total	1270		2.7	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Calcium, Total	195000		19.2	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Chromium, Total	4.1		0.60	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Iron, Total	3100		21.8	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Lithium, Total	6920		0.20	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Magnesium, Total	27900		6.7	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Manganese, Total	2140		0.20	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Potassium, Total	349000		409	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Sodium, Total	291000		41.0	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Vanadium, Total	5.2		0.80	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Aluminum, Total	106		22.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Arsenic, Total	9.1		2.4	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Barium, Total	24		0.20	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Beryllium, Total	0.82		0.10	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Boron, Total	393		2.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Calcium, Total	143000		19.2	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Chromium, Total	31.3		0.60	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Cobalt, Total	13.8		0.90	11/13/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Iron, Total	12300		21.8	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Lead, Total	2.7		2.1	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Lithium, Total	2760		0.20	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Magnesium, Total	12800		6.7	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Manganese, Total	3920		0.20	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Nickel, Total	32.1		0.90	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Potassium, Total	7520		40.9	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Sodium, Total	35400		4.1	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Zinc, Total	73.2	J	0.40	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Aluminum, Total	375		22.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Barium, Total	12.5	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Boron, Total	4660		2.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Cadmium, Total	0.46	J	0.30	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Calcium, Total	109000		19.2	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Chromium, Total	22.7		0.60	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Cobalt, Total	2.1	J	0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Copper, Total	1.5		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Iron, Total	7340	J	21.8	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Lithium, Total	13700	J	0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Magnesium, Total	20500		6.7	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Manganese, Total	884		0.20	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Nickel, Total	9.4		0.90	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Potassium, Total	57000	J	40.9	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Sodium, Total	1140000		41.0	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Vanadium, Total	5.4		0.80	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Zinc, Total	8.4		0.40	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Barium, Total	67.9		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Boron, Total	62.3		2.7	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Calcium, Total	89500		19.2	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Chromium, Total	2.3		0.60	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Iron, Total	2750		21.8	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Lithium, Total	74.1		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Magnesium, Total	19200		6.7	12/21/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Manganese, Total	397		0.20	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Potassium, Total	8460		40.9	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Sodium, Total	51000		4.1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Vanadium, Total	1.6		0.80	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Zinc, Total	3.2		0.40	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Barium, Total	18.4		0.20	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Boron, Total	727		2.1	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Calcium, Total	182000		8.1	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Chromium, Total	2.5		0.90	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Cobalt, Total	4.4		0.80	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Iron, Total	17.3	J	15.7	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Lithium, Total	6100		0.20	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Magnesium, Total	51800		8.8	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Manganese, Total	2650		0.10	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Nickel, Total	11		1.2	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Potassium, Total	7020	J	35.3	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Sodium, Total	562000		17.0	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Vanadium, Total	3.6		0.70	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Aluminum, Total	74.5	J	12.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Barium, Total	72.3		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Beryllium, Total	1.3		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Boron, Total	260		2.1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Calcium, Total	596000		162	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Chromium, Total	6.3		0.90	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Cobalt, Total	27.8		0.80	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Copper, Total	5.1		0.70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Iron, Total	30600		15.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Lithium, Total	5000		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Magnesium, Total	197000		8.8	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Manganese, Total	6230		0.10	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Nickel, Total	21.3		1.2	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Potassium, Total	84500	J	706	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Sodium, Total	705000		34.0	6/19/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Vanadium, Total	2.3		0.70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Zinc, Total	3490		0.30	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Aluminum, Total	31.2	J	12.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Arsenic, Total	3.6	J	2.3	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Beryllium, Total	0.25	J	0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Boron, Total	233		2.1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Calcium, Total	375000		8.1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Chromium, Total	5.3		0.90	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Cobalt, Total	45.5		0.80	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Copper, Total	2.4		0.70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Iron, Total	4840		15.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Lithium, Total	4770		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Magnesium, Total	194000		8.8	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Manganese, Total	3400		0.10	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Nickel, Total	15.4		1.2	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Potassium, Total	23200	J	35.3	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Silver, Total	1		1.0	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Sodium, Total	592000		34.0	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Thallium, Total	4.8		3.9	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Zinc, Total	293		0.30	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Aluminum, Total	765	J	12.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Barium, Total	164		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Beryllium, Total	5.3		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Boron, Total	206		2.1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Calcium, Total	1340000		162	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Chromium, Total	36.6		0.90	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Cobalt, Total	40.1		0.80	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Copper, Total	24.4		0.70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Iron, Total	118000		15.7	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Lead, Total	3.1	J	2.6	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Lithium, Total	5260		0.20	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Magnesium, Total	319000		8.8	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Manganese, Total	15200		0.10	6/19/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Nickel, Total	50.6		1.2	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Potassium, Total	209000	J	706	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Sodium, Total	1020000		34.0	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Vanadium, Total	7.7		0.70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Zinc, Total	2610		0.30	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Barium, Total	34.3		0.20	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Boron, Total	204		2.1	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Calcium, Total	249000		8.1	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Chromium, Total	23.6		0.90	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Cobalt, Total	49.1		0.80	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Copper, Total	2.1	J	0.70	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Iron, Total	525		15.7	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Lead, Total	3.5		2.6	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Lithium, Total	2340	J	0.20	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Magnesium, Total	67900		8.8	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Manganese, Total	2430		0.10	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Nickel, Total	26.1		1.2	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Potassium, Total	58800	J	35.3	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Sodium, Total	136000		8.5	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Vanadium, Total	0.8		0.70	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Barium, Total	14.7		0.20	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Calcium, Total	226000		8.1	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Copper, Total	1.4	J	0.70	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Iron, Total	632		15.7	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Lithium, Total	12800	J	0.20	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Magnesium, Total	56600		8.8	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Manganese, Total	4340		0.10	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Nickel, Total	16.4		1.2	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Potassium, Total	16700	J	35.3	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Sodium, Total	852000		8.5	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Vanadium, Total	4.6		0.70	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Zinc, Total	3.8		0.30	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Barium, Total	112		0.20	7/19/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Boron, Total	145		2.1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Cadmium, Total	0.97	J	0.30	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Calcium, Total	603000		40.5	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Chromium, Total	6.9		0.90	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Cobalt, Total	13.9		0.80	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Iron, Total	153000		15.7	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Lithium, Total	2160	J	0.20	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Magnesium, Total	185000		8.8	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Manganese, Total	7550		0.10	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Nickel, Total	3.9		1.2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Potassium, Total	216000	J	176	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Sodium, Total	660000		8.5	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Vanadium, Total	8.7		0.70	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Barium, Total	104		0.20	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Boron, Total	484		2.1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Cadmium, Total	2	J	0.30	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Calcium, Total	898000		40.5	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Chromium, Total	9.6		0.90	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Cobalt, Total	10.8		0.80	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Iron, Total	166000		15.7	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Lithium, Total	4130	J	0.20	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Magnesium, Total	223000		8.8	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Manganese, Total	6800		0.10	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Nickel, Total	7.1		1.2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Potassium, Total	664000	J	176	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Sodium, Total	836000		8.5	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Vanadium, Total	9.6		0.70	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Zinc, Total	5.9		0.30	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Aluminum, Total	181		16.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Barium, Total	63.4	J	0.10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Beryllium, Total	0.28		0.20	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Boron, Total	99.7	J	1.6	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Calcium, Total	712000	J	312	8/14/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Chromium, Total	9.1		1.4	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Cobalt, Total	8.1		0.90	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Copper, Total	2.2	J	0.50	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Iron, Total	15400		15.6	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Lithium, Total	1150		4.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Magnesium, Total	183000		8.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Manganese, Total	6230		0.10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Nickel, Total	9		1.7	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Potassium, Total	418000	J	428	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Sodium, Total	829000	J	64.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Vanadium, Total	6.8		0.50	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Aluminum, Total	64.9		16.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Barium, Total	59	J	0.10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Beryllium, Total	0.2		0.20	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Boron, Total	56.1	J	1.6	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Calcium, Total	488000	J	7.8	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Chromium, Total	3.5		1.4	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Cobalt, Total	14.9		0.90	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Copper, Total	0.87	J	0.50	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Iron, Total	3030		15.6	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Lithium, Total	883		2.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Magnesium, Total	137000		8.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Manganese, Total	5550		0.10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Nickel, Total	3.2		1.7	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Potassium, Total	78000	J	214	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Sodium, Total	484000	J	32.0	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Aluminum, Total	40.8		16.0	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Barium, Total	13	J	0.10	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Boron, Total	656	J	1.6	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Calcium, Total	132000	J	7.8	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Chromium, Total	34.2		1.4	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Cobalt, Total	12.3		0.90	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Copper, Total	3.5	J	0.50	8/15/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Iron, Total	595		15.6	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Lithium, Total	4150		2.0	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Magnesium, Total	39900		8.0	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Manganese, Total	1840		0.10	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Nickel, Total	45.1		1.7	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Potassium, Total	16600	J	214	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Sodium, Total	448000	J	32.0	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Vanadium, Total	1.9		0.50	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Aluminum, Total	153		16.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Barium, Total	19.6		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Boron, Total	206		1.6	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Calcium, Total	367000		7.8	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Chromium, Total	5.5	J	1.4	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Cobalt, Total	9.1		0.90	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Iron, Total	823		15.6	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Lithium, Total	3520		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Magnesium, Total	216000		8.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Manganese, Total	2180		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Potassium, Total	7640	J	10.7	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Sodium, Total	425000		8.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Aluminum, Total	105		16.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Barium, Total	25.6		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Boron, Total	536		1.6	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Calcium, Total	228000		7.8	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Chromium, Total	3.4	J	1.4	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Iron, Total	41700		15.6	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Lithium, Total	5310		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Magnesium, Total	128000		8.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Manganese, Total	1750		0.10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Potassium, Total	5540	J	10.7	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Sodium, Total	463000		8.0	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Zinc, Total	25.7		0.40	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Aluminum, Total	25.4		14.0	1/3/2002

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Barium, Total	26.7		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Beryllium, Total	0.1	J	0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Boron, Total	156		1.8	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Calcium, Total	257000		8.9	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Cobalt, Total	4.9		0.80	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Iron, Total	69800		17.3	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Lithium, Total	1310	J	0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Magnesium, Total	53700		4.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Manganese, Total	3400		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Nickel, Total	10.5		1.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Potassium, Total	103000		1890	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Sodium, Total	122000		177	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Aluminum, Total	117		14.0	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Barium, Total	22.2		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Beryllium, Total	0.31		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Boron, Total	26.1		1.8	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Calcium, Total	478000		8.9	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Cobalt, Total	10.6		0.80	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Iron, Total	108000		17.3	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Lithium, Total	1230	J	0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Magnesium, Total	165000		4.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Manganese, Total	8540		0.10	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Nickel, Total	15.5		1.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Potassium, Total	813000		1890	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Sodium, Total	928000		177	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Vanadium, Total	3.8		0.50	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Zinc, Total	9.3		0.30	1/3/2002
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Aluminum, Total	41.6		22.7	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Barium, Total	117		0.20	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Boron, Total	51.7		2.7	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Cadmium, Total	2.2		0.30	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Calcium, Total	109000		19.2	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Chromium, Total	3.1		0.60	11/16/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Copper, Total	12.5		0.90	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Iron, Total	198		21.8	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Lithium, Total	31.6		0.20	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Magnesium, Total	27300		6.7	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Manganese, Total	24.8		0.20	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Nickel, Total	9.1		0.90	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Potassium, Total	6330		303	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Sodium, Total	35800		4.1	11/16/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Aluminum, Total	202		22.7	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Arsenic, Total	19.1		2.4	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Barium, Total	23.9		0.20	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Boron, Total	612		2.7	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Calcium, Total	72100		19.2	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Chromium, Total	5.6		0.60	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Copper, Total	8.3		0.90	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Iron, Total	399		21.8	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Lead, Total	3.8		2.1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Lithium, Total	2620		0.20	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Magnesium, Total	27900		6.7	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Manganese, Total	779		0.20	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Nickel, Total	10.6		0.90	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Potassium, Total	54500		40.9	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Sodium, Total	298000		41.0	11/9/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Aluminum, Total	26.8		22.7	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Barium, Total	72.9		0.20	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Boron, Total	349		2.7	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Calcium, Total	275000		19.2	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Chromium, Total	3.3		0.60	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Copper, Total	1.7		0.90	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Iron, Total	7650		21.8	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Lithium, Total	1970		0.20	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Magnesium, Total	23700		6.7	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Manganese, Total	4420		0.20	11/1/2000

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
20a	Grove	20a-021038	B38W17B	18.7'-29'	Nickel, Total	3.6		0.90	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Potassium, Total	107000		204	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Sodium, Total	203000		20.5	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Vanadium, Total	1.7		0.80	11/1/2000
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Aluminum, Total	19.5		12.4	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Barium, Total	166		0.20	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Boron, Total	31.3		2.1	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Calcium, Total	106000		11.4	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Iron, Total	2470		17.4	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Magnesium, Total	6290		5.9	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Manganese, Total	120		0.20	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Potassium, Total	7130		20.9	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Sodium, Total	39200		2.6	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Vanadium, Total	0.61		0.60	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Aluminum, Total	84.3		12.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Barium, Total	152		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Beryllium, Total	0.16		0.10	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Boron, Total	26.8		2.1	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Calcium, Total	71000		11.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Chromium, Total	13.5		0.70	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Cobalt, Total	0.93		0.70	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Copper, Total	0.94		0.60	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Iron, Total	1610		17.4	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Lithium, Total	23.2		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Magnesium, Total	4110		5.9	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Manganese, Total	24.8		0.20	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Nickel, Total	12.3		1.1	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Potassium, Total	15900		20.9	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Sodium, Total	53600		2.6	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Aluminum, Total	30.6		12.4	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Barium, Total	131		0.20	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Boron, Total	54		2.1	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Calcium, Total	61500		11.4	2/22/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Copper, Total	0.77		0.60	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Iron, Total	3930		17.4	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Lithium, Total	5.4		0.20	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Magnesium, Total	13100		5.9	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Manganese, Total	93.9		0.20	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Nickel, Total	1.7		1.1	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Potassium, Total	1960		20.9	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Sodium, Total	30500		2.6	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Barium, Total	453		0.20	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Beryllium, Total	0.1		0.10	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Boron, Total	33.9		2.1	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Calcium, Total	87500		11.4	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Iron, Total	6150		17.4	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Lithium, Total	4.8		0.20	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Magnesium, Total	23700		5.9	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Manganese, Total	98.2		0.20	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Potassium, Total	2090		20.9	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Sodium, Total	19700		2.6	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Vanadium, Total	1.2		0.60	2/19/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Arsenic, Total	3.2		3.2	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Barium, Total	242		0.20	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Boron, Total	59		2.1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Calcium, Total	87400		11.4	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Chromium, Total	8.4		0.70	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Cobalt, Total	2		0.70	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Iron, Total	3270		17.4	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Lithium, Total	3.9		0.20	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Magnesium, Total	13900		5.9	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Manganese, Total	95.2		0.20	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Nickel, Total	11		1.1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Potassium, Total	4120		20.9	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Selenium, Total	3.1		3.1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Sodium, Total	24700		2.6	2/26/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Arsenic, Total	3.5		3.2	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Barium, Total	32.5		0.20	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Boron, Total	184		2.1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Calcium, Total	49600		11.4	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Copper, Total	16.2		0.60	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Iron, Total	567		17.4	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Lithium, Total	2030	J	0.20	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Magnesium, Total	18300		5.9	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Manganese, Total	259		0.20	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Nickel, Total	7.4		1.1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Potassium, Total	12300	J	20.9	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Sodium, Total	175000		13.0	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Vanadium, Total	18.6		0.60	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Zinc, Total	4.4	J	0.50	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Barium, Total	120		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Boron, Total	69.6		2.1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Calcium, Total	77700		11.4	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Cobalt, Total	1.5		0.70	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Iron, Total	3870		17.4	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Lithium, Total	1.5		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Magnesium, Total	16600		5.9	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Manganese, Total	43.2		0.20	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Potassium, Total	942		20.9	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Sodium, Total	10500		2.6	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Vanadium, Total	1.1		0.60	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Barium, Total	186		0.20	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Boron, Total	45.2		2.1	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Calcium, Total	58100		11.4	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Chromium, Total	1.8		0.70	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Iron, Total	7090		17.4	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Lithium, Total	20.1	J	0.20	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Magnesium, Total	12900		5.9	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Manganese, Total	60.3		0.20	2/15/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Nickel, Total	2.7		1.1	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Sodium, Total	23200		2.6	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Vanadium, Total	1.6		0.60	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Zinc, Total	14.5	J	0.50	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Aluminum, Total	81.8		12.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Arsenic, Total	4.1		3.2	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Barium, Total	125		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Beryllium, Total	0.15		0.10	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Boron, Total	29.6		2.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Calcium, Total	76000		11.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Chromium, Total	3		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Cobalt, Total	4.6		0.70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Copper, Total	1		0.60	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Iron, Total	8290		17.4	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Lithium, Total	18.5		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Magnesium, Total	32400		5.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Manganese, Total	132		0.20	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Nickel, Total	8.6		1.1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Potassium, Total	1420		20.9	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Sodium, Total	15200		2.6	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Vanadium, Total	2.8		0.60	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Barium, Total	127		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Boron, Total	62.1		2.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Calcium, Total	132000		11.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Chromium, Total	3.1		0.70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Cobalt, Total	3.4		0.70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Iron, Total	13700		17.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Lithium, Total	6.6		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Magnesium, Total	15000		5.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Manganese, Total	928		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Nickel, Total	5.6		1.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Potassium, Total	4980		20.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Sodium, Total	51600		2.6	2/28/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Zinc, Total	6		0.50	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Aluminum, Total	113		12.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Barium, Total	98.9		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Boron, Total	252		2.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Calcium, Total	133000		11.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Chromium, Total	6.4		0.70	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Cobalt, Total	4.9		0.70	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Iron, Total	15800		17.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Lithium, Total	8.9		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Magnesium, Total	20000		5.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Manganese, Total	436		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Nickel, Total	8.7		1.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Potassium, Total	4400		20.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Sodium, Total	63200		2.6	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Barium, Total	349		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Boron, Total	28.6		2.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Cadmium, Total	0.3		0.30	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Calcium, Total	115000		11.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Chromium, Total	1.4		0.70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Cobalt, Total	4.1		0.70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Iron, Total	13000		17.4	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Lithium, Total	3.6		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Magnesium, Total	7520		5.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Manganese, Total	2740		0.20	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Nickel, Total	4.8		1.1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Potassium, Total	1560		20.9	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Sodium, Total	52600		2.6	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Aluminum, Total	242		12.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Arsenic, Total	3.7		3.2	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Barium, Total	245		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Boron, Total	39.3		2.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Calcium, Total	24800		11.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Chromium, Total	6.8		0.70	3/1/2001

TABLE 4-44
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	GWRI Site Name	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Iron, Total	1360		17.4	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Lithium, Total	159		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Magnesium, Total	971		5.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Manganese, Total	24.5		0.20	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Nickel, Total	4.5		1.1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Potassium, Total	87900		20.9	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Sodium, Total	97200		2.6	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Vanadium, Total	1.4		0.60	3/1/2001

Notes:

J = Estimated Concentration

ft bgs = Feet below ground surface

TABLE 4-45
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES EXCEEDING STANDARDS SORTED BY CHEMICALS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Aluminum, Total	207		22.7	200	200	200	200	NA	11/7/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Aluminum, Total	246		22.7	200	200	200	200	NA	11/8/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Aluminum, Total	375		22.7	200	200	200	200	NA	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Aluminum, Total	765	J	12.7	200	200	200	200	NA	6/19/2001
20a	Grove	20a-021036	B38W15D	40'-45'	Aluminum, Total	202		22.7	200	200	200	200	NA	11/9/2000
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Aluminum, Total	242		12.4	200	200	200	200	NA	3/1/2001
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Arsenic, Total	72.4		2.4	50	0.02	8	8	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Arsenic, Total	89.1		2.4	50	0.02	8	8	NA	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Arsenic, Total	12.5		2.4	50	0.02	8	8	NA	11/13/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Arsenic, Total	19.1		2.4	50	0.02	8	8	NA	11/9/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Barium, Total	9750		0.20	2000	2000	200	2000	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Beryllium, Total	5.3		0.20	4	0.008	20	20	NA	6/19/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Chromium, Total	513		0.60	100	100	10	100	NA	11/2/2000
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Chromium, Total	689		0.70	100	100	10	100	NA	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Chromium, Total	173		0.60	100	100	10	100	NA	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Chromium, Total	160		0.60	100	100	10	100	NA	2/6/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Iron, Soluble	1260		17.4	300	300	100	300	NA	2/21/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021077	MW-16D	48'-73'	Iron, Total	12500		17.4	300	300	100	300	NA	2/21/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Iron, Total	9940		17.4	300	300	100	300	NA	2/27/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Iron, Total	2420		17.4	300	300	100	300	NA	2/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Iron, Total	4060		15.7	300	300	100	300	NA	4/19/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Iron, Total	798		17.4	300	300	100	300	NA	2/8/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Iron, Total	4270		21.8	300	300	100	300	NA	11/2/2000
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Iron, Total	10300		17.4	300	300	100	300	NA	3/13/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Iron, Total	1990		17.4	300	300	100	300	NA	2/8/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Iron, Total	329		17.4	300	300	100	300	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Iron, Total	308		21.8	300	300	100	300	NA	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Iron, Total	18500		21.8	300	300	100	300	NA	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Iron, Total	17500		21.8	300	300	100	300	NA	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Iron, Total	27100		21.8	300	300	100	300	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Iron, Total	30800		21.8	300	300	100	300	NA	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Iron, Total	2960	J	21.8	300	300	100	300	NA	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Iron, Total	1440	J	21.8	300	300	100	300	NA	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Iron, Total	4030	J	21.8	300	300	100	300	NA	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Iron, Total	11800	J	21.8	300	300	100	300	NA	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Iron, Total	1160		21.8	300	300	100	300	NA	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Iron, Total	388		21.8	300	300	100	300	NA	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Iron, Total	1150		21.8	300	300	100	300	NA	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Iron, Total	31500		17.4	300	300	100	300	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Iron, Total	1720		17.4	300	300	100	300	NA	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Iron, Total	15200		15.7	300	300	100	300	NA	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Iron, Total	354		21.8	300	300	100	300	NA	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Iron, Total	23700		17.4	300	300	100	300	NA	3/14/2001

TABLE 4-45
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES EXCEEDING STANDARDS SORTED BY CHEMICALS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Iron, Total	54200		15.7	300	300	100	300	NA	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Iron, Total	34200		21.8	300	300	100	300	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Iron, Total	10500		21.8	300	300	100	300	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Iron, Total	3100		21.8	300	300	100	300	NA	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Iron, Total	11600		21.8	300	300	100	300	NA	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Iron, Total	12300		21.8	300	300	100	300	NA	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Iron, Total	7340	J	21.8	300	300	100	300	NA	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Iron, Total	2750		21.8	300	300	100	300	NA	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Iron, Total	30600		15.7	300	300	100	300	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Iron, Total	4840		15.7	300	300	100	300	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Iron, Total	118000		15.7	300	300	100	300	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Iron, Total	525		15.7	300	300	100	300	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Iron, Total	632		15.7	300	300	100	300	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Iron, Total	153000		15.7	300	300	100	300	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Iron, Total	166000		15.7	300	300	100	300	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Iron, Total	15400		15.6	300	300	100	300	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Iron, Total	3030		15.6	300	300	100	300	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Iron, Total	595		15.6	300	300	100	300	NA	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Iron, Total	823		15.6	300	300	100	300	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Iron, Total	41700		15.6	300	300	100	300	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Iron, Total	69800		17.3	300	300	100	300	NA	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Iron, Total	108000		17.3	300	300	100	300	NA	1/3/2002
20a	Grove	20a-021038	B38W17B	18.7'-29'	Iron, Total	7650		21.8	300	300	100	300	NA	11/1/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Iron, Total	399		21.8	300	300	100	300	NA	11/9/2000
22b	Lodi Brook Drainage Basin	22b-021081	MW-18D	32'-57'	Iron, Total	6150		17.4	300	300	100	300	NA	2/19/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Iron, Total	1610		17.4	300	300	100	300	NA	2/21/2001
22b	Lodi Brook Drainage Basin	22b-021078	MW-17D	22'-46'	Iron, Total	3930		17.4	300	300	100	300	NA	2/22/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Iron, Total	2470		17.4	300	300	100	300	NA	3/13/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Iron, Total	567		17.4	300	300	100	300	NA	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Iron, Total	7090		17.4	300	300	100	300	NA	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Iron, Total	3870		17.4	300	300	100	300	NA	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Iron, Total	8290		17.4	300	300	100	300	NA	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Iron, Total	3270		17.4	300	300	100	300	NA	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Iron, Total	13000		17.4	300	300	100	300	NA	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Iron, Total	13700		17.4	300	300	100	300	NA	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Iron, Total	1360		17.4	300	300	100	300	NA	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Iron, Total	15800		17.4	300	300	100	300	NA	3/1/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Lead, Total	33.9		2.6	15	5	10	10	NA	4/19/2001
02a	100 Hancock Street	02a-021073	MW-14D	27'-52'	Lithium, Total	751	=	0.20	NA			NA	730	2/27/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Lithium, Total	4260	J	0.20	NA			NA	730	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Lithium, Total	5100	J	0.20	NA			NA	730	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Lithium, Total	3930	J	0.20	NA			NA	730	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Lithium, Total	1100	J	0.20	NA			NA	730	11/27/2000

TABLE 4-45
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES EXCEEDING STANDARDS SORTED BY CHEMICALS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Lithium, Total	2710	J	0.20	NA			NA	730	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Lithium, Total	2490	=	0.20	NA			NA	730	2/22/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Lithium, Total	5060		0.20	NA			NA	730	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Lithium, Total	13700	J	0.20	NA			NA	730	3/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Lithium, Total	12800	J	0.20	NA			NA	730	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Lithium, Total	7400		0.20	NA			NA	730	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Lithium, Total	7740		0.20	NA			NA	730	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Lithium, Total	2990		0.20	NA			NA	730	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Lithium, Total	2760		0.20	NA			NA	730	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Lithium, Total	16100	J	0.20	NA			NA	730	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Lithium, Total	5000		0.20	NA			NA	730	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Lithium, Total	4150		2.0	NA			NA	730	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021556	BRPW-1D	40'-115'	Lithium, Total	3630		100	NA			NA	730	5/29/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Lithium, Total	4130	J	0.20	NA			NA	730	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Lithium, Total	6100		0.20	NA			NA	730	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Lithium, Total	6920		0.20	NA			NA	730	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Lithium, Total	4770		0.20	NA			NA	730	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Lithium, Total	2340	J	0.20	NA			NA	730	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Lithium, Total	2160	J	0.20	NA			NA	730	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Lithium, Total	883		2.0	NA			NA	730	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Lithium, Total	1150		4.0	NA			NA	730	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Lithium, Total	5310		0.10	NA			NA	730	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Lithium, Total	3520		0.10	NA			NA	730	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Lithium, Total	5260		0.20	NA			NA	730	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Lithium, Total	1310	J	0.10	NA			NA	730	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Lithium, Total	1230	J	0.10	NA			NA	730	1/3/2002
20a	Grove	20a-021036	B38W15D	40'-45'	Lithium, Total	2620		0.20	NA			NA	730	11/9/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Lithium, Total	1970		0.20	NA			NA	730	11/1/2000
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Lithium, Total	2030	J	0.20	NA			NA	730	2/14/2001
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021499	MW-16D	48'-73'	Manganese, Soluble	167		0.20	50	50	6	50	NA	2/21/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Manganese, Total	883		0.20	50	50	6	50	NA	2/13/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Manganese, Total	83.8		0.20	50	50	6	50	NA	11/2/2000
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Manganese, Total	2870		0.20	50	50	6	50	NA	2/7/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Manganese, Total	97.6		0.20	50	50	6	50	NA	2/12/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Manganese, Total	997		0.20	50	50	6	50	NA	2/13/2001
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Manganese, Total	3210		0.20	50	50	6	50	NA	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Manganese, Total	7540		0.20	50	50	6	50	NA	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Manganese, Total	6160		0.20	50	50	6	50	NA	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Manganese, Total	5730		0.20	50	50	6	50	NA	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Manganese, Total	6880		0.20	50	50	6	50	NA	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Manganese, Total	5600		0.20	50	50	6	50	NA	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Manganese, Total	1160		0.20	50	50	6	50	NA	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Manganese, Total	2690		0.20	50	50	6	50	NA	11/29/2000

TABLE 4-45
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES EXCEEDING STANDARDS SORTED BY CHEMICALS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Manganese, Total	3390		0.20	50	50	6	50	NA	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Manganese, Total	3600		0.20	50	50	6	50	NA	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Manganese, Total	1890		0.20	50	50	6	50	NA	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Manganese, Total	6740		0.20	50	50	6	50	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Manganese, Total	307		0.20	50	50	6	50	NA	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Manganese, Total	7530		0.10	50	50	6	50	NA	7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Manganese, Total	1750		0.20	50	50	6	50	NA	11/8/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Manganese, Total	12400		0.20	50	50	6	50	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Manganese, Total	4290		0.20	50	50	6	50	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Manganese, Total	2140		0.20	50	50	6	50	NA	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Manganese, Total	3340		0.20	50	50	6	50	NA	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Manganese, Total	3920		0.20	50	50	6	50	NA	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Manganese, Total	2550		0.20	50	50	6	50	NA	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Manganese, Total	397		0.20	50	50	6	50	NA	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Manganese, Total	2430		0.10	50	50	6	50	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Manganese, Total	4340		0.10	50	50	6	50	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Manganese, Total	7550		0.10	50	50	6	50	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Manganese, Total	6800		0.10	50	50	6	50	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Manganese, Total	6230		0.10	50	50	6	50	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Manganese, Total	5550		0.10	50	50	6	50	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Manganese, Total	1840		0.10	50	50	6	50	NA	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Manganese, Total	2180		0.10	50	50	6	50	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Manganese, Total	1750		0.10	50	50	6	50	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Manganese, Total	3400		0.10	50	50	6	50	NA	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Manganese, Total	8540		0.10	50	50	6	50	NA	1/3/2002
20a	Grove	20a-021038	B38W17B	18.7'-29'	Manganese, Total	4420		0.20	50	50	6	50	NA	11/1/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Manganese, Total	779		0.20	50	50	6	50	NA	11/9/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Nickel, Total	160		0.90		100	10	100	NA	11/2/2000
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Sodium, Total	66900		1.7		50000	400	50000	NA	4/19/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Sodium, Total	56900		2.6		50000	400	50000	NA	2/8/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Sodium, Total	214000		20.5		50000	400	50000	NA	2/7/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Sodium, Total	50300		2.6		50000	400	50000	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Sodium, Total	92900		4.1		50000	400	50000	NA	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Sodium, Total	83800		4.1		50000	400	50000	NA	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Sodium, Total	86800		4.1		50000	400	50000	NA	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Sodium, Total	90200		4.1		50000	400	50000	NA	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Sodium, Total	150000		20.5		50000	400	50000	NA	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Sodium, Total	158000		20.5		50000	400	50000	NA	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Sodium, Total	79500		2.6		50000	400	50000	NA	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Sodium, Total	75900		2.6		50000	400	50000	NA	2/22/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Sodium, Total	1E+06		124		50000	400	50000	NA	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Sodium, Total	475000		17.0		50000	400	50000	NA	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Sodium, Total	2E+06		41.0		50000	400	50000	NA	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Sodium, Total	1E+06		41.0		50000	400	50000	NA	11/6/2000

TABLE 4-45
SUMMARY OF TAL METALS IN BEDROCK GROUNDWATER SAMPLES EXCEEDING STANDARDS SORTED BY CHEMICALS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	MCL	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL (ug/L)	Region IX PRG (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Sodium, Total	291000		41.0		50000	400	50000	NA	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Sodium, Total	1E+06		41.0		50000	400	50000	NA	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Sodium, Total	51000		4.1		50000	400	50000	NA	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Sodium, Total	562000		17.0		50000	400	50000	NA	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Sodium, Total	705000		34.0		50000	400	50000	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Sodium, Total	592000		34.0		50000	400	50000	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Sodium, Total	1E+06		34.0		50000	400	50000	NA	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Sodium, Total	136000		8.5		50000	400	50000	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Sodium, Total	852000		8.5		50000	400	50000	NA	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Sodium, Total	660000		8.5		50000	400	50000	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Sodium, Total	836000		8.5		50000	400	50000	NA	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Sodium, Total	829000	J	64.0		50000	400	50000	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Sodium, Total	484000	J	32.0		50000	400	50000	NA	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Sodium, Total	448000	J	32.0		50000	400	50000	NA	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Sodium, Total	425000		8.0		50000	400	50000	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Sodium, Total	463000		8.0		50000	400	50000	NA	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Sodium, Total	122000		177				50000	NA	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Sodium, Total	928000		177				50000	NA	1/3/2002
20a	Grove	20a-021038	B38W17B	18.7'-29'	Sodium, Total	203000		20.5		50000	400	50000	NA	11/1/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Sodium, Total	298000		41.0		50000	400	50000	NA	11/9/2000
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Sodium, Total	53600		2.6		50000	400	50000	NA	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Sodium, Total	175000		13.0		50000	400	50000	NA	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	Sodium, Total	52600		2.6		50000	400	50000	NA	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Sodium, Total	51600		2.6		50000	400	50000	NA	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Sodium, Total	97200		2.6		50000	400	50000	NA	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Sodium, Total	63200		2.6		50000	400	50000	NA	3/1/2001
02d	8 Mill Street	02d-021075	MW-15D	36'-61'	Thallium, Total	3.1		3.0	2	0.5	10	10	NA	2/19/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Thallium, Total	4.4		3.0	2	0.5	10	10	NA	2/8/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Thallium, Total	4.8		3.9	2	0.5	10	10	NA	6/19/2001

Notes:
J = Estimated Concentration
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
PRG = Preliminary Remediation Goal
NA = Not Applicable

TABLE 4-46
SUMMARY OF DETECTABLE REE'S IN BEDROCK GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Neodymium, Total	22.4		13.2	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Yttrium, Total	4.7		1.9	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	Neodymium, Total	14.1		13.2	7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Neodymium, Total	24.8		13.2	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Dysprosium, Total	5.6		3.1	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Neodymium, Total	14.6		13.2	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Dysprosium, Total	4.1		3.1	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Dysprosium, Total	10.1		3.1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Neodymium, Total	17		13.2	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Yttrium, Total	3.1		1.9	2/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Dysprosium, Total	3.7		3.1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Dysprosium, Total	4.3		3.1	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Neodymium, Total	13.9		13.2	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Dysprosium, Total	14.5		3.1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Neodymium, Total	28.2		13.2	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Dysprosium, Total	6.3		3.1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Cerium, Total	312		35.3	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Lanthanum, Total	231		33.8	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Neodymium, Total	132		13.2	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Yttrium, Total	41.6		1.9	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Cerium, Total	313		35.3	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Lanthanum, Total	250		33.8	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Neodymium, Total	133		13.2	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Yttrium, Total	44.5		1.9	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Neodymium, Total	28.7		13.2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Yttrium, Total	3.7		1.3	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Yttrium, Total	1.8		1.3	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Neodymium, Total	17.8		13.2	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Dysprosium, Total	3.6		3.1	1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Neodymium, Total	23.1		13.2	1/3/2002
20a	Grove	20a-021038	B38W17B	18.7'-29'	Dysprosium, Total	5.8		3.1	11/1/2000

Note:
ft bgs = Feet below ground surface

TABLE 4-47
SUMMARY OF DETECTABLE VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	1,2-Dichloroethane	0.2	J	REG	1	2	0.3	2	2	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	1,2-Dichloroethene (total)	1	J	REG	1	70	10	2	10	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Acetone	4	J	REG	5		700		700	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Trichloroethene	0.4	J	REG	1	1	1	1	1	4/19/2001
05a	99 Essex Street	05a-021542	MW-13D	25'-50'	Vinyl Chloride	0.2	J	REG	2	2	0.08	5	5	4/19/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	1,2-Dichloroethane	0.1	J	REG	1	2	0.3	2	2	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	1,2-Dichloroethene (total)	3		REG	1	70	10	2	10	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Trichloroethene	2		REG	1	1	1	1	1	2/13/2001
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Vinyl Chloride	0.3	J	REG	2	2	0.08	5	5	2/13/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	1,2-Dichloroethene (total)	0.2	J	REG	1	70	10	2	10	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Chloroform	0.4	J	REG	1		6	1	6	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Tetrachloroethene	6		REG	1	1	0.4	1	1	2/15/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Trichloroethene	0.2	J	REG	1	1	1	1	1	2/15/2001
06e	29 Essex Street	06e-021417	BRMW9	13.5'-23.5'	Chloroform	0.4	J	REG	1		6	1	6	2/8/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Chloroform	1		REG	1		6	1	6	2/12/2001
06e	29 Essex Street	06e-021422	BRMW12	38'-48'	Tetrachloroethene	0.1	J	REG	1	1	0.4	1	1	2/12/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	1,2-Dichloroethene (total)	0.1	J	REG	1	70	10	2	10	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Chloroform	2		REG	1		6	1	6	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Tetrachloroethene	0.2	J	REG	1	1	0.4	1	1	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Toluene	0.1	J	REG	1	1000	1000	5	1000	11/2/2000
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Trichloroethene	2		REG	1	1	1	1	1	11/2/2000
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	1,2-Dichloroethane	0.3	J	REG	1	2	0.3	2	2	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	1,2-Dichloroethene (total)	3		REG	1	70	10	2	10	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Chloroform	1		REG	1		6	1	6	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Tetrachloroethene	0.4	J	REG	1	1	0.4	1	1	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Toluene	0.2	J	REG	1	1000	1000	5	1000	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Trichloroethene	2		REG	1	1	1	1	1	3/13/2001
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Vinyl Chloride	0.6	J	REG	2	2	0.08	5	5	3/13/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	1,2-Dichloroethene (total)	110	D	DIL	10	70	10	2	10	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Benzene	16		REG	1	1	0.2	1	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Benzene	17	D	DIL	10	1	0.2	1	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Chlorobenzene	0.2	J	REG	1		54	2	54	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Toluene	0.2	J	REG	1	1000	1000	5	1000	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Total Xylene	1	J	DIL	10	1000	40	2	40	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Total Xylene	1		REG	1	1000	40	2	40	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Vinyl Chloride	200		REG	2	2	0.08	5	5	2/7/2001
09a	149-151 Maywood Avenue	09a-021412	BRMW6	17'-27'	Chloroform	2		REG	1		6	1	6	2/8/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	1,2-Dichloroethene (total)	2		REG	1	70	10	2	10	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Chloroform	0.5	J	REG	1		6	1	6	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Tetrachloroethene	0.5	J	REG	1	1	0.4	1	1	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Trichloroethene	1		REG	1	1	1	1	1	2/13/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Vinyl Chloride	0.1	J	REG	2	2	0.08	5	5	2/13/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	1,2-Dichloroethene (total)	0.7	J	REG	1	70	10	2	10	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Chloroform	0.3	J	REG	1		6	1	6	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Tetrachloroethene	4		REG	1	1	0.4	1	1	2/8/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Trichloroethene	0.3	J	REG	1	1	1	1	1	2/8/2001

TABLE 4-47
SUMMARY OF DETECTABLE VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	1,1-Dichloroethane	0.1	J	REG	1	50	70		70	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	1,2-Dichloroethane	0.7	J	REG	1	2	0.3	2	2	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	1,2-Dichloroethene (total)	10		REG	1	70	10	2	10	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Tetrachloroethene	2		REG	1	1	0.4	1	1	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Trichloroethene	2		REG	1	1	1	1	1	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Vinyl Chloride	1	J	REG	2	2	0.08	5	5	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Carbon Disulfide	0.2	J	REG	1					11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Toluene	0.4	J	REG	1	1000	1000	5	1000	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021016	MISS03B	20'-50'	Total Xylene	0.4	J	REG	1	1000	40	2	40	11/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	1,2-Dichloroethene (total)	8	J	REG	1	70	10	2	10	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Benzene	6	J	REG	1	1	0.2	1	1	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Carbon Disulfide	0.1	J	REG	1					11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Toluene	0.4	J	REG	1	1000	1000	5	1000	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Total Xylene	1		REG	1	1000	40	2	40	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Vinyl Chloride	66	D	DIL	10	2	0.08	5	5	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	1,2-Dichloroethene (total)	0.3	J	REG	1	70	10	2	10	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Benzene	0.3	J	REG	1	1	0.2	1	1	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Toluene	0.9	J	REG	1	1000	1000	5	1000	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021026	B38W03B	29.50'-39.50'	Total Xylene	0.7	J	REG	1	1000	40	2	40	11/16/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Ethylbenzene	100		REG	10	700	700	5	700	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Methylene Chloride	22	B	REG	20	3	2	2	2	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Toluene	4	J	REG	10	1000	1000	5	1000	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Total Xylene	270		REG	10	1000	40	2	40	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Ethylbenzene	2		REG	1	700	700	5	700	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Methylene Chloride	0.6	JB	REG	2	3	2	2	2	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Tetrachloroethene	0.1	J	REG	1	1	0.4	1	1	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Toluene	0.3	J	REG	1	1000	1000	5	1000	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021028	B38W05B	22.7'-33'	Total Xylene	8		REG	1	1000	40	2	40	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	1,2-Dichloroethene (total)	0.9	J	REG	1	70	10	2	10	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Methylene Chloride	0.7	JB	REG	2	3	2	2	2	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Toluene	0.3	J	REG	1	1000	1000	5	1000	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Total Xylene	1	J	REG	1	1000	40	2	40	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021029	B38W06B	15.9'-20.90'	Vinyl Chloride	0.2	J	REG	2	2	0.08	5	5	11/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Benzene	0.1	J	REG	1	1	0.2	1	1	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Toluene	0.3	J	REG	1	1000	1000	5	1000	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021030	B38W07B	18.5'-28.8'	Total Xylene	0.2	J	REG	1	1000	40	2	40	11/7/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	1,2-Dichloroethene (total)	0.3	J	REG	1	70	10	2	10	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Benzene	0.2	J	REG	1	1	0.2	1	1	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Carbon Disulfide	0.2	J	REG	1					11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Chlorobenzene	0.3	J	REG	1		54	2	54	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Ethylbenzene	0.2	J	REG	1	700	700	5	700	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Toluene	0.7	J	REG	1	1000	1000	5	1000	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021043	B38W24D	22'-27'	Total Xylene	1	J	REG	1	1000	40	2	40	11/15/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Benzene	0.4	J	REG	1	1	0.2	1	1	11/27/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Chlorobenzene	0.2	J	REG	1		54	2	54	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Ethylbenzene	0.2	J	REG	1	700	700	5	700	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Toluene	1		REG	1	1000	1000	5	1000	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021045	B38W25D	21.6'-26.6'	Total Xylene	0.9	J	REG	1	1000	40	2	40	11/27/2000
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	1,2-Dichloroethane	0.2	J	REG	1	2	0.3	2	2	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	1,2-Dichloroethene (total)	1	J	REG	1	70	10	2	10	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Total Xylene	0.7	J	REG	1	1000	40	2	40	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021403	PT-1DA	31.5'-41.5'	Vinyl Chloride	0.5	J	REG	2	2	0.08	5	5	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	1,2-Dichloroethane	0.2	J	REG	1	2	0.3	2	2	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	1,2-Dichloroethene (total)	1	J	REG	1	70	10	2	10	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021404	PT-1DB	31.5'-41.5'	Vinyl Chloride	0.5	J	REG	2	2	0.08	5	5	2/5/2001
10a	100 West Hunter Avenue (Stepan)	10a-021419	BRMW10	30'-40	Tetrachloroethene	0.1	J	REG	1	1	0.4	1	1	2/14/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Chloroform	0.6	J	REG	1		6	1	6	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021429	BRMW15	20'-30'	Tetrachloroethene	0.1	J	REG	1	1	0.4	1	1	2/7/2001
10a	100 West Hunter Avenue (Stepan)	10a-021430	BRMW16	20'-30'	Chloroform	0.4	J	REG	1		6	1	6	2/8/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Chloroform	0.4	J	REG	1		6	1	6	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Tetrachloroethene	1		REG	1	1	0.4	1	1	2/6/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	1,2-Dichloroethene (total)	0.3	J	REG	1	70	10	2	10	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021463	B38W03B	29.5'-39.50	Ethylbenzene	0.2	J	REG	1	700	700	5	700	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Ethylbenzene	150	D	DIL	10	700	700	5	700	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Methylene Chloride	13	JBD	DIL	20	3	2	2	2	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Toluene	2	J	REG	1	1000	1000	5	1000	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Total Xylene	460	D	DIL	10	1000	40	2	40	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	2-Chlorotoluene	0.4	J	REG	1					7/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021592	MISS03B	20'-50'	4-Chlorotoluene	0.3	J	REG	1					7/12/2001
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Benzene	0.7	J	REG	1	1	0.2	1	1	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Chlorobenzene	0.2	J	REG	1		54	2	54	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Toluene	0.6	J	REG	1	1000	1000	5	1000	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021025	B38W02D	37'-42'	Total Xylene	0.5	J	REG	1	1000	40	2	40	11/8/2000
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	1,1-Dichloroethane	0.3	J	REG	1	50	70		70	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	1,2-Dichloroethene (total)	0.1	J	REG	1	70	10	2	10	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Benzene	0.4	J	REG	1	1	0.2	1	1	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Chlorobenzene	0.2	J	REG	1		54	2	54	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021086	MW-20D	30'-55'	Total Xylene	0.4	J	REG	1	1000	40	2	40	3/14/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	1,1-Dichloroethane	0.3	J	REG	1	50	70		70	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	1,2-Dichloroethene (total)	1	J	REG	1	70	10	2	10	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Acetone	4	J	REG	5		700		700	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Benzene	5		REG	1	1	0.2	1	1	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Chlorobenzene	0.1	J	REG	1		54	2	54	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Trichloroethene	1		REG	1	1	1	1	1	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Benzene	0.7	J	REG	1	1	0.2	1	1	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Carbon Disulfide	0.1	J	REG	1					11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Chlorobenzene	0.1	J	REG	1		54	2	54	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Ethylbenzene	0.2	J	REG	1	700	700	5	700	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Toluene	2		REG	1	1000	1000	5	1000	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021014	MISS02B	28.5'-58.5'	Total Xylene	0.7	J	REG	1	1000	40	2	40	11/21/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	1,2-Dichloroethene (total)	0.8	J	REG	1	70	10	2	10	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	4-Methyl-2-pentanone	5	J	REG	5		400		400	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Acetone	200	J	REG	5		700		700	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Benzene	3500	D	DIL	100	1	0.2	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Carbon Disulfide	0.3	J	REG	1					11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Chlorobenzene	8	J	REG	1		54	2	54	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Ethylbenzene	0.9	J	REG	1	700	700	5	700	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Toluene	6	J	REG	1	1000	1000	5	1000	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Total Xylene	4	J	REG	1	1000	40	2	40	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Vinyl Chloride	0.2	J	REG	2	2	0.08	5	5	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	1,1,1-Trichloroethane	0.2	J	REG	1	30	30	1	30	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	1,1-Dichloroethane	0.6	J	REG	1	50	70		70	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	1,1-Dichloroethene	0.7	J	REG	1	2	1	2	2	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	1,2-Dichloroethene (total)	6		REG	1	70	10	2	10	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Acetone	3	JB	REG	5		700		700	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Benzene	0.2	J	REG	1	1	0.2	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Carbon Disulfide	0.2	J	REG	1					11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Chlorobenzene	0.2	J	REG	1		54	2	54	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Tetrachloroethene	9		REG	1	1	0.4	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Toluene	0.3	J	REG	1	1000	1000	5	1000	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Total Xylene	0.4	J	REG	1	1000	40	2	40	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Trichloroethene	2		REG	1	1	1	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Vinyl Chloride	1	J	REG	2	2	0.08	5	5	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Toluene	0.4	J	REG	1	1000	1000	5	1000	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021039	B38W18D	35'-40'	Total Xylene	0.4	J	REG	1	1000	40	2	40	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Ethylbenzene	0.2	J	REG	1	700	700	5	700	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Toluene	0.7	J	REG	1	1000	1000	5	1000	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021133	B38W18D	35'-40'	Total Xylene	0.8	J	REG	1	1000	40	2	40	11/13/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	1,2-Dichloroethene (total)	0.5	J	REG	1	70	10	2	10	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Benzene	1		REG	1	1	0.2	1	1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Chlorobenzene	0.4	J	REG	1		54	2	54	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Toluene	0.4	J	REG	1	1000	1000	5	1000	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Total Xylene	0.5	J	REG	1	1000	40	2	40	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Benzene	0.6	J	REG	1	1	0.2	1	1	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Carbon Disulfide	0.2	J	REG	1					11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Ethylbenzene	0.5	J	REG	1	700	700	5	700	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Toluene	3		REG	1	1000	1000	5	1000	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021172	MISS02B	28.5'-58.5'	Total Xylene	2		REG	1	1000	40	2	40	11/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	1,1-Dichloroethene	0.2	J	REG	1	2	1	2	2	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	1,2-Dichloroethene (total)	1		REG	1	70	10	2	10	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Chloroform	0.2	J	REG	1		6	1	6	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Tetrachloroethene	12		REG	1	1	0.4	1	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Toluene	0.3	J	REG	1	1000	1000	5	1000	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Total Xylene	0.2	J	REG	1	1000	40	2	40	12/21/2000

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12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Trichloroethene	1		REG	1	1	1	1	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	4-Methyl-2-Pentanone	1	J	REG	20		400		400	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Benzene	210		REG	10	1	0.2	1	1	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Chlorobenzene	1	J	REG	10		54	2	54	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Methylene Chloride	8	J	REG	10	3	2	2	2	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Toluene	24		REG	10	1000	1000	5	1000	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Total Xylene	1	J	REG	10	1000	40	2	40	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	1,2-Dichloroethene (total)	2		REG	1	70	10	2	10	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	2-Butanone	8	J	REG	5		300		300	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	2-Chlorotoluene	110	J	DIL	25					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	4-Chlorotoluene	52	J	DIL	25					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	4-Methyl-2-pentanone	5	J	REG	5		400		400	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Benzene	480		DIL	25	1	0.2	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Chlorobenzene	2		REG	1		54	2	54	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Tetrachloroethene	1		REG	1	1	0.4	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Toluene	110		DIL	25	1000	1000	5	1000	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Total Xylene	0.9	J	REG	1	1000	40	2	40	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Trichloroethene	0.4	J	REG	1	1	1	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	1,2-Dichloroethene (total)	3		REG	1	70	10	2	10	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	2-Butanone	6	J	REG	5		300		300	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	2-Chlorotoluene	100	J	DIL	10					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	4-Chlorotoluene	52	J	DIL	10					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	4-Methyl-2-pentanone	4	J	REG	5		400		400	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Benzene	290		DIL	10	1	0.2	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Chlorobenzene	2		REG	1		54	2	54	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Tetrachloroethene	0.6	J	REG	1	1	0.4	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Toluene	89		DIL	10	1000	1000	5	1000	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Total Xylene	0.6	J	REG	1	1000	40	2	40	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Trichloroethene	0.6	J	REG	1	1	1	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	1,2-Dichloroethene (total)	2	J	REG	1	70	10	2	10	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	2-Chlorotoluene	170	J	DIL	200					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	2-Hexanone	5		REG	5					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	4-Chlorotoluene	93	J	DIL	200					6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	4-Methyl-2-pentanone	36	J	REG	5		400		400	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Benzene	5000		DIL	200	1	0.2	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Chlorobenzene	6	J	REG	1		54	2	54	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Ethylbenzene	0.4	J	REG	1	700	700	5	700	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Styrene	1	J	REG	1	100	100	5	100	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Tetrachloroethene	0.8	J	REG	1	1	0.4	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Toluene	1400		DIL	200	1000	1000	5	1000	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Total Xylene	4	J	REG	1	1000	40	2	40	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Trichloroethene	0.6	J	REG	1	1	1	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Vinyl Chloride	0.1	J	REG	2	2	0.08	5	5	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	2-Chlorotoluene	0.2	J	REG	1					7/9/2001

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12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Carbon Disulfide	0.1	J	REG	1					7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021584	MW-23D	51'-71'	Chloroform	0.2	J	REG	1		6	1	6	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	1,1-Dichloroethane	0.3	J	REG	1	50	70		70	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	1,2-Dichloroethane	0.2	J	REG	1	2	0.3	2	2	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	1,2-Dichloroethene (total)	0.1	J	REG	1	70	10	2	10	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	2-Chlorotoluene	0.2	J	REG	1					7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Chlorobenzene	0.3	J	REG	1		54	2	54	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021585	MW-23DD	83'-103'	Chloroform	0.6	J	REG	1		6	1	6	7/9/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	1,2-Dichloroethene (total)	7	J	REG	25	70	10	2	10	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	2-Chlorotoluene	590		REG	25					7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	4-Chlorotoluene	330		REG	25					7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Benzene	890		REG	25	1	0.2	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Chlorobenzene	6	J	REG	25		54	2	54	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Methylene Chloride	7	J	REG	50	3	2	2	2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Tetrachloroethene	3	J	REG	25	1	0.4	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Toluene	26		REG	25	1000	1000	5	1000	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Trichloroethene	8	J	REG	25	1	1	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	2-Chlorotoluene	230		REG	50					7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	4-Chlorotoluene	150		REG	50					7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Benzene	1500		REG	50	1	0.2	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Methylene Chloride	340		REG	100	3	2	2	2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Toluene	170		REG	50	1000	1000	5	1000	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	1,1-Dichloroethane	0.3	J	REG	1	50	70		70	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	1,2-Dichloroethene (total)	8		REG	1	70	10	2	10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	2-Chlorotoluene	1200	D	DIL	50					8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	4-Chlorotoluene	700	D	DIL	50					8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Benzene	850	D	DIL	50	1	0.2	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Chlorobenzene	7		REG	1		54	2	54	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Ethylbenzene	1		REG	1	700	700	5	700	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Tetrachloroethene	0.5	J	REG	1	1	0.4	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Toluene	190	D	DIL	50	1000	1000	5	1000	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Total Xylene	9		REG	1	1000	40	2	40	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Trichloroethene	5		REG	1	1	1	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Vinyl Chloride	2		REG	2	2	0.08	5	5	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	1,1-Dichloroethane	0.8	J	REG	1	50	70		70	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	1,2-Dichloroethene (total)	2		REG	1	70	10	2	10	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	2-Chlorotoluene	2300	BD	REG	100					8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	4-Chlorotoluene	1200	BD	REG	100					8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Acetone	9	J	REG	5		700		700	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Benzene	200	D	REG	100	1	0.2	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Chlorobenzene	21		REG	1		54	2	54	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Ethylbenzene	2		REG	1	700	700	5	700	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Methylene Chloride	360	BD	REG	200	3	2	2	2	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Toluene	25	JD	REG	100	1000	1000	5	1000	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Toluene	13		REG	1	1000	1000	5	1000	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Total Xylene	10		REG	1	1000	40	2	40	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	1,1,1-Trichloroethane	0.1	J	REG	1	30	30	1	30	8/15/2001

TABLE 4-47
SUMMARY OF DETECTABLE VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	1,2-Dichloroethene (total)	0.6	J	REG	1	70	10	2	10	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	2-Chlorotoluene	6	B	REG	1					8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	4-Chlorotoluene	3	B	REG	1					8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Benzene	8		REG	1	1	0.2	1	1	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Tetrachloroethene	4		REG	1	1	0.4	1	1	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Trichloroethene	0.9	J	REG	1	1	1	1	1	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	1,2-Dichloroethene (total)	2	J	REG	10	70	10	2	10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	2-Chlorotoluene	160		REG	10					9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	4-Chlorotoluene	38		REG	10					9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Benzene	78		REG	10	1	0.2	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Trichloroethene	8	J	REG	10	1	1	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	1,2-Dichloroethene (total)	1	J	REG	5	70	10	2	10	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	2-Chlorotoluene	85		REG	5					9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	4-Chlorotoluene	29		REG	5					9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Benzene	33		REG	5	1	0.2	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Trichloroethene	2	J	REG	5	1	1	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	2-Chlorotoluene	0.2	J		1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Benzene	0.3	J		1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021639	MW-25D	35'-60'	Chlorobenzene	0.1	J		1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Benzene	520	D	25	25					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Chlorobenzene	0.4	J		1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Ethylbenzene	0.6	J		1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Toluene	1			1					1/3/2002
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Total Xylene	1			1					1/3/2002
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,1,1-Trichloroethane	2		REG	1	30	30	1	30	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,1-Dichloroethane	1		REG	1	50	70		70	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,1-Dichloroethene	4		REG	1	2	1	2	2	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,2-Dichloroethene (total)	50	D	DIL	10	70	10	2	10	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,2-Dichloropropane	0.4	J	REG	1	5	0.5	1	1	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Benzene	0.1	J	REG	1	1	0.2	1	1	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Chloroform	2		REG	1		6	1	6	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Tetrachloroethene	300	D	DIL	10	1	0.4	1	1	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Toluene	0.2	J	REG	1	1000	1000	5	1000	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Total Xylene	0.4	J	REG	1	1000	40	2	40	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Trichloroethene	82	D	DIL	10	1	1	1	1	11/16/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,1,1-Trichloroethane	0.6	J	REG	1	30	30	1	30	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,1-Dichloroethane	2		REG	1	50	70		70	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,1-Dichloroethene	2		REG	1	2	1	2	2	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,2-Dichloroethene (total)	55		REG	1	70	10	2	10	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,2-Dichloropropane	0.3	J	REG	1	5	0.5	1	1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Benzene	0.7	J	REG	1	1	0.2	1	1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Chloroform	0.2	J	REG	1		6	1	6	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Tetrachloroethene	150	D	DIL	5	1	0.4	1	1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Toluene	0.6	J	REG	1	1000	1000	5	1000	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Total Xylene	0.5	J	REG	1	1000	40	2	40	11/9/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
20a	Grove	20a-021036	B38W15D	40'-45'	Trichloroethene	30		REG	1	1	1	1	1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Vinyl Chloride	0.6	J	REG	2	2	0.08	5	5	11/9/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Acetone	350	B	REG	50		700		700	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Ethylbenzene	2	J	REG	10	700	700	5	700	11/1/2000
20a	Grove	20a-021038	B38W17B	18.7'-29'	Total Xylene	2	J	REG	10	1000	40	2	40	11/1/2000
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Chloroform	0.7	J	REG	1		6	1	6	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021063	MW-9D	22-47'	Tetrachloroethene	0.1	J	REG	1	1	0.4	1	1	3/13/2001
22b	Lodi Brook Drainage Basin	22b-021065	MW-10D	21'-46'	Chloroform	2		REG	1		6	1	6	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	1,2-Dichloroethene (total)	0.6	J	REG	1	70	10	2	10	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Chloroform	0.4	J	REG	1		6	1	6	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Tetrachloroethene	9		REG	1	1	0.4	1	1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Trichloroethene	2		REG	1	1	1	1	1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	1,1,1-Trichloroethane	0.1	J	REG	1	30	30	1	30	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	1,1-Dichloroethane	0.2	J	REG	1	50	70		70	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	1,1-Dichloroethene	0.3	J	REG	1	2	1	2	2	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	1,2-Dichloroethene (total)	8		REG	1	70	10	2	10	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Chloroform	0.2	J	REG	1		6	1	6	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Tetrachloroethene	37		REG	1	1	0.4	1	1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Trichloroethene	2		REG	1	1	1	1	1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Vinyl Chloride	0.2	J	REG	2	2	0.08	5	5	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	1,1,1-Trichloroethane	0.3	J	REG	1	30	30	1	30	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	1,1-Dichloroethene	0.4	J	REG	1	2	1	2	2	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Chloroform	0.2	J	REG	1		6	1	6	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Tetrachloroethene	9		REG	1	1	0.4	1	1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Trichloroethene	0.3	J	REG	1	1	1	1	1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Chloroform	2		REG	1		6	1	6	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Tetrachloroethene	1		REG	1	1	0.4	1	1	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	1,1,1-Trichloroethane	0.7	J	REG	1	30	30	1	30	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	1,1-Dichloroethane	0.3	J	REG	1	50	70		70	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	1,1-Dichloroethene	0.7	J	REG	1	2	1	2	2	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	1,2-Dichloroethene (total)	0.5	J	REG	1	70	10	2	10	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Chloroform	1		REG	1		6	1	6	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Tetrachloroethene	22		REG	1	1	0.4	1	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Toluene	0.1	J	REG	1	1000	1000	5	1000	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Trichloroethene	2		REG	1	1	1	1	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,1,1-Trichloroethane	3		REG	1	30	30	1	30	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,1-Dichloroethane	3		REG	1	50	70		70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,1-Dichloroethene	1		REG	1	2	1	2	2	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,2-Dichloroethene (total)	190	D	DIL	50	70	10	2	10	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,2-Dichloropropane	0.9	J	REG	1	5	0.5	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Benzene	0.3	J	REG	1	1	0.2	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Tetrachloroethene	1200	D	DIL	50	1	0.4	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Trichloroethene	380	D	DIL	50	1	1	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Vinyl Chloride	1	J	REG	2	2	0.08	5	5	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	1,1,1-Trichloroethane	0.1	J	REG	1	30	30	1	30	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	1,1-Dichloroethene	0.4	J	REG	1	2	1	2	2	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	1,2-Dichloroethene (total)	270	D	DIL	10	70	10	2	10	3/1/2001

TABLE 4-47
SUMMARY OF DETECTABLE VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screened Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	Result Type:	IDL (ug/L)	NJMCL:	NJGW Quality Criteria:	NJGWCriteria.PQL:	Greater of NJGW Criteria or NJ PQL	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Benzene	0.1	J	REG	1	1	0.2	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Tetrachloroethene	80	D	DIL	10	1	0.4	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Toluene	0.1	J	REG	1	1000	1000	5	1000	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Trichloroethene	15	J	REG	1	1	1	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Vinyl Chloride	2	J	REG	2	2	0.08	5	5	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021083	MW-19D	17'-42'	1,1-Dichloroethane	0.4	J	REG	1	50	70		70	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	1,1,1-Trichloroethane	0.3	J	REG	1	30	30	1	30	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	1,1-Dichloroethane	0.7	J	REG	1	50	70		70	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	1,1-Dichloroethene	3		REG	1	2	1	2	2	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Benzene	0.1	J	REG	1	1	0.2	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Chloroform	0.3	J	REG	1		6	1	6	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Ethylbenzene	0.1	J	REG	1	700	700	5	700	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Tetrachloroethene	0.5	J	REG	1	1	0.4	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Toluene	2		REG	1	1000	1000	5	1000	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	Total Xylene	0.7	J	REG	1	1000	40	2	40	3/1/2001

Notes:
J = Estimated Concentration
B = Detected in laboratory blank
D = Sample required dilution
ft bgs = Feet below ground surface

TABLE 4-48
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER EXCEEDING STANDARDS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screen Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Lower of Federal/State MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Date of Sample Collection
06a	85-101 NJ Rt. 17 North	06a-021416	BRMW8	32'-42'	Trichloroethene	2		1	1	1	2/13/2001
06b	137 NJ Rt. 17 North	06b-021406	BRMW3	20'-30'	Tetrachloroethene	6		1	1	1	2/15/2001
08a	23 West Howcroft Road	08a-021032	B38W12B	34.5'-44.9'	Trichloroethene	2		1	1	1	11/2/2000
08a	23 West Howcroft Road	08a-021069	MW-12D	29'-54'	Trichloroethene	2		1	1	1	3/13/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	1,2-Dichloroethene (total)	110	D	10	70 (a)	10 (a)	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Benzene	16		1	1	1	2/7/2001
09a	149-151 Maywood Avenue	09a-021401	BRMW1	37'-37	Vinyl Chloride	200		2	2	5	2/7/2001
09a	149-151 Maywood Avenue	09a-021421	BRMW11	23'-33'	Trichloroethene	1		1	1	1	2/13/2001
09a	149-151 Maywood Avenue	09a-021425	BRMW13	23'-33'	Tetrachloroethene	4		1	1	1	2/8/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	1,2-Dichloroethene (total)	10		1	70 (a)	10 (a)	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Tetrachloroethene	2		1	1	1	2/12/2001
09a	149-151 Maywood Avenue	09a-021427	BRMW14	27'-37'	Trichloroethene	2		1	1	1	2/12/2001
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Benzene	6	J	1	1	1	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021018	MISS04B	17'-47'	Vinyl Chloride	66	D	10	2	5	11/14/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Methylene Chloride	22	B	20	3	2	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021027	B38W04B	22.7'-27.7'	Total Xylene	270		10	1000	40	11/17/2000
10a	100 West Hunter Avenue (Stepan)	10a-021464	B38W04B	22.7'-27.7'	Total Xylene	460	D	10	1000	40	2/22/2001
10a	100 West Hunter Avenue (Stepan)	10a-021431	BRMW17	25'-35'	Tetrachloroethene	1		1	1	1	2/6/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Benzene	5		1	1	1	4/19/2001
12a	NY, Susquehanna, & Western Railway	12a-021543	MW-3D	30'-55'	Trichloroethene	1		1	1	1	4/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021020	MISS05B	25'-55'	Benzene	3500	D	100	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Tetrachloroethene	9		1	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021023	MISS07B	19'-49'	Trichloroethene	2		1	1	1	11/6/2000
12b	100 West Hunter Avenue (MISS)	12b-021041	B38W19D	21.7'-31.9'	Benzene	1		1	1	1	11/7/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Tetrachloroethene	12		1	1	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021302	MISS01B	23'-53.5'	Trichloroethene	1		1	1	1	12/21/2000
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Benzene	210		10	1	1	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021562	BRPZ-7	84'-109'	Methylene Chloride	8	J	10	3	2	6/4/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Benzene	480		25	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021575	BRPZ-5	102'-112'	Tetrachloroethene	1		1	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021576	BRPZ-5	69'-79'	Benzene	290		10	1	1	6/19/2001

TABLE 4-48
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER EXCEEDING STANDARDS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screen Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Lower of Federal/State MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Benzene	5000		200	1	1	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021577	BRPZ-5	45'-55'	Toluene	1400		200	1000	1000	6/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Benzene	890		25	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Methylene Chloride	7	J	50	3	2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Tetrachloroethene	3	J	25	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021596	BRPZ-4	40'-61'	Trichloroethene	8	J	25	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Benzene	1500		50	1	1	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021597	BRPZ-9	32'-57'	Methylene Chloride	340		100	3	2	7/19/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Benzene	850	D	50	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Trichloroethene	6	JD	50	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021607	BRPZ-2RE	44'-64'	Vinyl Chloride	2		2	2	5	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Benzene	200	D	100	1	1	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021608	BRPZ-3RE	39'-59'	Methylene Chloride	360	BD	200	3	2	8/14/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Benzene	8		1	1	1	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021610	BRPW-1DRE	92'-112'	Tetrachloroethene	4		1	1	1	8/15/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Benzene	78		10	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021621	MW-24D	45'-70'	Trichloroethene	8	J	10	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Benzene	33		5	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021622	MW-24DD	80'-105'	Trichloroethene	2	J	5	1	1	9/6/2001
12b	100 West Hunter Avenue (MISS)	12b-021642	MW-26D	35'-60'	Benzene	520	D	25	1	1	1/3/2002
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,1-Dichloroethene	4		1	2	2	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	1,2-Dichloroethene (total)	50	D	10	70 (a)	10 (a)	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Tetrachloroethene	300	D	10	1	1	11/16/2000
19a	Parkway	19a-021034	B38W14D	46'-51.5'	Trichloroethene	82	D	10	1	1	11/16/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,1-Dichloroethene	2		1	2	2	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	1,2-Dichloroethene (total)	55		1	70 (a)	10 (a)	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Tetrachloroethene	150	D	5	1	1	11/9/2000
20a	Grove	20a-021036	B38W15D	40'-45'	Trichloroethene	30		1	1	1	11/9/2000
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Tetrachloroethene	9		1	1	1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021047	MW-1D	21'-46'	Trichloroethene	2		1	1	1	2/26/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Tetrachloroethene	37		1	1	1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021049	MW-2D	22'-48.5'	Trichloroethene	2		1	1	1	2/14/2001
23b	Westerly Brook Drainage Basin	23b-021053	MW-4D	18'-43'	Tetrachloroethene	9		1	1	1	2/20/2001
23b	Westerly Brook Drainage Basin	23b-021055	MW-5D	32'-52'	Tetrachloroethene	1		1	1	1	2/15/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Tetrachloroethene	22		1	1	1	2/21/2001
23b	Westerly Brook Drainage Basin	23b-021057	MW-6D	29'-54'	Trichloroethene	2		1	1	1	2/21/2001

TABLE 4-48
SUMMARY OF VOLATILE ORGANIC COMPOUNDS IN BEDROCK GROUNDWATER EXCEEDING STANDARDS - PHASE II

Property ID Number	Property Name	S&W Lab Sample ID	Well	Screen Interval (ft bgs)	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Lower of Federal/State MCL (ug/L)	Greater of NJ GWQC or NJ PQL (ug/L)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	1,2-Dichloroethene (total)	190	D	50	70 (a)	10 (a)	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Tetrachloroethene	1200	D	50	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021059	MW-7D	21'-46'	Trichloroethene	380	D	50	1	1	2/28/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	1,2-Dichloroethene (total)	270	D	10	70 (a)	10 (a)	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Tetrachloroethene	80	D	10	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Trichloroethene	15	J	1	1	1	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021061	MW-8D	27'-52'	Vinyl Chloride	2	J	2	2	5	3/1/2001
23b	Westerly Brook Drainage Basin	23b-021510	MW-19DD	51'-76'	1,1-Dichloroethene	3		1	2	2	3/1/2001

Notes:

J = Estimated Concentration
D = Sample required dilution
ft bgs = Feet below ground surface
MCL = Maximum Contaminant Level - Most Stringent of Federal or State
(a) = represents the standard for cis 1,2-dichloroethene

Table 4-49
Summary of Radiological Parameters in Westerly Brook Surface Water - Phase II

Sample Location	S&W Lab Sample ID	Analyte	Analytical Result (pCi/L)	Calculated Isotopic Uranium Result (1) (ug/L)	Data Qualifier	Measurement Error (pCi/L)	MDA (pCi/L)	Totals (pCi/L)	Calculated Total Isotopic Uranium Result (1) (ug/L)	Date Collected
WB-1	23a-020902	RA-226	0.35	NA	U	0.37	0.80	**5.10**	NA	10/23/2000
WB-1	23a-020902	RA-228	4.75	NA	J	1.65	1.65			10/23/2000
WB-1	23a-020902	TH-228	0.12	NA	U	0.19	0.34	1.41	NA	10/23/2000
WB-1	23a-020902	TH-230	0.71	NA	J	0.44	0.50			10/23/2000
WB-1	23a-020902	TH-232	0.58	NA	U	0.17	0.58			10/23/2000
WB-1	23a-020902	U-234	1.40	2.20E-04	J	0.58	0.25	2.41	2.32	10/23/2000
WB-1	23a-020902	U-235	0.28	0.13		0.27	0.27			10/23/2000
WB-1	23a-020902	U-238	0.73	2.18	J	0.40	0.28			10/23/2000
WB-2	23a-020904	RA-226	0.78	NA		0.45	0.71	**5.58**	NA	10/23/2000
WB-2	23a-020904	RA-228	4.80	NA	J	1.29	1.24			10/23/2000
WB-2	23a-020904	TH-228	0.07	NA	U	0.13	0.24	1.10	NA	10/23/2000
WB-2	23a-020904	TH-230	0.83	NA	J	0.46	0.56			10/23/2000
WB-2	23a-020904	TH-232	0.20	NA	U	0.23	0.38			10/23/2000
WB-2	23a-020904	U-234	1.26	1.98E-04	J	0.55	0.38	1.78	1.47	10/23/2000
WB-2	23a-020904	U-235	0.04	0.02	U	0.11	0.30			10/23/2000
WB-2	23a-020904	U-238	0.48	1.45	J	0.32	0.33			10/23/2000
WB-3	23a-020908	RA-226	0.92	NA	J	0.35	0.26	1.70	NA	10/26/2000
WB-3	23a-020908	RA-228	0.78	NA	J	0.73	0.79			10/26/2000
WB-3	23a-020908	TH-228	0.49	NA		0.32	0.28	1.17	NA	10/26/2000
WB-3	23a-020908	TH-230	0.46	NA	J	0.32	0.34			10/26/2000
WB-3	23a-020908	TH-232	0.23	NA	UJ	0.23	0.34			10/26/2000
WB-3	23a-020908	Total Uranium	1.20	NA		0.02	0.04	1.20	NA	10/26/2000
WB-4	23a-020906	RA-226	0.44	NA	J	0.33	0.60	4.02	NA	10/23/2000
WB-4	23a-020906	RA-228	3.58	NA	J	1.48	1.51			10/23/2000
WB-4	23a-020906	TH-228	0.01	NA		0.11	0.36	0.79	NA	10/23/2000
WB-4	23a-020906	TH-230	0.37	NA	J	0.34	0.53			10/23/2000
WB-4	23a-020906	TH-232	0.41	NA	U	0.11	0.41			10/23/2000
WB-4	23a-020906	U-234	1.30	2.05E-04	J	0.60	0.50	1.58	0.83	10/23/2000
WB-4	23a-020906	U-235	0.00	0.00	U	0.14	0.47			10/23/2000
WB-4	23a-020906	U-238	0.28	0.83	UJ	0.28	0.43			10/23/2000
WB-5	23a-020910	RA-226	0.67	NA	J	0.46	0.74	0.81	NA	10/24/2000
WB-5	23a-020910	RA-228	0.14	NA	UJ	1.34	1.48			10/24/2000
WB-5	23a-020910	TH-228	0.04	NA	U	0.16	0.41	0.74	NA	10/24/2000
WB-5	23a-020910	TH-230	0.68	NA	J	0.42	0.41			10/24/2000
WB-5	23a-020910	TH-232	0.02	NA	U	0.16	0.46			10/24/2000
WB-5	23a-020910	U-234	1.18	1.85E-04	J	0.51	0.38	2.07	1.82	10/24/2000
WB-5	23a-020910	U-235	0.34	0.16	J	0.28	0.31			10/24/2000
WB-5	23a-020910	U-238	0.56	1.66	J	0.34	0.37			10/24/2000

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
NA = Not Applicable
Federal/State MCL for Total Radium = 5
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334.
If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L

Table 4-50
Summary of Detectable Metals in Westerly Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
WB-1	23a-020902	Aluminum, Total	22.7		10.6	10/23/2000
WB-1	23a-020902	Arsenic, Total	12		3.4	10/23/2000
WB-1	23a-020902	Barium, Total	114		0.20	10/23/2000
WB-1	23a-020902	Boron, Total	218		2.1	10/23/2000
WB-1	23a-020902	Calcium, Total	116000		8.9	10/23/2000
WB-1	23a-020902	Chromium, Total	4.9		0.90	10/23/2000
WB-1	23a-020902	Copper, Total	1.6		0.80	10/23/2000
WB-1	23a-020902	Iron, Total	979		16.4	10/23/2000
WB-1	23a-020902	Lithium, Total	642		0.20	10/23/2000
WB-1	23a-020902	Magnesium, Total	16900		7.8	10/23/2000
WB-1	23a-020902	Manganese, Total	487		0.20	10/23/2000
WB-1	23a-020902	Mercury, Total	0.12		0.10	10/23/2000
WB-1	23a-020902	Nickel, Total	2.1		1.2	10/23/2000
WB-1	23a-020902	Potassium, Total	32200		29.9	10/23/2000
WB-1	23a-020902	Sodium, Total	75800		3.8	10/23/2000
WB-1	23a-020902	Thallium, Total	6.1		3.6	10/23/2000
WB-1	23a-020902	Vanadium, Total	0.84		0.90	10/23/2000
WB-1	23a-020902	Zinc, Total	14.8	J	0.40	10/23/2000
WB-2	23a-020904	Aluminum, Total	23.1		10.6	10/23/2000
WB-2	23a-020904	Arsenic, Total	18.5		3.4	10/23/2000
WB-2	23a-020904	Barium, Total	113		0.20	10/23/2000
WB-2	23a-020904	Boron, Total	213		2.1	10/23/2000
WB-2	23a-020904	Calcium, Total	113000		8.9	10/23/2000
WB-2	23a-020904	Copper, Total	1.7		0.80	10/23/2000
WB-2	23a-020904	Iron, Total	1090		16.4	10/23/2000
WB-2	23a-020904	Lithium, Total	634		0.20	10/23/2000
WB-2	23a-020904	Magnesium, Total	16300		7.8	10/23/2000
WB-2	23a-020904	Manganese, Total	733		0.20	10/23/2000
WB-2	23a-020904	Nickel, Total	3.1		1.2	10/23/2000
WB-2	23a-020904	Potassium, Total	31900		29.9	10/23/2000
WB-2	23a-020904	Sodium, Total	74200		3.8	10/23/2000
WB-2	23a-020904	Zinc, Total	18.8	J	0.40	10/23/2000

Table 4-50
Summary of Detectable Metals in Westerly Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
WB-3	23a-020908	Aluminum, Total	255		22.7	10/26/2000
WB-3	23a-020908	Arsenic, Total	48.7		2.4	10/26/2000
WB-3	23a-020908	Barium, Total	242		0.20	10/26/2000
WB-3	23a-020908	Boron, Total	203		2.7	10/26/2000
WB-3	23a-020908	Cadmium, Total	0.54		0.30	10/26/2000
WB-3	23a-020908	Calcium, Total	109000		19.2	10/26/2000
WB-3	23a-020908	Chromium, Total	1		0.60	10/26/2000
WB-3	23a-020908	Cobalt, Total	1.8		0.90	10/26/2000
WB-3	23a-020908	Copper, Total	4.9		0.90	10/26/2000
WB-3	23a-020908	Iron, Total	3460		21.8	10/26/2000
WB-3	23a-020908	Lead, Total	5.4		2.1	10/26/2000
WB-3	23a-020908	Lithium, Total	546		0.20	10/26/2000
WB-3	23a-020908	Magnesium, Total	13700		6.7	10/26/2000
WB-3	23a-020908	Manganese, Total	3730		0.20	10/26/2000
WB-3	23a-020908	Mercury, Total	0.11		0.10	10/26/2000
WB-3	23a-020908	Nickel, Total	7.9		0.90	10/26/2000
WB-3	23a-020908	Potassium, Total	27400		40.9	10/26/2000
WB-3	23a-020908	Silver, Total	59.4		1.1	10/26/2000
WB-3	23a-020908	Sodium, Total	70300		4.1	10/26/2000
WB-3	23a-020908	Vanadium, Total	3.3		0.80	10/26/2000
WB-3	23a-020908	Zinc, Total	186	J	0.40	10/26/2000
WB-4	23a-020906	Aluminum, Total	54.3		10.6	10/23/2000
WB-4	23a-020906	Arsenic, Total	3.8		3.4	10/23/2000
WB-4	23a-020906	Barium, Total	166		0.20	10/23/2000
WB-4	23a-020906	Boron, Total	97.7		2.1	10/23/2000
WB-4	23a-020906	Calcium, Total	77100		8.9	10/23/2000
WB-4	23a-020906	Copper, Total	2.6		0.80	10/23/2000
WB-4	23a-020906	Iron, Total	1110		16.4	10/23/2000
WB-4	23a-020906	Lanthanum, Total	35.3		33.8	10/23/2000
WB-4	23a-020906	Lead, Total	4		2.1	10/23/2000
WB-4	23a-020906	Lithium, Total	23.6		0.20	10/23/2000
WB-4	23a-020906	Magnesium, Total	9620		7.8	10/23/2000

Table 4-50
Summary of Detectable Metals in Westerly Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
WB-4	23a-020906	Manganese, Total			0.20	10/23/2000
WB-4	23a-020906	Nickel, Total	2.5		1.2	10/23/2000
WB-4	23a-020906	Potassium, Total	3540		29.9	10/23/2000
WB-4	23a-020906	Sodium, Total	33500		3.8	10/23/2000
WB-4	23a-020906	Zinc, Total	23.3	J	0.40	10/23/2000
WB-5	23a-020910	Barium, Total	157		0.20	10/24/2000
WB-5	23a-020910	Boron, Total	95.1		2.1	10/24/2000
WB-5	23a-020910	Calcium, Total	82200		8.9	10/24/2000
WB-5	23a-020910	Copper, Total	1.5		0.80	10/24/2000
WB-5	23a-020910	Iron, Total	543		16.4	10/24/2000
WB-5	23a-020910	Lithium, Total	41.4		0.20	10/24/2000
WB-5	23a-020910	Magnesium, Total	9600		7.8	10/24/2000
WB-5	23a-020910	Manganese, Total	201		0.20	10/24/2000
WB-5	23a-020910	Nickel, Total	3		1.2	10/24/2000
WB-5	23a-020910	Potassium, Total	3550		29.9	10/24/2000
WB-5	23a-020910	Silver, Total	8.6		1.1	10/24/2000
WB-5	23a-020910	Sodium, Total	35900		3.8	10/24/2000
WB-5	23a-020910	Zinc, Total	19.1	J	0.40	10/24/2000

Notes:
J = Estimated Concentration

Table 4-51

Summary of Metals in Westerly Brook Surface Water Exceeding Standards - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Collection Date	NJ SWQC (ug/L)	EPA Federal AWQC - Acute (ug/L)	EPA Federal AWQC - Chronic (ug/L)	EPA Federal AWQC - Organoleptic Criteria (ug/L)
WB-1	23a-020902	Arsenic, Total	12	3.4		10/23/2000	0.017	340	150	NS
WB-1	23a-020902	Thallium, Total	6.1	3.6		10/23/2000	1.7	NS	NS	NS
WB-2	23a-020904	Arsenic, Total	18.5	3.4		10/23/2000	0.017	340	150	NS
WB-2	23a-020904	Iron, Total	1090	16.4		10/23/2000	NS	1000	NS	NS
WB-3	23a-020908	Aluminum, Total	255	22.7		10/26/2000	NS	750	87	NS
WB-3	23a-020908	Arsenic, Total	48.7	2.4		10/26/2000	0.017	340	150	NS
WB-3	23a-020908	Iron, Total	3460	21.8		10/26/2000	NS	1000	NS	NS
WB-3	23a-020908	Lead, Total	5.4	2.1		10/26/2000	5	65	2.5	NS
WB-3	23a-020908	Silver, Total	59.4	1.1		10/26/2000	164	3.4	NS	NS
WB-3	23a-020908	Zinc, Total	186	0.40	J	10/26/2000	NS	120	120	5000
WB-4	23a-020906	Arsenic, Total	3.8	3.4		10/23/2000	0.017	340	150	NS
WB-4	23a-020906	Iron, Total	1110	16.4		10/23/2000	NS	1000	NS	NS
WB-4	23a-020906	Lead, Total	4	2.1		10/23/2000	5	65	2.5	NS
WB-5	23a-020910	Silver, Total	8.6	1.1		10/24/2000	164	3.4	NS	NS

Notes:

ug/L = micrograms per liter

NS = No Standard

Table 4-52
Summary of Rare Earth Elements in Westerly Brook Surface Water - Phase II

Surface Water Location	Location	S&W Lab Sample	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
CB-4	Coles Brook	25a-021240	Dysprosium, Total	5	J	3.1	12/7/2000
CB-5	Coles Brook	25a-021238	Dysprosium, Total	4.8	J	3.1	12/7/2000
LB-3	Lodi Brook	22a-020888	Lanthanum, Total	38.4		33.8	10/23/2000
WB-4	Westerly Brook	23a-020906	Lanthanum, Total	35.3		33.8	10/23/2000

Notes:
J = Estimated concentration

Table 4-53
Summary of Radiological Parameters in Lodi Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analyte	Analytical Result (pCi/L)	Calculated Isotopic Uranium Result (1) (ug/L)	Data Qualifier	Measurement Error (pCi/L)	MDA (pCi/L)	Totals (pCi/L)	Calculated Total Isotopic Uranium Result (1) (ug/L)	Date Collected
LB-2	22a-020886	RA-226	0.96	NA	J	0.51	0.71	3.81	NA	10/19/2000
LB-2	22a-020886	RA-228	2.85		J	1.60	1.68			10/19/2000
LB-2	22a-020886	TH-228	1.58	NA		0.61	0.32	2.58	NA	10/19/2000
LB-2	22a-020886	TH-230	0.84		J	0.42	0.25			10/19/2000
LB-2	22a-020886	TH-232	0.16		U	0.19	0.32			10/19/2000
LB-2	22a-020886	U-234	0.80	1.26E-04	J	0.65	0.92	1.72	2.17	10/19/2000
LB-2	22a-020886	U-235	0.23	0.10	U	0.41	0.85			10/19/2000
LB-2	22a-020886	U-238	0.69	2.06	J	0.58	0.78			10/19/2000
LB-3	22a-020888	RA-226	0.69	NA	J	0.49	1.02	**5.48**	NA	10/23/2000
LB-3	22a-020888	RA-228	4.79		J	1.92	1.95			10/23/2000
LB-3	22a-020888	TH-228	0.03	NA	U	0.16	0.46	2.45	NA	10/23/2000
LB-3	22a-020888	TH-230	2.10		J	0.81	0.42			10/23/2000
LB-3	22a-020888	TH-232	0.32		J	0.32	0.50			10/23/2000
LB-3	22a-020888	U-234	1.19	1.87E-04	J	0.51	0.40	1.68	1.32	10/23/2000
LB-3	22a-020888	U-235	0.06	0.03	U	0.15	0.35			10/23/2000
LB-3	22a-020888	U-238	0.43	1.30	J	0.29	0.31			10/23/2000
LB-4	22a-020890	RA-226	1.76	NA	J	0.69	0.69	4.80	NA	10/19/2000
LB-4	22a-020890	RA-228	3.04		J	1.33	1.36			10/19/2000
LB-4	22a-020890	TH-228	0.24	NA	U	0.32	0.61	1.15	NA	10/19/2000
LB-4	22a-020890	TH-230	0.51		J	0.44	0.69			10/19/2000
LB-4	22a-020890	TH-232	0.41			0.34	0.40			10/19/2000
LB-4	22a-020890	U-234	2.08	3.26E-04	J	1.15	0.68	3.29	1.81	10/19/2000
LB-4	22a-020890	U-235	0.72	0.33	J	0.71	0.83			10/19/2000
LB-4	22a-020890	U-238	0.49	1.48	U	0.58	0.92			10/19/2000
LB-5	22a-020894	RA-226	1.02	NA	J	0.51	0.58	**9.25**	NA	10/19/2000
LB-5	22a-020894	RA-228	8.23			2.31	2.28			10/19/2000
LB-5	22a-020894	TH-228	0.12	NA	U	0.22	0.45	0.54	NA	10/19/2000
LB-5	22a-020894	TH-230	0.23		U	0.29	0.52			10/19/2000
LB-5	22a-020894	TH-232	0.19		U	0.24	0.42			10/19/2000

LB-5	22a-020894	U-234	1.00	1.56E-04	J	0.49	0.43	1.62	1.04	10/19/2000
LB-5	22a-020894	U-235	0.32	0.15	J	0.30	0.40			10/19/2000
LB-5	22a-020894	U-238	0.30	0.89	J	0.26	0.34			10/19/2000
LB-6	22a-020896	RA-226	1.08	NA	J	0.62	1.09	3.99	NA	10/19/2000
LB-6	22a-020896	RA-228	2.91		J	1.60	1.67			10/19/2000
LB-6	22a-020896	TH-228	0.14	NA	U	0.23	0.46	1.09	NA	10/19/2000
LB-6	22a-020896	TH-230	0.87		J	0.49	0.49			10/19/2000
LB-6	22a-020896	TH-232	0.09		U	0.25	0.61			10/19/2000
LB-6	22a-020896	U-234	0.73	1.15E-04	J	0.39	0.36	1.14	1.10	10/19/2000
LB-6	22a-020896	U-235	0.04	0.02	U	0.11	0.24			10/19/2000
LB-6	22a-020896	U-238	0.36	1.08		0.26	0.23			10/19/2000
LB-7	22a-020898	RA-226	0.32	NA	J	0.28	0.50	**6.07**	NA	10/19/2000
LB-7	22a-020898	RA-228	5.74		J	1.91	1.88			10/19/2000
LB-7	22a-020898	TH-228	0.33	NA	J	0.30	0.37	0.93	NA	10/19/2000
LB-7	22a-020898	TH-230	0.36		J	0.33	0.51			10/19/2000
LB-7	22a-020898	TH-232	0.24		UJ	0.24	0.32			10/19/2000
LB-7	22a-020898	U-234	0.59	9.22E-05	J	0.34	0.29	1.18	1.16	10/19/2000
LB-7	22a-020898	U-235	0.24	0.11	U	0.02	0.24			10/19/2000
LB-7	22a-020898	U-238	0.35	1.05		0.26	0.25			10/19/2000
LB-8	22a-020900	RA-226	0.68	NA	J	0.50	0.85	2.87	NA	10/19/2000
LB-8	22a-020900	RA-228	2.20		J	1.27	1.32			10/19/2000
LB-8	22a-020900	TH-228	0.12	NA	U	0.18	0.33	1.19	NA	10/19/2000
LB-8	22a-020900	TH-230	0.89		J	0.46	0.51			10/19/2000
LB-8	22a-020900	TH-232	0.17		U	0.23	0.45			10/19/2000
LB-8	22a-020900	U-234	0.41	6.48E-05	J	0.29	0.33	0.75	0.55	10/19/2000
LB-8	22a-020900	U-235	0.18	0.08	UJ	0.20	0.26			10/19/2000
LB-8	22a-020900	U-238	0.16	0.47	U	0.18	0.29			10/19/2000

Notes:
Units = picocuries per liter (pCi/L)
J = Estimated Concentration
U = Non-Detect
UJ = Estimated Non-Detect
NA = Not Applicable
Federal/State MCL for Total Radium = 5 pCi/L
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334.
If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L

Table 4-54
Summary of Metals in Lodi Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
LB-2	22a-020886	Aluminum, Total	97.3		10.6	10/19/2000
LB-2	22a-020886	Arsenic, Total	9.7		3.4	10/19/2000
LB-2	22a-020886	Barium, Total	56.6		0.20	10/19/2000
LB-2	22a-020886	Boron, Total	53.6	J	2.1	10/19/2000
LB-2	22a-020886	Calcium, Total	84700		8.9	10/19/2000
LB-2	22a-020886	Chromium, Total	1.8	J	0.90	10/19/2000
LB-2	22a-020886	Cobalt, Total	1.1		0.9	10/19/2000
LB-2	22a-020886	Copper, Total	3.5		0.80	10/19/2000
LB-2	22a-020886	Iron, Total	1160		16.4	10/19/2000
LB-2	22a-020886	Lead, Total	7.7		2.1	10/19/2000
LB-2	22a-020886	Lithium, Total	94.6		0.20	10/19/2000
LB-2	22a-020886	Magnesium, Total	7610		7.8	10/19/2000
LB-2	22a-020886	Manganese, Total	434		0.20	10/19/2000
LB-2	22a-020886	Nickel, Total	2.8		1.2	10/19/2000
LB-2	22a-020886	Potassium, Total	4560		29.9	10/19/2000
LB-2	22a-020886	Sodium, Total	42300		3.8	10/19/2000
LB-2	22a-020886	Vanadium, Total	3		0.90	10/19/2000
LB-2	22a-020886	Zinc, Total	18.9	J	0.40	10/19/2000
LB-3	22a-020888	Aluminum, Total	91.9		10.6	10/23/2000
LB-3	22a-020888	Barium, Total	104		0.20	10/23/2000
LB-3	22a-020888	Boron, Total	152		2.1	10/23/2000
LB-3	22a-020888	Calcium, Total	58400		8.9	10/23/2000
LB-3	22a-020888	Chromium, Total	1.1		0.90	10/23/2000
LB-3	22a-020888	Copper, Total	12.5		0.80	10/23/2000
LB-3	22a-020888	Iron, Total	320		16.4	10/23/2000
LB-3	22a-020888	Lanthanum, Total	38.4		33.8	10/23/2000
LB-3	22a-020888	Lead, Total	2.6		2.1	10/23/2000
LB-3	22a-020888	Lithium, Total	11.5		0.20	10/23/2000
LB-3	22a-020888	Magnesium, Total	16900		7.8	10/23/2000
LB-3	22a-020888	Manganese, Total	103		0.20	10/23/2000
LB-3	22a-020888	Nickel, Total	2.6		1.2	10/23/2000
LB-3	22a-020888	Potassium, Total	6410		29.9	10/23/2000
LB-3	22a-020888	Sodium, Total	53000		3.8	10/23/2000
LB-3	22a-020888	Vanadium, Total	0.95		0.90	10/23/2000
LB-3	22a-020888	Zinc, Total	24.6	J	0.40	10/23/2000
LB-4	22a-020890	Aluminum, Total	81.3		10.6	10/19/2000
LB-4	22a-020890	Arsenic, Total	3.6		3.4	10/19/2000
LB-4	22a-020890	Barium, Total	90.4		0.20	10/19/2000
LB-4	22a-020890	Boron, Total	166	J	2.1	10/19/2000
LB-4	22a-020890	Calcium, Total	51800		8.9	10/19/2000
LB-4	22a-020890	Chromium, Total	2	J	0.90	10/19/2000
LB-4	22a-020890	Cobalt, Total	1		0.9	10/19/2000
LB-4	22a-020890	Copper, Total	23.8		0.80	10/19/2000
LB-4	22a-020890	Iron, Total	339		16.4	10/19/2000
LB-4	22a-020890	Lead, Total	3.6		2.1	10/19/2000
LB-4	22a-020890	Lithium, Total	14.2		0.20	10/19/2000
LB-4	22a-020890	Magnesium, Total	15400		7.8	10/19/2000
LB-4	22a-020890	Manganese, Total	198		0.20	10/19/2000
LB-4	22a-020890	Nickel, Total	2.2		1.2	10/19/2000
LB-4	22a-020890	Potassium, Total	10600		29.9	10/19/2000
LB-4	22a-020890	Sodium, Total	49300		3.8	10/19/2000
LB-4	22a-020890	Vanadium, Total	1.4		0.90	10/19/2000
LB-4	22a-020890	Zinc, Total	33.8	J	0.40	10/19/2000

Table 4-54
Summary of Metals in Lodi Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
LB-5	22a-020894	Aluminum, Total	92		10.6	10/19/2000
LB-5	22a-020894	Arsenic, Total	4		3.4	10/19/2000
LB-5	22a-020894	Barium, Total	94.9		0.20	10/19/2000
LB-5	22a-020894	Boron, Total	168	J	2.1	10/19/2000
LB-5	22a-020894	Calcium, Total	51500		8.9	10/19/2000
LB-5	22a-020894	Chromium, Total	2.2	J	0.90	10/19/2000
LB-5	22a-020894	Copper, Total	14.1		0.80	10/19/2000
LB-5	22a-020894	Iron, Total	393		16.4	10/19/2000
LB-5	22a-020894	Lead, Total	2.8		2.1	10/19/2000
LB-5	22a-020894	Lithium, Total	21.4		0.20	10/19/2000
LB-5	22a-020894	Magnesium, Total	15000		7.8	10/19/2000
LB-5	22a-020894	Manganese, Total	119		0.20	10/19/2000
LB-5	22a-020894	Nickel, Total	2.4		1.2	10/19/2000
LB-5	22a-020894	Potassium, Total	7050		29.9	10/19/2000
LB-5	22a-020894	Silver, Total	1.3		1.1	10/19/2000
LB-5	22a-020894	Sodium, Total	49800		3.8	10/19/2000
LB-5	22a-020894	Thallium, Total	4.3		3.6	10/19/2000
LB-5	22a-020894	Vanadium, Total	1.4		0.90	10/19/2000
LB-5	22a-020894	Zinc, Total	39.5	J	0.40	10/19/2000
LB-6	22a-020896	Aluminum, Total	65.9		10.6	10/19/2000
LB-6	22a-020896	Arsenic, Total	3.9		3.4	10/19/2000
LB-6	22a-020896	Barium, Total	91.2		0.20	10/19/2000
LB-6	22a-020896	Boron, Total	162	J	2.1	10/19/2000
LB-6	22a-020896	Calcium, Total	50900		8.9	10/19/2000
LB-6	22a-020896	Chromium, Total	1.7	J	0.90	10/19/2000
LB-6	22a-020896	Copper, Total	12.1		0.80	10/19/2000
LB-6	22a-020896	Iron, Total	325		16.4	10/19/2000
LB-6	22a-020896	Lithium, Total	23		0.20	10/19/2000
LB-6	22a-020896	Magnesium, Total	14500		7.8	10/19/2000
LB-6	22a-020896	Manganese, Total	108		0.20	10/19/2000
LB-6	22a-020896	Nickel, Total	2.1		1.2	10/19/2000
LB-6	22a-020896	Potassium, Total	6850		29.9	10/19/2000
LB-6	22a-020896	Silver, Total	1.1		1.1	10/19/2000
LB-6	22a-020896	Sodium, Total	48200		3.8	10/19/2000
LB-6	22a-020896	Vanadium, Total	1.7		0.90	10/19/2000
LB-6	22a-020896	Zinc, Total	30.7	J	0.40	10/19/2000
LB-7	22a-020898	Aluminum, Total	69.7		10.6	10/19/2000
LB-7	22a-020898	Arsenic, Total	4		3.4	10/19/2000
LB-7	22a-020898	Barium, Total	90.1		0.20	10/19/2000
LB-7	22a-020898	Boron, Total	169	J	2.1	10/19/2000
LB-7	22a-020898	Calcium, Total	52300		8.9	10/19/2000
LB-7	22a-020898	Chromium, Total	1.5	J	0.90	10/19/2000
LB-7	22a-020898	Copper, Total	12.3		0.80	10/19/2000
LB-7	22a-020898	Iron, Total	327		16.4	10/19/2000
LB-7	22a-020898	Lithium, Total	27.3		0.20	10/19/2000
LB-7	22a-020898	Magnesium, Total	15000		7.8	10/19/2000
LB-7	22a-020898	Manganese, Total	101		0.20	10/19/2000
LB-7	22a-020898	Nickel, Total	2.5		1.2	10/19/2000
LB-7	22a-020898	Potassium, Total	6900		29.9	10/19/2000
LB-7	22a-020898	Sodium, Total	49300		3.8	10/19/2000
LB-7	22a-020898	Vanadium, Total	1.5		0.90	10/19/2000
LB-7	22a-020898	Zinc, Total	31.8	J	0.40	10/19/2000
LB-8	22a-020900	Aluminum, Total	87		10.6	10/19/2000

Table 4-54
Summary of Metals in Lodi Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
LB-8	22a-020900	Arsenic, Total	4.6		3.4	10/19/2000
LB-8	22a-020900	Barium, Total	92.5		0.20	10/19/2000
LB-8	22a-020900	Boron, Total	176	J	2.1	10/19/2000
LB-8	22a-020900	Calcium, Total	54100		8.9	10/19/2000
LB-8	22a-020900	Chromium, Total	1.7	J	0.90	10/19/2000
LB-8	22a-020900	Cobalt, Total	1.6		0.9	10/19/2000
LB-8	22a-020900	Copper, Total	11.7		0.80	10/19/2000
LB-8	22a-020900	Iron, Total	332		16.4	10/19/2000
LB-8	22a-020900	Lithium, Total	31.4		0.20	10/19/2000
LB-8	22a-020900	Magnesium, Total	15000		7.8	10/19/2000
LB-8	22a-020900	Manganese, Total	102		0.20	10/19/2000
LB-8	22a-020900	Nickel, Total	3.2		1.2	10/19/2000
LB-8	22a-020900	Potassium, Total	6680		29.9	10/19/2000
LB-8	22a-020900	Silver, Total	1.1		1.1	10/19/2000
LB-8	22a-020900	Sodium, Total	49300		3.8	10/19/2000
LB-8	22a-020900	Vanadium, Total	1.4		0.90	10/19/2000
LB-8	22a-020900	Zinc, Total	31.8	J	0.40	10/19/2000

Notes:
J = Estimated Concentration

Table 4-55

Summary of Metals in Lodi Brook Surface Water Exceeding Standards - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Collection Date	NJ SWQC (ug/L)	EPA Federal AWQC - Acute (ug/L)	EPA Federal AWQC - Chronic (ug/L)	EPA Federal AWQC - Organoleptic Criteria (ug/L)
LB-2	22a-020886	Aluminum, Total	97.3	10.6		10/19/2000	NS	750	87	NS
LB-2	22a-020886	Arsenic, Total	9.7	3.4		10/19/2000	0.017	340	150	NS
LB-2	22a-020886	Iron, Total	1160	16.4		10/19/2000	NS	1000	NS	NS
LB-2	22a-020886	Lead, Total	7.7	2.1		10/19/2000	5	65	2.5	NS
LB-3	22a-020888	Aluminum, Total	91.9	10.6		10/23/2000	NS	750	87	NS
LB-3	22a-020888	Copper, Total	12.5	0.80		10/23/2000	7.9	13	9	1000
LB-3	22a-020888	Lead, Total	2.6	2.1		10/23/2000	5	65	2.5	NS
LB-4	22a-020890	Arsenic, Total	3.6	3.4		10/19/2000	0.017	340	150	NS
LB-4	22a-020890	Copper, Total	23.8	0.80		10/19/2000	7.9	13	9	1000
LB-4	22a-020890	Lead, Total	3.6	2.1		10/19/2000	5	65	2.5	NS
LB-5	22a-020894	Aluminum, Total	92	10.6		10/19/2000	NS	750	87	NS
LB-5	22a-020894	Arsenic, Total	4	3.4		10/19/2000	0.017	340	150	NS
LB-5	22a-020894	Copper, Total	14.1	0.80		10/19/2000	7.9	13	9	1000
LB-5	22a-020894	Lead, Total	2.8	2.1		10/19/2000	5	65	2.5	NS
LB-5	22a-020894	Thallium, Total	4.3	3.6		10/19/2000	1.7	NS	NS	NS
LB-6	22a-020896	Arsenic, Total	3.9	3.4		10/19/2000	0.017	340	150	NS
LB-6	22a-020896	Copper, Total	12.1	0.80		10/19/2000	7.9	13	9	1000
LB-7	22a-020898	Arsenic, Total	4	3.4		10/19/2000	0.017	340	150	NS
LB-7	22a-020898	Copper, Total	12.3	0.80		10/19/2000	7.9	13	9	1000
LB-8	22a-020900	Aluminum, Total	87	10.6		10/19/2000	NS	750	87	NS
LB-8	22a-020900	Arsenic, Total	4.6	3.4		10/19/2000	0.017	340	150	NS
LB-8	22a-020900	Copper, Total	11.7	0.80		10/19/2000	7.9	13	9	1000

Notes:

ug/L = micrograms per liter

NJ SWQC = New Jersey Surface Water Quality Criteria

Federal AWQC = Ambient Water Quality Criteria

NS = No Standard

Table 4-56
Summary of Radiological Parameters in Coles Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analyte	Analytical Result (pCi/L)	Calculated Isotopic Uranium Result (1) (ug/L)	Data Qualifier	Measurement Error (pCi/L)	MDA (pCi/L)	Totals (pCi/L)	Calculated Total Isotopic Uranium Result (1) (ug/L)	Date Collected
CB-1	25a-020922	RA-226	0.30	NA	J	0.21	0.42	0.38	NA	10/30/2000
CB-1	25a-020922	RA-228	0.08	NA	UJ	0.59	0.65			10/30/2000
CB-1	25a-020922	TH-228	0.07	NA	U	0.17	0.40	1.16	NA	10/30/2000
CB-1	25a-020922	TH-230	0.67	NA	J	0.40	0.41			10/30/2000
CB-1	25a-020922	TH-232	0.42	NA	J	0.33	0.44			10/30/2000
CB-1	25a-020922	Total Uranium	6.56	NA		0.10	0.02	6.56	9.68 (2)	10/30/2000
CB-2	25a-020926	RA-226	0.38	NA	J	0.23	0.35	1.32	NA	10/30/2000
CB-2	25a-020926	RA-228	0.94	NA	UJ	0.83	0.94			10/30/2000
CB-2	25a-020926	TH-228	0.18	NA	U	0.24	0.40	1.09	NA	10/30/2000
CB-2	25a-020926	TH-230	0.47	NA	J	0.40	0.59			10/30/2000
CB-2	25a-020926	TH-232	0.44	NA	J	0.36	0.46			10/30/2000
CB-2	25a-020926	Total Uranium	0.54	NA		0.02	0.02	0.54	0.8 (2)	10/30/2000
CB-4	25a-021240	RA-226	0.22	NA	J	0.19	0.32	0.89	NA	12/7/2000
CB-4	25a-021240	RA-228	0.68	NA	UJ	1.03	1.12			12/7/2000
CB-4	25a-021240	TH-228	0.16	NA	UJ	0.18	0.23	1.39	NA	12/7/2000
CB-4	25a-021240	TH-230	0.76	NA	J	0.41	0.40			12/7/2000
CB-4	25a-021240	TH-232	0.47	NA		0.31	0.31			12/7/2000
CB-4	25a-021240	U-234	1.85	2.90E-04	J	0.69	0.50	3.28	4.13	12/7/2000
CB-4	25a-021240	U-235	0.07	0.03	U	0.16	0.35			12/7/2000
CB-4	25a-021240	U-238	1.37	4.09		0.59	0.54			12/7/2000
CB-5	25a-021238	RA-226	0.26	NA	J	0.19	0.36	0.93	NA	12/7/2000
CB-5	25a-021238	RA-228	0.67	NA	UJ	0.75	0.80			12/7/2000
CB-5	25a-021238	TH-228	0.00	NA	U	0.10	0.34	0.77	NA	12/7/2000
CB-5	25a-021238	TH-230	0.53	NA	J	0.37	0.47			12/7/2000
CB-5	25a-021238	TH-232	0.24	NA	U	0.25	0.40			12/7/2000
CB-5	25a-021238	U-234	2.01	3.16E-04	J	0.77	0.51	3.28	3.57	12/7/2000
CB-5	25a-021238	U-235	0.09	0.04	U	0.22	0.51			12/7/2000
CB-5	25a-021238	U-238	1.18	3.52		0.56	0.50			12/7/2000

Notes:
J = Estimated Concentration
U = Non-Detect
UJ = Estimated non-Detect
NA = Not Applicable
Federal/State MCL for Total Radium = 5 pCi/L
(1) = Mass of uranium isotope was determined by dividing the reported activity by its specific activity in pCi/ug. Specific Activity for U-234 = 6366; U-235 = 2.16; U-238 = 0.334.
If reported activity is less than 0.0, the mass was assigned a value of 0.0
Total Uranium MCL - Federal/State MCL is 30 ug/L
(2) = Calculated by the laboratory Assuming U-Nat.

Table 4-57
Summary of Metals in Coles Brook Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
CB-1	25a-020922	Barium, Total	0.68		0.20	10/31/2000
CB-1	25a-020922	Boron, Total	3.3	J	2.7	10/31/2000
CB-1	25a-020922	Calcium, Total	159		19.2	10/31/2000
CB-1	25a-020922	Copper, Total	6.1		0.90	10/31/2000
CB-1	25a-020922	Iron, Total	31.3		21.8	10/31/2000
CB-1	25a-020922	Lithium, Total	0.48		0.20	10/31/2000
CB-1	25a-020922	Magnesium, Total	101		6.7	10/31/2000
CB-1	25a-020922	Sodium, Total	61.4		4.1	10/31/2000
CB-1	25a-020922	Zinc, Total	4.9	J	0.40	10/31/2000
CB-2	25a-020926	Aluminum, Total	47.3		22.7	10/31/2000
CB-2	25a-020926	Barium, Total	72.5		0.20	10/31/2000
CB-2	25a-020926	Boron, Total	54.4	J	2.7	10/31/2000
CB-2	25a-020926	Calcium, Total	45800		19.2	10/31/2000
CB-2	25a-020926	Copper, Total	4.2		0.90	10/31/2000
CB-2	25a-020926	Iron, Total	927		21.8	10/31/2000
CB-2	25a-020926	Lithium, Total	3.4		0.20	10/31/2000
CB-2	25a-020926	Magnesium, Total	8380		6.7	10/31/2000
CB-2	25a-020926	Manganese, Total	119		0.20	10/31/2000
CB-2	25a-020926	Nickel, Total	1.2		0.90	10/31/2000
CB-2	25a-020926	Potassium, Total	2790		40.9	10/31/2000
CB-2	25a-020926	Sodium, Total	35300		4.1	10/31/2000
CB-2	25a-020926	Zinc, Total	6.2	J	0.40	10/31/2000
CB-4	25a-021240	Barium, Total	150		0.20	12/7/2000
CB-4	25a-021240	Boron, Total	43.3		2.7	12/7/2000
CB-4	25a-021240	Calcium, Total	78700		19.2	12/7/2000
CB-4	25a-021240	Copper, Total	1.5		0.90	12/7/2000
CB-4	25a-021240	Dysprosium, Total	5	J	3.1	12/7/2000
CB-4	25a-021240	Iron, Total	534		21.8	12/7/2000
CB-4	25a-021240	Lithium, Total	7.7		0.20	12/7/2000
CB-4	25a-021240	Magnesium, Total	16400		6.7	12/7/2000
CB-4	25a-021240	Manganese, Total	286		0.20	12/7/2000
CB-4	25a-021240	Potassium, Total	2730		40.9	12/7/2000
CB-4	25a-021240	Sodium, Total	43500		4.1	12/7/2000
CB-5	25a-021238	Barium, Total	152		0.20	12/7/2000
CB-5	25a-021238	Boron, Total	43.7		2.7	12/7/2000
CB-5	25a-021238	Calcium, Total	81400		19.2	12/7/2000
CB-5	25a-021238	Cobalt, Total	0.92		0.90	12/7/2000
CB-5	25a-021238	Copper, Total	1.3		0.90	12/7/2000
CB-5	25a-021238	Dysprosium, Total	4.8	J	3.1	12/7/2000
CB-5	25a-021238	Iron, Total	489		21.8	12/7/2000
CB-5	25a-021238	Lithium, Total	7.7		0.20	12/7/2000
CB-5	25a-021238	Magnesium, Total	16800		6.7	12/7/2000
CB-5	25a-021238	Manganese, Total	278		0.20	12/7/2000
CB-5	25a-021238	Potassium, Total	3090		40.9	12/7/2000
CB-5	25a-021238	Sodium, Total	47300		4.1	12/7/2000

Table 4-59
Summary of Radiological Parameters in Saddle River Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analyte	Analytical Result (pCi/L)	Data Qualifier	Measurement Error (pCi/L)	MDA (pCi/L)	Totals (pCi/L)	Calculated Total Uranium Result (1) (ug/L)	Date Collected
SR-2	24a-020872	RA-226	0.47	J	0.30	0.42	0.62	NA	10/25/2000
SR-2	24a-020872	RA-228	0.15	UJ	0.69	0.77			10/25/2000
SR-2	24a-020872	TH-228	0.04	U	0.14	0.36	0.40	NA	10/25/2000
SR-2	24a-020872	TH-230	0.36	J	0.29	0.36			10/25/2000
SR-2	24a-020872	TH-232		R	0.05	0.40			10/25/2000
SR-2	24a-020872	Total Uranium	0.47		0.02	0.02	0.47	0.70	10/25/2000
SR-3	24a-020874	RA-226	0.81	J	0.38	0.39	1.02	NA	10/25/2000
SR-3	24a-020874	RA-228	0.21	UJ	0.81	0.89			10/25/2000
SR-3	24a-020874	TH-228	0.08	U	0.13	0.25	1.69	NA	10/25/2000
SR-3	24a-020874	TH-230	1.04	J	0.48	0.28			10/25/2000
SR-3	24a-020874	TH-232	0.57		0.35	0.28			10/25/2000
SR-3	24a-020874	Total Uranium	0.84		0.04	0.02	0.84	1.23	10/25/2000
SR-4	24a-020876	RA-226	0.38	J	0.26	0.48	1.13	NA	10/25/2000
SR-4	24a-020876	RA-228	0.75	UJ	0.67	0.75			10/25/2000
SR-4	24a-020876	TH-228	0.13	U	0.20	0.36	1.23	NA	10/25/2000
SR-4	24a-020876	TH-230	0.85	J	0.51	0.56			10/25/2000
SR-4	24a-020876	TH-232	0.25	UJ	0.28	0.45			10/25/2000
SR-4	24a-020876	Total Uranium	0.54	U	0.03	0.02	0.54	0.80	10/25/2000
SR-6	24a-020880	RA-226	1.35	J	0.51	0.69	2.09	NA	10/25/2000
SR-6	24a-020880	RA-228	0.74	UJ	0.67	0.74			10/25/2000
SR-6	24a-020880	TH-228	0.13	U	0.22	0.45	1.34	NA	10/25/2000
SR-6	24a-020880	TH-230	0.99	J	0.52	0.41			10/25/2000
SR-6	24a-020880	TH-232	0.22	U	0.27	0.48			10/25/2000
SR-6	24a-020880	Total Uranium	0.61	J	0.10	0.02	0.61	0.91	10/25/2000
SR-7	24a-020882	RA-226	1.56	J	0.54	0.56	2.26	NA	10/25/2000
SR-7	24a-020882	RA-228	0.70	UJ	0.61	0.70			10/25/2000
SR-7	24a-020882	TH-228	0.18	UJ	0.19	0.22	1.64	NA	10/25/2000
SR-7	24a-020882	TH-230	1.06	J	0.53	0.57			10/25/2000
SR-7	24a-020882	TH-232	0.39	J	0.31	0.39			10/25/2000
SR-7	24a-020882	Total Uranium	0.41		0.02	0.02	0.41	0.60	10/25/2000

Notes:
J = Estimated Concentration
U = Non-Detect
UJ = Estimated non-Detect
R = Rejected data
Federal/State MCL for Total Radium = 5 pCi/L
Total Uranium MCL - Federal/State MCL is 30 ug/L
(1) = Calculated by the laboratory Assuming U-Nat.
Federal/State MCL for Total Thorium = N/A

Table 4-60
Summary of Metals in Saddle River Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
SR-2	24a-020872	Barium, Total	112		0.10	10/25/2000
SR-2	24a-020872	Boron, Total	152	J	1.8	10/25/2000
SR-2	24a-020872	Calcium, Total	61400		11.9	10/25/2000
SR-2	24a-020872	Copper, Total	10.3		0.80	10/25/2000
SR-2	24a-020872	Iron, Total	248		10.8	10/25/2000
SR-2	24a-020872	Lead, Total	10.8		2.3	10/25/2000
SR-2	24a-020872	Lithium, Total	6.2		0.20	10/25/2000
SR-2	24a-020872	Magnesium, Total	18000		7.7	10/25/2000
SR-2	24a-020872	Manganese, Total	117		0.20	10/25/2000
SR-2	24a-020872	Potassium, Total	6280		18.6	10/25/2000
SR-2	24a-020872	Sodium, Total	55500		3.1	10/25/2000
SR-2	24a-020872	Vanadium, Total	0.82		0.70	10/25/2000
SR-2	24a-020872	Zinc, Total	17.7	J	0.70	10/25/2000
SR-3	24a-020874	Arsenic, Total	8.8		3.2	10/25/2000
SR-3	24a-020874	Barium, Total	115		0.10	10/25/2000
SR-3	24a-020874	Boron, Total	209	J	1.8	10/25/2000
SR-3	24a-020874	Calcium, Total	114000		11.9	10/25/2000
SR-3	24a-020874	Copper, Total	1.7		0.80	10/25/2000
SR-3	24a-020874	Iron, Total	215		10.8	10/25/2000
SR-3	24a-020874	Lithium, Total	631		0.20	10/25/2000
SR-3	24a-020874	Magnesium, Total	17100		7.7	10/25/2000
SR-3	24a-020874	Manganese, Total	173		0.20	10/25/2000
SR-3	24a-020874	Nickel, Total	1.6		1.4	10/25/2000
SR-3	24a-020874	Potassium, Total	31700		18.6	10/25/2000
SR-3	24a-020874	Sodium, Total	74800		3.1	10/25/2000
SR-3	24a-020874	Zinc, Total	8.1	J	0.70	10/25/2000
SR-4	24a-020876	Aluminum, Total	45.4		18.7	10/25/2000
SR-4	24a-020876	Barium, Total	120		0.10	10/25/2000
SR-4	24a-020876	Boron, Total	171	J	1.8	10/25/2000
SR-4	24a-020876	Calcium, Total	66500		11.9	10/25/2000
SR-4	24a-020876	Copper, Total	10.6		0.80	10/25/2000
SR-4	24a-020876	Iron, Total	298		10.8	10/25/2000
SR-4	24a-020876	Lithium, Total	31.9		0.20	10/25/2000
SR-4	24a-020876	Magnesium, Total	19200		7.7	10/25/2000
SR-4	24a-020876	Manganese, Total	147		0.20	10/25/2000
SR-4	24a-020876	Nickel, Total	2.2		1.4	10/25/2000
SR-4	24a-020876	Potassium, Total	7860		18.6	10/25/2000
SR-4	24a-020876	Silver, Total	1.4		0.50	10/25/2000
SR-4	24a-020876	Sodium, Total	59400		3.1	10/25/2000
SR-4	24a-020876	Vanadium, Total	0.92		0.70	10/25/2000
SR-4	24a-020876	Zinc, Total	21.2	J	0.70	10/25/2000
SR-6	24a-020880	Aluminum, Total	67.8		18.7	10/25/2000
SR-6	24a-020880	Barium, Total	121		0.10	10/25/2000
SR-6	24a-020880	Boron, Total	185	J	1.8	10/25/2000
SR-6	24a-020880	Calcium, Total	64400		11.9	10/25/2000
SR-6	24a-020880	Chromium, Total	0.73		0.60	10/25/2000
SR-6	24a-020880	Copper, Total	11.3		0.80	10/25/2000

Table 4-60
Summary of Metals in Saddle River Surface Water - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Date of Sample Collection
SR-6	24a-020880	Iron, Total	317		10.8	10/25/2000
SR-6	24a-020880	Lithium, Total	8.7		0.20	10/25/2000
SR-6	24a-020880	Magnesium, Total	19100		7.7	10/25/2000
SR-6	24a-020880	Manganese, Total	129		0.20	10/25/2000
SR-6	24a-020880	Nickel, Total	1.3		1.4	10/25/2000
SR-6	24a-020880	Potassium, Total	7100		18.6	10/25/2000
SR-6	24a-020880	Sodium, Total	59700		3.1	10/25/2000
SR-6	24a-020880	Zinc, Total	23.2	J	0.70	10/25/2000
SR-7	24a-020882	Barium, Total	125		0.10	10/25/2000
SR-7	24a-020882	Boron, Total	171	J	1.8	10/25/2000
SR-7	24a-020882	Calcium, Total	62600		11.9	10/25/2000
SR-7	24a-020882	Chromium, Total	0.68		0.60	10/25/2000
SR-7	24a-020882	Copper, Total	11.3		0.80	10/25/2000
SR-7	24a-020882	Iron, Total	248		10.8	10/25/2000
SR-7	24a-020882	Lithium, Total	8.5		0.20	10/25/2000
SR-7	24a-020882	Magnesium, Total	18400		7.7	10/25/2000
SR-7	24a-020882	Manganese, Total	155		0.20	10/25/2000
SR-7	24a-020882	Nickel, Total	1.6		1.4	10/25/2000
SR-7	24a-020882	Potassium, Total	6750		18.6	10/25/2000
SR-7	24a-020882	Sodium, Total	57000		3.1	10/25/2000
SR-7	24a-020882	Zinc, Total	20.3	J	0.70	10/25/2000

Notes:
J = Estimated Concentration

Table 4-61

Summary of Metals in Saddle River Surface Water Exceeding Standards - Phase II

Surface Water Location	S&W Lab Sample ID	Analysis Name	Result (ug/L)	Result Qualifier	IDL (ug/L)	Collection Date	NJ SWQC (ug/L)	EPA Federal AWQC - Acute (ug/L)	EPA Federal AWQC - Chronic (ug/L)	EPA Federal AWQC - Organoleptic Criteria (ug/L)
SR-2	24a-020872	Copper, Total	10.3	0.80		10/25/2000	7.9	13	9	1000
SR-2	24a-020872	Lead, Total	10.8	2.3		10/25/2000	5	65	2.5	NS
SR-3	24a-020874	Arsenic, Total	8.8	3.2		10/25/2000	0.017	340	150	NS
SR-4	24a-020876	Copper, Total	10.6	0.80		10/25/2000	7.9	13	9	1000
SR-6	24a-020880	Copper, Total	11.3	0.80		10/25/2000	7.9	13	9	1000
SR-7	24a-020882	Copper, Total	11.3	0.80		10/25/2000	7.9	13	9	1000

Notes:

ug/L = micrograms per liter

NJ SWQC = New Jersey Surface Water Quality Criteria

Federal AWQC = Ambient Water Quality Criteria

NS = No Standard

Table 4-62
Summary of Radiological Parameters in FMSS Sediments - Phase II

Brook/River	Sediment Location	S&W Lab Sample ID	RA-226 Result (pCi/g)	RA-226 Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	TH-232 Result (pCi/g)	TH-232 Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Combined RA-226 + TH-232 (pCi/g)	U-238 Result (pCi/g)	U-238 Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
Coles Brook	CB-1	25a-020921	1.15	J	0.41	0.23	0.30		0.15	0.14	1.44	0.58		0.24	0.16	10/30/2000
	CB-2	25a-020925	1.57	J	0.47	0.44	0.92		0.31	0.08	2.49	0.52		0.21	0.12	10/30/2000
	CB-3	25a-021242	1.41		0.39	0.24	1.80		0.50	0.17	3.21	1.34		0.44	0.22	12/7/2000
	CB-4	25a-021241	0.75		0.26	0.21	0.77		0.31	0.22	1.52	0.94		0.36	0.28	12/7/2000
	CB-5	25a-021239	1.49		0.46	0.29	0.75		0.29	0.18	2.24	0.98		0.33	0.18	12/7/2000
Lodi Brook	LB-1	22a-020883	10.41		1.40	0.36	21.48		4.50	0.21	**31.89**	5.76		1.29	0.16	12/7/2000
	LB-3	22a-020887	1.73	J	0.51	0.50	0.91		0.31	0.12	2.64	1.09		0.35	0.15	10/23/2000
	LB-4	22a-020889	1.84		0.52	0.32	1.45		0.46	0.18	3.29	0.88		0.32	0.18	10/19/2000
	LB-6	22a-020895	1.20		0.42	0.42	0.85		0.35	0.21	2.05	0.34		0.19	0.21	10/19/2000
	LB-7	22a-020897	2.35		0.60	0.48	0.33		0.19	0.21	2.68	0.51		0.23	0.17	10/19/2000
	LB-8	22a-020899	2.51		0.66	0.36	0.60		0.26	0.13	3.11	0.72		0.30	0.18	10/19/2000
Saddle River	SR-2	24a-020871	2.59	J	0.96	0.76	0.24		0.15	0.16	2.83	1.19		0.38	0.12	10/25/2000
	SR-3	24a-020873	1.84	J	0.57	0.37	1.01		0.44	0.21	2.85	1.02		0.32	0.11	10/25/2000
	SR-4	24a-020875	0.36	J	0.20	0.29	0.87		0.41	0.28	1.23	1.03		0.36	0.18	10/25/2000
	SR-6	24a-020879	0.79	J	0.30	0.37	0.66		0.30	0.23	1.45	0.87		0.32	0.16	10/25/2000
	SR-7	24a-020881	0.78	J	0.35	0.45	0.63		0.28	0.19	1.40	0.99		0.36	0.16	10/25/2000
Westerly Brook	WB-1	23a-020907	1.17	J	0.45	0.50	0.59		0.33	0.27	1.76	0.95	J	0.37	0.25	10/23/2000
	WB-2	23a-020903	2.83	J	0.75	0.43	0.47		0.25	0.18	3.30	1.22		0.40	0.18	10/23/2000
	WB-4	23a-020905	1.20	J	0.47	0.48	0.59		0.36	0.29	1.79	1.41	J	0.65	0.35	10/23/2000
	WB-5	23a-020909	1.74	J	0.56	0.34	0.73		0.26	0.15	2.47	0.73		0.28	0.17	10/24/2000
	UD-6	23a-020911	0.77		0.24	0.15	0.69		0.28	0.12	1.46	0.99		0.36	0.18	12/7/2000
	UD-7	23a-020915	0.73		0.28	0.21	0.52		0.24	0.15	1.25	0.96		0.34	0.18	12/7/2000

Notes:
J = Estimated Concentration

Table 4-63
Summary of Metals in Westerly Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
WB-1	23a-020901	Aluminum, Total	3570		1.3	10/23/2000
WB-1	23a-020901	Arsenic, Total	5.8		0.40	10/23/2000
WB-1	23a-020901	Barium, Total	36.3		0.02	10/23/2000
WB-1	23a-020901	Beryllium, Total	0.33		0.01	10/23/2000
WB-1	23a-020901	Calcium, Total	6500		1.1	10/23/2000
WB-1	23a-020901	Cadmium, Total	0.48		0.04	10/23/2000
WB-1	23a-020901	Cobalt, Total	4.2		0.09	10/23/2000
WB-1	23a-020901	Chromium, Total	10.6	J	0.11	10/23/2000
WB-1	23a-020901	Iron, Total	11300		1.9	10/23/2000
WB-1	23a-020901	Mercury, Total	0.04		0.02	10/23/2000
WB-1	23a-020901	Potassium, Total	384		3.5	10/23/2000
WB-1	23a-020901	Lithium, Total	5.9	J	0.02	10/23/2000
WB-1	23a-020901	Magnesium, Total	3260	J	0.93	10/23/2000
WB-1	23a-020901	Manganese, Total	183	J	0.02	10/23/2000
WB-1	23a-020901	Sodium, Total	216		0.45	10/23/2000
WB-1	23a-020901	Nickel, Total	13.6		0.14	10/23/2000
WB-1	23a-020901	Lead, Total	65.7		0.25	10/23/2000
WB-1	23a-020901	Antimony, Total	1.6		0.25	10/23/2000
WB-1	23a-020901	Vanadium, Total	12.5	J	0.11	10/23/2000
WB-1	23a-020901	Zinc, Total	221		0.05	10/23/2000
WB-2	23a-020903	Aluminum, Total	4280		1.2	10/23/2000
WB-2	23a-020903	Arsenic, Total	4.3		0.40	10/23/2000
WB-2	23a-020903	Barium, Total	47.6		0.02	10/23/2000
WB-2	23a-020903	Beryllium, Total	0.46		0.01	10/23/2000
WB-2	23a-020903	Calcium, Total	7710		1.0	10/23/2000
WB-2	23a-020903	Cadmium, Total	0.48		0.04	10/23/2000
WB-2	23a-020903	Cobalt, Total	5.4		0.09	10/23/2000
WB-2	23a-020903	Chromium, Total	13.6	J	0.11	10/23/2000
WB-2	23a-020903	Iron, Total	12500		1.9	10/23/2000
WB-2	23a-020903	Mercury, Total	0.07		0.02	10/23/2000
WB-2	23a-020903	Potassium, Total	403		3.5	10/23/2000
WB-2	23a-020903	Lithium, Total	6.9	J	0.02	10/23/2000
WB-2	23a-020903	Magnesium, Total	2590	J	0.91	10/23/2000
WB-2	23a-020903	Manganese, Total	207	J	0.02	10/23/2000
WB-2	23a-020903	Sodium, Total	185		0.44	10/23/2000
WB-2	23a-020903	Nickel, Total	17.7		0.14	10/23/2000
WB-2	23a-020903	Lead, Total	88.8		0.25	10/23/2000
WB-2	23a-020903	Antimony, Total	0.49		0.25	10/23/2000
WB-2	23a-020903	Selenium, Total	0.51		0.50	10/23/2000
WB-2	23a-020903	Vanadium, Total	16.1	J	0.11	10/23/2000
WB-2	23a-020903	Zinc, Total	202		0.05	10/23/2000
WB-4	23a-020905	Aluminum, Total	2930		1.2	10/23/2000
WB-4	23a-020905	Arsenic, Total	1.9		0.38	10/23/2000
WB-4	23a-020905	Barium, Total	31.3		0.02	10/23/2000
WB-4	23a-020905	Beryllium, Total	0.3		0.01	10/23/2000

Table 4-63
Summary of Metals in Westerly Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
WB-4	23a-020905	Calcium, Total	2310		0.99	10/23/2000
WB-4	23a-020905	Cadmium, Total	0.36		0.03	10/23/2000
WB-4	23a-020905	Cobalt, Total	3.5		0.09	10/23/2000
WB-4	23a-020905	Chromium, Total	9.6	J	0.1	10/23/2000
WB-4	23a-020905	Iron, Total	8050		1.8	10/23/2000
WB-4	23a-020905	Mercury, Total	0.03		0.02	10/23/2000
WB-4	23a-020905	Potassium, Total	305		3.3	10/23/2000
WB-4	23a-020905	Lithium, Total	4.1	J	0.02	10/23/2000
WB-4	23a-020905	Magnesium, Total	1490	J	0.87	10/23/2000
WB-4	23a-020905	Manganese, Total	62.7	J	0.02	10/23/2000
WB-4	23a-020905	Sodium, Total	162		0.42	10/23/2000
WB-4	23a-020905	Nickel, Total	15.7		0.13	10/23/2000
WB-4	23a-020905	Lead, Total	50.9		0.23	10/23/2000
WB-4	23a-020905	Antimony, Total	0.61		0.23	10/23/2000
WB-4	23a-020905	Selenium, Total	1.6		0.48	10/23/2000
WB-4	23a-020905	Vanadium, Total	8.9	J	0.1	10/23/2000
WB-4	23a-020905	Zinc, Total	154		0.04	10/23/2000
WB-5	23a-020909	Silver, Total	1.1		0.12	10/24/2000
WB-5	23a-020909	Aluminum, Total	2990		1.2	10/24/2000
WB-5	23a-020909	Arsenic, Total	3.6		0.38	10/24/2000
WB-5	23a-020909	Barium, Total	71.1		0.02	10/24/2000
WB-5	23a-020909	Beryllium, Total	0.25		0.01	10/24/2000
WB-5	23a-020909	Calcium, Total	3550	J	1.0	10/24/2000
WB-5	23a-020909	Cadmium, Total	0.54		0.03	10/24/2000
WB-5	23a-020909	Chromium, Total	9.7		0.10	10/24/2000
WB-5	23a-020909	Copper, Total	31.7		0.09	10/24/2000
WB-5	23a-020909	Iron, Total	8180		1.8	10/24/2000
WB-5	23a-020909	Mercury, Total	0.05		0.02	10/24/2000
WB-5	23a-020909	Potassium, Total	338		3.3	10/24/2000
WB-5	23a-020909	Lithium, Total	5.8	J	0.02	10/24/2000
WB-5	23a-020909	Magnesium, Total	2060	J	0.87	10/24/2000
WB-5	23a-020909	Manganese, Total	83.3	J	0.02	10/24/2000
WB-5	23a-020909	Sodium, Total	160		0.42	10/24/2000
WB-5	23a-020909	Nickel, Total	11.1		0.13	10/24/2000
WB-5	23a-020909	Lead, Total	93.3		0.23	10/24/2000
WB-5	23a-020909	Antimony, Total	0.59		0.23	10/24/2000
WB-5	23a-020909	Selenium, Total	0.39		0.48	10/24/2000
WB-5	23a-020909	Vanadium, Total	10.5	J	0.10	10/24/2000
WB-5	23a-020909	Zinc, Total	158		0.04	10/24/2000
UD-6	23a-020911	Aluminum, Total	6470		2.6	12/7/2000
UD-6	23a-020911	Arsenic, Total	3.5		0.27	12/7/2000
UD-6	23a-020911	Barium, Total	77.5		0.02	12/7/2000
UD-6	23a-020911	Calcium, Total	5460		2.2	12/7/2000
UD-6	23a-020911	Cadmium, Total	1.1		0.03	12/7/2000
UD-6	23a-020911	Cobalt, Total	6.9		0.10	12/7/2000

Table 4-63
Summary of Metals in Westerly Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
UD-6	23a-020911	Chromium, Total	40.5		0.07	12/7/2000
UD-6	23a-020911	Copper, Total	96.8		0.10	12/7/2000
UD-6	23a-020911	Iron, Total	24200		2.5	12/7/2000
UD-6	23a-020911	Potassium, Total	805		4.7	12/7/2000
UD-6	23a-020911	Lithium, Total	11.3		0.02	12/7/2000
UD-6	23a-020911	Magnesium, Total	3730		0.76	12/7/2000
UD-6	23a-020911	Manganese, Total	141		0.02	12/7/2000
UD-6	23a-020911	Sodium, Total	287		0.47	12/7/2000
UD-6	23a-020911	Nickel, Total	48.6		0.10	12/7/2000
UD-6	23a-020911	Lead, Total	276	J	0.24	12/7/2000
UD-6	23a-020911	Antimony, Total	1.3	J	0.26	12/7/2000
UD-6	23a-020911	Vanadium, Total	22.9		0.09	12/7/2000
UD-6	23a-020911	Zinc, Total	452		0.05	12/7/2000
UD-7	23a-020915	Aluminum, Total	5840		3.8	12/7/2000
UD-7	23a-020915	Arsenic, Total	3.3		0.40	12/7/2000
UD-7	23a-020915	Barium, Total	93.4		0.03	12/7/2000
UD-7	23a-020915	Calcium, Total	7060		3.2	12/7/2000
UD-7	23a-020915	Cadmium, Total	1.7		0.05	12/7/2000
UD-7	23a-020915	Cobalt, Total	6		0.15	12/7/2000
UD-7	23a-020915	Chromium, Total	60.8		0.10	12/7/2000
UD-7	23a-020915	Copper, Total	90.2		0.15	12/7/2000
UD-7	23a-020915	Iron, Total	25800		3.7	12/7/2000
UD-7	23a-020915	Potassium, Total	659		6.9	12/7/2000
UD-7	23a-020915	Lithium, Total	10.5		0.03	12/7/2000
UD-7	23a-020915	Magnesium, Total	4830		1.1	12/7/2000
UD-7	23a-020915	Manganese, Total	160		0.03	12/7/2000
UD-7	23a-020915	Sodium, Total	280		0.69	12/7/2000
UD-7	23a-020915	Nickel, Total	30.3		0.15	12/7/2000
UD-7	23a-020915	Lead, Total	197	J	0.35	12/7/2000
UD-7	23a-020915	Antimony, Total	1.6	J	0.39	12/7/2000
UD-7	23a-020915	Vanadium, Total	28.7		0.13	12/7/2000
UD-7	23a-020915	Zinc, Total	349		0.07	12/7/2000

Notes:
J = Estimated Concentration

Table 4-64

Summary of Metals in Westerly Brook Sediment Exceeding Standards - Phase II

GWRI Site Name:	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
UD-6	23a-020911	Cadmium, Total	1.1	0.03		12/7/2000	0.6	0.99
UD-6	23a-020911	Chromium, Total	40.5	0.07		12/7/2000	26	43.4
UD-6	23a-020911	Copper, Total	96.8	0.10		12/7/2000	16	31.6
UD-6	23a-020911	Lead, Total	276	0.24	J	12/7/2000	31	35.8
UD-6	23a-020911	Nickel, Total	48.6	0.10		12/7/2000	16	22.7
UD-6	23a-020911	Zinc, Total	452	0.05		12/7/2000	120	121
UD-7	23a-020915	Cadmium, Total	1.7	0.05		12/7/2000	0.6	0.99
UD-7	23a-020915	Chromium, Total	60.8	0.10		12/7/2000	26	43.4
UD-7	23a-020915	Copper, Total	90.2	0.15		12/7/2000	16	31.6
UD-7	23a-020915	Lead, Total	197	0.35	J	12/7/2000	31	35.8
UD-7	23a-020915	Nickel, Total	30.3	0.15		12/7/2000	16	22.7
UD-7	23a-020915	Zinc, Total	349	0.07		12/7/2000	120	121
WB-1	23a-020901	Lead, Total	65.7	0.25		10/23/2000	31	35.8
WB-1	23a-020901	Zinc, Total	221	0.05		10/23/2000	120	121
WB-2	23a-020903	Lead, Total	88.8	0.25		10/23/2000	31	35.8
WB-2	23a-020903	Nickel, Total	17.7	0.14		10/23/2000	16	22.7
WB-2	23a-020903	Zinc, Total	202	0.05		10/23/2000	120	121
WB-4	23a-020905	Lead, Total	50.9	0.23		10/23/2000	31	35.8
WB-4	23a-020905	Zinc, Total	154	0.04		10/23/2000	120	121
WB-5	23a-020909	Copper, Total	31.7	0.09		10/24/2000	16	31.6
WB-5	23a-020909	Lead, Total	93.3	0.23		10/24/2000	31	35.8
WB-5	23a-020909	Zinc, Total	158	0.04		10/24/2000	120	121

Notes:

mg/kg = Milligrams per Kilogram

Table 4-65
Summary of Metals in Lodi Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
LB-1	22a-020883	Aluminum, Total	7510		4.1	12/7/2000
LB-1	22a-020883	Arsenic, Total	30.5		0.43	12/7/2000
LB-1	22a-020883	Boron, Total	79.8		0.49	12/7/2000
LB-1	22a-020883	Barium, Total	132		0.04	12/7/2000
LB-1	22a-020883	Calcium, Total	14300		3.5	12/7/2000
LB-1	22a-020883	Cadmium, Total	0.89		0.05	12/7/2000
LB-1	22a-020883	Cobalt, Total	3		0.16	12/7/2000
LB-1	22a-020883	Chromium, Total	191		0.11	12/7/2000
LB-1	22a-020883	Copper, Total	96		0.16	12/7/2000
LB-1	22a-020883	Iron, Total	10400		3.9	12/7/2000
LB-1	22a-020883	Potassium, Total	454		7.4	12/7/2000
LB-1	22a-020883	Lithium, Total	94.6		0.04	12/7/2000
LB-1	22a-020883	Magnesium, Total	1400		1.2	12/7/2000
LB-1	22a-020883	Manganese, Total	94.4		0.04	12/7/2000
LB-1	22a-020883	Sodium, Total	3840		0.74	12/7/2000
LB-1	22a-020883	Nickel, Total	13.6		0.16	12/7/2000
LB-1	22a-020883	Lead, Total	354	J	0.38	12/7/2000
LB-1	22a-020883	Vanadium, Total	21.4		0.14	12/7/2000
LB-1	22a-020883	Zinc, Total	226		0.07	12/7/2000
LB-3	22a-020887	Aluminum, Total	3020		1.1	10/23/2000
LB-3	22a-020887	Arsenic, Total	1		0.36	10/23/2000
LB-3	22a-020887	Barium, Total	40.7		0.02	10/23/2000
LB-3	22a-020887	Beryllium, Total	0.27		0.01	10/23/2000
LB-3	22a-020887	Calcium, Total	8340		0.93	10/23/2000
LB-3	22a-020887	Cadmium, Total	0.32		0.03	10/23/2000
LB-3	22a-020887	Cobalt, Total	3.3		0.08	10/23/2000
LB-3	22a-020887	Chromium, Total	18.2	J	0.09	10/23/2000
LB-3	22a-020887	Copper, Total		R	0.08	10/23/2000
LB-3	22a-020887	Iron, Total	9330		1.7	10/23/2000
LB-3	22a-020887	Mercury, Total	0.11		0.02	10/23/2000
LB-3	22a-020887	Potassium, Total	233		3.1	10/23/2000
LB-3	22a-020887	Lithium, Total	3.6	J	0.02	10/23/2000
LB-3	22a-020887	Magnesium, Total	5020	J	0.82	10/23/2000
LB-3	22a-020887	Manganese, Total	138	J	0.02	10/23/2000
LB-3	22a-020887	Sodium, Total	273		0.40	10/23/2000
LB-3	22a-020887	Nickel, Total	11.4		0.13	10/23/2000
LB-3	22a-020887	Lead, Total	33.8		0.22	10/23/2000
LB-3	22a-020887	Antimony, Total	0.27		0.22	10/23/2000
LB-3	22a-020887	Selenium, Total	0.39		0.45	10/23/2000
LB-3	22a-020887	Vanadium, Total	12.5	J	0.09	10/23/2000
LB-3	22a-020887	Zinc, Total	108		0.04	10/23/2000
LB-4	22a-020889	Aluminum, Total	3860		1.2	10/19/2000
LB-4	22a-020889	Arsenic, Total	3.4	J	0.39	10/19/2000
LB-4	22a-020889	Boron, Total	10.1	J	0.24	10/19/2000
LB-4	22a-020889	Barium, Total	103	J	0.02	10/19/2000
LB-4	22a-020889	Beryllium, Total	0.26	J	0.01	10/19/2000
LB-4	22a-020889	Calcium, Total	7890	J	1.0	10/19/2000
LB-4	22a-020889	Cadmium, Total	0.42		0.03	10/19/2000
LB-4	22a-020889	Cobalt, Total	4.1		0.09	10/19/2000
LB-4	22a-020889	Chromium, Total	81	J	0.10	10/19/2000
LB-4	22a-020889	Copper, Total		R	0.09	10/19/2000

Table 4-65
Summary of Metals in Lodi Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
LB-4	22a-020889	Iron, Total	15400		1.9	10/19/2000
LB-4	22a-020889	Mercury, Total	0.08		0.02	10/19/2000
LB-4	22a-020889	Potassium, Total	411		3.5	10/19/2000
LB-4	22a-020889	Lithium, Total	7	J	0.02	10/19/2000
LB-4	22a-020889	Magnesium, Total	3730	J	0.90	10/19/2000
LB-4	22a-020889	Manganese, Total	524		0.02	10/19/2000
LB-4	22a-020889	Sodium, Total	220	J	0.44	10/19/2000
LB-4	22a-020889	Nickel, Total	12.1		0.14	10/19/2000
LB-4	22a-020889	Lead, Total	229	J	0.24	10/19/2000
LB-4	22a-020889	Antimony, Total	0.43	J	0.24	10/19/2000
LB-4	22a-020889	Selenium, Total	0.47		0.50	10/19/2000
LB-4	22a-020889	Vanadium, Total	15.5		0.10	10/19/2000
LB-4	22a-020889	Zinc, Total	179	J	0.05	10/19/2000
LB-6	22a-020895	Aluminum, Total	3630		1.2	10/19/2000
LB-6	22a-020895	Arsenic, Total	4.8	J	0.40	10/19/2000
LB-6	22a-020895	Boron, Total	7.5	J	0.24	10/19/2000
LB-6	22a-020895	Barium, Total	88.3	J	0.02	10/19/2000
LB-6	22a-020895	Beryllium, Total	0.78	J	0.01	10/19/2000
LB-6	22a-020895	Calcium, Total	21900	J	1.0	10/19/2000
LB-6	22a-020895	Cadmium, Total	0.37		0.03	10/19/2000
LB-6	22a-020895	Cobalt, Total	8		0.09	10/19/2000
LB-6	22a-020895	Chromium, Total	28.2	J	0.10	10/19/2000
LB-6	22a-020895	Copper, Total		R	0.09	10/19/2000
LB-6	22a-020895	Iron, Total	24200		1.9	10/19/2000
LB-6	22a-020895	Mercury, Total	0.07		0.02	10/19/2000
LB-6	22a-020895	Potassium, Total	407		3.5	10/19/2000
LB-6	22a-020895	Lithium, Total	6		0.02	10/19/2000
LB-6	22a-020895	Magnesium, Total	3260	J	0.91	10/19/2000
LB-6	22a-020895	Manganese, Total	410		0.02	10/19/2000
LB-6	22a-020895	Sodium, Total	545	J	0.44	10/19/2000
LB-6	22a-020895	Nickel, Total	23.9		0.14	10/19/2000
LB-6	22a-020895	Lead, Total	199	J	0.24	10/19/2000
LB-6	22a-020895	Antimony, Total	2.6	J	0.24	10/19/2000
LB-6	22a-020895	Vanadium, Total	16.4		0.10	10/19/2000
LB-6	22a-020895	Zinc, Total	621	J	0.05	10/19/2000
LB-7	22a-020897	Aluminum, Total	3770		1.2	10/19/2000
LB-7	22a-020897	Arsenic, Total	3.9	J	0.39	10/19/2000
LB-7	22a-020897	Boron, Total	16.3	J	0.24	10/19/2000
LB-7	22a-020897	Barium, Total	59.8	J	0.02	10/19/2000
LB-7	22a-020897	Beryllium, Total	0.66	J	0.01	10/19/2000
LB-7	22a-020897	Calcium, Total	12900	J	1.0	10/19/2000
LB-7	22a-020897	Cadmium, Total	0.27		0.03	10/19/2000
LB-7	22a-020897	Cobalt, Total	16.6		0.09	10/19/2000
LB-7	22a-020897	Chromium, Total	21	J	0.10	10/19/2000
LB-7	22a-020897	Copper, Total		R	0.09	10/19/2000
LB-7	22a-020897	Iron, Total	30000		1.9	10/19/2000
LB-7	22a-020897	Mercury, Total	0.07		0.02	10/19/2000
LB-7	22a-020897	Potassium, Total	360		3.5	10/19/2000
LB-7	22a-020897	Lithium, Total	5.9		0.02	10/19/2000
LB-7	22a-020897	Magnesium, Total	7240	J	0.90	10/19/2000
LB-7	22a-020897	Manganese, Total	448		0.02	10/19/2000

Table 4-65
Summary of Metals in Lodi Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
LB-7	22a-020897	Sodium, Total	376	J	0.44	10/19/2000
LB-7	22a-020897	Nickel, Total	61		0.14	10/19/2000
LB-7	22a-020897	Lead, Total	427	J	0.24	10/19/2000
LB-7	22a-020897	Antimony, Total	4.8	J	0.24	10/19/2000
LB-7	22a-020897	Vanadium, Total	18.8		0.10	10/19/2000
LB-7	22a-020897	Zinc, Total	1020	J	0.05	10/19/2000
LB-8	22a-020899	Aluminum, Total	4570		1.1	10/17/2000
LB-8	22a-020899	Arsenic, Total	4.7	J	0.35	10/17/2000
LB-8	22a-020899	Boron, Total	12	J	0.21	10/17/2000
LB-8	22a-020899	Barium, Total	95.4	J	0.02	10/17/2000
LB-8	22a-020899	Beryllium, Total	0.55	J	0.01	10/17/2000
LB-8	22a-020899	Calcium, Total	13800	J	0.90	10/17/2000
LB-8	22a-020899	Cadmium, Total	0.41		0.03	10/17/2000
LB-8	22a-020899	Cobalt, Total	7.5		0.08	10/17/2000
LB-8	22a-020899	Chromium, Total	27.3	J	0.09	10/17/2000
LB-8	22a-020899	Copper, Total		R	0.08	10/17/2000
LB-8	22a-020899	Iron, Total	37300		1.7	10/17/2000
LB-8	22a-020899	Mercury, Total	0.04		0.01	10/17/2000
LB-8	22a-020899	Potassium, Total	329		3.0	10/17/2000
LB-8	22a-020899	Lithium, Total	6.4		0.02	10/17/2000
LB-8	22a-020899	Magnesium, Total	5920	J	0.79	10/17/2000
LB-8	22a-020899	Manganese, Total	580		0.02	10/17/2000
LB-8	22a-020899	Sodium, Total	636	J	0.39	10/17/2000
LB-8	22a-020899	Nickel, Total	24.3		0.12	10/17/2000
LB-8	22a-020899	Lead, Total	128	J	0.21	10/17/2000
LB-8	22a-020899	Antimony, Total	0.7	J	0.21	10/17/2000
LB-8	22a-020899	Vanadium, Total	20.9		0.09	10/17/2000
LB-8	22a-020899	Zinc, Total	323	J	0.04	10/17/2000

Notes:
J = Estimated Concentration
R = Rejected data

Table 4-66
Summary of Rare Earth Elements in Lodi Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
LB-1	22a-020883	Cerium, Total	758		6.4	12/7/2000
LB-1	22a-020883	Dysprosium, Total	3.9		0.56	12/7/2000
LB-1	22a-020883	Lanthanum, Total	355		6.1	12/7/2000
LB-1	22a-020883	Neodymium, Total	301		2.4	12/7/2000
LB-1	22a-020883	Yttrium, Total	11		0.34	12/7/2000
LB-3	22a-020887	Cerium, Total	16.7	J	3.8	10/23/2000
LB-3	22a-020887	Dysprosium, Total	0.77		0.33	10/23/2000
LB-3	22a-020887	Lanthanum, Total	13.8		3.6	10/23/2000
LB-3	22a-020887	Neodymium, Total	8.3	J	1.4	10/23/2000
LB-3	22a-020887	Yttrium, Total	3.5		0.20	10/23/2000
LB-4	22a-020889	Cerium, Total	20.3	J	4.1	10/19/2000
LB-4	22a-020889	Dysprosium, Total	1.2		0.36	10/19/2000
LB-4	22a-020889	Lanthanum, Total	26.1		3.9	10/19/2000
LB-4	22a-020889	Neodymium, Total	8.9		1.5	10/19/2000
LB-4	22a-020889	Yttrium, Total	4.6		0.22	10/19/2000
LB-6	22a-020895	Cerium, Total	23.8	J	4.1	10/19/2000
LB-6	22a-020895	Dysprosium, Total	1.4		0.36	10/19/2000
LB-6	22a-020895	Lanthanum, Total	14.5		3.9	10/19/2000
LB-6	22a-020895	Neodymium, Total	11.6		1.5	10/19/2000
LB-6	22a-020895	Yttrium, Total	6.8		0.22	10/19/2000
LB-7	22a-020897	Cerium, Total	16	J	4.1	10/19/2000
LB-7	22a-020897	Dysprosium, Total	1.4		0.36	10/19/2000
LB-7	22a-020897	Lanthanum, Total	6.6		3.9	10/19/2000
LB-7	22a-020897	Neodymium, Total	8.2		1.5	10/19/2000
LB-7	22a-020897	Yttrium, Total	5.5		0.22	10/19/2000
LB-8	22a-020899	Cerium, Total	7.3	J	3.6	10/19/2000
LB-8	22a-020899	Dysprosium, Total	1.1		0.31	10/19/2000
LB-8	22a-020899	Lanthanum, Total	5.9		3.4	10/19/2000
LB-8	22a-020899	Neodymium, Total	5.1		1.3	10/19/2000
LB-8	22a-020899	Yttrium, Total	4.5		0.19	10/19/2000

Table 4-67

Summary of Metals in Lodi Brook Sediment Exceeding Standards - Phase II

GWRI Site Name	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
LB-1	22a-020883	Arsenic, Total	30.5	0.43		12/7/2000	6	9.79
LB-1	22a-020883	Cadmium, Total	0.89	0.05		12/7/2000	0.6	0.99
LB-1	22a-020883	Chromium, Total	191	0.11		12/7/2000	26	43.4
LB-1	22a-020883	Copper, Total	96	0.16		12/7/2000	16	31.6
LB-1	22a-020883	Lead, Total	354	0.38	J	12/7/2000	31	35.8
LB-1	22a-020883	Zinc, Total	226	0.07		12/7/2000	120	121
LB-3	22a-020887	Lead, Total	33.8	0.22		10/23/2000	31	35.8
LB-4	22a-020889	Chromium, Total	81	0.10	J	10/19/2000	26	43.4
LB-4	22a-020889	Lead, Total	229	0.24	J	10/19/2000	31	35.8
LB-4	22a-020889	Zinc, Total	179	0.05	J	10/19/2000	120	121
LB-6	22a-020895	Chromium, Total	28.2	0.10	J	10/19/2000	26	43.4
LB-6	22a-020895	Lead, Total	199	0.24	J	10/19/2000	31	35.8
LB-6	22a-020895	Nickel, Total	23.9	0.14		10/19/2000	16	22.7
LB-6	22a-020895	Zinc, Total	621	0.05	J	10/19/2000	120	121
LB-7	22a-020897	Lead, Total	427	0.24	J	10/19/2000	31	35.8
LB-7	22a-020897	Nickel, Total	61	0.14		10/19/2000	16	22.7
LB-7	22a-020897	Zinc, Total	1020	0.05	J	10/19/2000	120	121
LB-8	22a-020899	Chromium, Total	27.3	0.09	J	10/19/2000	26	43.4
LB-8	22a-020899	Lead, Total	128	0.21	J	10/19/2000	31	35.8
LB-8	22a-020899	Nickel, Total	24.3	0.12		10/19/2000	16	22.7
LB-8	22a-020899	Zinc, Total	323	0.04	J	10/19/2000	120	121

Notes:

mg/kg = Milligrams per Kilogram

Table 4-68
Summary of Rare Earth Elements in Lodi Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
LB-1	22a-020883	Cerium, Total	758		6.4	12/7/2000
LB-1	22a-020883	Dysprosium, Total	3.9		0.56	12/7/2000
LB-1	22a-020883	Lanthanum, Total	355		6.1	12/7/2000
LB-1	22a-020883	Neodymium, Total	301		2.4	12/7/2000
LB-1	22a-020883	Yttrium, Total	11		0.34	12/7/2000
LB-3	22a-020887	Cerium, Total	16.7	J	3.8	10/23/2000
LB-3	22a-020887	Dysprosium, Total	0.77		0.33	10/23/2000
LB-3	22a-020887	Lanthanum, Total	13.8		3.6	10/23/2000
LB-3	22a-020887	Neodymium, Total	8.3	J	1.4	10/23/2000
LB-3	22a-020887	Yttrium, Total	3.5		0.20	10/23/2000
LB-4	22a-020889	Cerium, Total	20.3	J	4.1	10/19/2000
LB-4	22a-020889	Dysprosium, Total	1.2		0.36	10/19/2000
LB-4	22a-020889	Lanthanum, Total	26.1		3.9	10/19/2000
LB-4	22a-020889	Neodymium, Total	8.9		1.5	10/19/2000
LB-4	22a-020889	Yttrium, Total	4.6		0.22	10/19/2000
LB-6	22a-020895	Cerium, Total	23.8	J	4.1	10/19/2000
LB-6	22a-020895	Dysprosium, Total	1.4		0.36	10/19/2000
LB-6	22a-020895	Lanthanum, Total	14.5		3.9	10/19/2000
LB-6	22a-020895	Neodymium, Total	11.6		1.5	10/19/2000
LB-6	22a-020895	Yttrium, Total	6.8		0.22	10/19/2000
LB-7	22a-020897	Cerium, Total	16	J	4.1	10/19/2000
LB-7	22a-020897	Dysprosium, Total	1.4		0.36	10/19/2000
LB-7	22a-020897	Lanthanum, Total	6.6		3.9	10/19/2000
LB-7	22a-020897	Neodymium, Total	8.2		1.5	10/19/2000
LB-7	22a-020897	Yttrium, Total	5.5		0.22	10/19/2000
LB-8	22a-020899	Cerium, Total	7.3	J	3.6	10/19/2000
LB-8	22a-020899	Dysprosium, Total	1.1		0.31	10/19/2000
LB-8	22a-020899	Lanthanum, Total	5.9		3.4	10/19/2000
LB-8	22a-020899	Neodymium, Total	5.1		1.3	10/19/2000
LB-8	22a-020899	Yttrium, Total	4.5		0.19	10/19/2000

Table 4-69
Summary of Metals in Coles Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
CB-1	25a-020921	Aluminum, Total	3120		2.4	10/30/2000
CB-1	25a-020921	Arsenic, Total	1.2		0.26	10/30/2000
CB-1	25a-020921	Barium, Total	23.4		0.02	10/30/2000
CB-1	25a-020921	Beryllium, Total	0.27		0.01	10/30/2000
CB-1	25a-020921	Calcium, Total	6620	J	2.0	10/30/2000
CB-1	25a-020921	Cadmium, Total	0.79		0.03	10/30/2000
CB-1	25a-020921	Cobalt, Total	3.7		0.1	10/30/2000
CB-1	25a-020921	Chromium, Total	21.1		0.06	10/30/2000
CB-1	25a-020921	Copper, Total	29		0.1	10/30/2000
CB-1	25a-020921	Iron, Total	12600		2.3	10/30/2000
CB-1	25a-020921	Potassium, Total	302		4.4	10/30/2000
CB-1	25a-020921	Lithium, Total	4.3		0.02	10/30/2000
CB-1	25a-020921	Magnesium, Total	3420		0.71	10/30/2000
CB-1	25a-020921	Manganese, Total	125		0.02	10/30/2000
CB-1	25a-020921	Sodium, Total	216		0.44	10/30/2000
CB-1	25a-020921	Nickel, Total	10		0.1	10/30/2000
CB-1	25a-020921	Lead, Total	40.2		0.22	10/30/2000
CB-1	25a-020921	Antimony, Total	0.59	J	0.25	10/30/2000
CB-1	25a-020921	Selenium, Total	0.6		0.35	10/30/2000
CB-1	25a-020921	Vanadium, Total	14.2		0.09	10/30/2000
CB-1	25a-020921	Zinc, Total	109		0.04	10/30/2000
CB-2	25a-020925	Aluminum, Total	3110		2.6	10/30/2000
CB-2	25a-020925	Arsenic, Total	1.2		0.28	10/30/2000
CB-2	25a-020925	Barium, Total	20.8		0.02	10/30/2000
CB-2	25a-020925	Beryllium, Total	0.25		0.01	10/30/2000
CB-2	25a-020925	Calcium, Total	4160	J	2.2	10/30/2000
CB-2	25a-020925	Cadmium, Total	0.18		0.03	10/30/2000
CB-2	25a-020925	Cobalt, Total	3		0.10	10/30/2000
CB-2	25a-020925	Chromium, Total	7.5		0.07	10/30/2000
CB-2	25a-020925	Copper, Total	19.1		0.10	10/30/2000
CB-2	25a-020925	Iron, Total	8650		2.5	10/30/2000
CB-2	25a-020925	Potassium, Total	441		4.8	10/30/2000
CB-2	25a-020925	Lithium, Total	5		0.02	10/30/2000
CB-2	25a-020925	Magnesium, Total	2830		0.78	10/30/2000
CB-2	25a-020925	Manganese, Total	101		0.02	10/30/2000
CB-2	25a-020925	Sodium, Total	153		0.48	10/30/2000
CB-2	25a-020925	Nickel, Total	7.5		0.10	10/30/2000
CB-2	25a-020925	Lead, Total	20.2		0.24	10/30/2000
CB-2	25a-020925	Vanadium, Total	11.2		0.09	10/30/2000
CB-2	25a-020925	Zinc, Total	64		0.05	10/30/2000
CB-3	25a-021242	Silver, Total	0.83		0.41	12/7/2000
CB-3	25a-021242	Aluminum, Total	9390		8.5	12/7/2000
CB-3	25a-021242	Arsenic, Total	6.7		0.90	12/7/2000
CB-3	25a-021242	Boron, Total	15.1		1.0	12/7/2000
CB-3	25a-021242	Barium, Total	179		0.08	12/7/2000
CB-3	25a-021242	Calcium, Total	9620		7.2	12/7/2000
CB-3	25a-021242	Cadmium, Total	3		0.11	12/7/2000
CB-3	25a-021242	Cobalt, Total	7.8		0.34	12/7/2000
CB-3	25a-021242	Chromium, Total	59.4		0.23	12/7/2000
CB-3	25a-021242	Copper, Total	131		0.34	12/7/2000
CB-3	25a-021242	Iron, Total	24700		8.2	12/7/2000
CB-3	25a-021242	Potassium, Total	1220		15.4	12/7/2000
CB-3	25a-021242	Lithium, Total	11.9		0.08	12/7/2000
CB-3	25a-021242	Magnesium, Total	5380		2.5	12/7/2000
CB-3	25a-021242	Manganese, Total	250		0.08	12/7/2000

Table 4-69
Summary of Metals in Coles Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Sample Date
CB-3	25a-021242	Sodium, Total	542		1.5	12/7/2000
CB-3	25a-021242	Nickel, Total	36.8		0.34	12/7/2000
CB-3	25a-021242	Lead, Total	304	J	0.79	12/7/2000
CB-3	25a-021242	Antimony, Total	1.9	J	0.87	12/7/2000
CB-3	25a-021242	Selenium, Total	1.5		1.2	12/7/2000
CB-3	25a-021242	Vanadium, Total	63.4		0.30	12/7/2000
CB-3	25a-021242	Zinc, Total	565		0.15	12/7/2000
CB-4	25a-021241	Aluminum, Total	5080		2.8	12/7/2000
CB-4	25a-021241	Arsenic, Total	1.7		0.30	12/7/2000
CB-4	25a-021241	Boron, Total	11.6		0.33	12/7/2000
CB-4	25a-021241	Barium, Total	60.9		0.02	12/7/2000
CB-4	25a-021241	Calcium, Total	23600		2.4	12/7/2000
CB-4	25a-021241	Cadmium, Total	0.25		0.04	12/7/2000
CB-4	25a-021241	Cobalt, Total	3.8		0.11	12/7/2000
CB-4	25a-021241	Chromium, Total	10.9		0.07	12/7/2000
CB-4	25a-021241	Copper, Total	19.8		0.11	12/7/2000
CB-4	25a-021241	Iron, Total	13500		2.7	12/7/2000
CB-4	25a-021241	Potassium, Total	539		5.1	12/7/2000
CB-4	25a-021241	Lithium, Total	5.1		0.02	12/7/2000
CB-4	25a-021241	Magnesium, Total	4300		0.83	12/7/2000
CB-4	25a-021241	Manganese, Total	206		0.02	12/7/2000
CB-4	25a-021241	Sodium, Total	330		0.51	12/7/2000
CB-4	25a-021241	Nickel, Total	9.9		0.11	12/7/2000
CB-4	25a-021241	Lead, Total	25.4	J	0.26	12/7/2000
CB-4	25a-021241	Antimony, Total	0.33	J	0.28	12/7/2000
CB-4	25a-021241	Vanadium, Total	24.2		0.1	12/7/2000
CB-4	25a-021241	Zinc, Total	110		0.05	12/7/2000
CB-5	25a-021239	Aluminum, Total	4260		2.7	12/7/2000
CB-5	25a-021239	Arsenic, Total	1		0.28	12/7/2000
CB-5	25a-021239	Boron, Total	11.5		0.32	12/7/2000
CB-5	25a-021239	Barium, Total	26		0.02	12/7/2000
CB-5	25a-021239	Calcium, Total	3790		2.3	12/7/2000
CB-5	25a-021239	Cadmium, Total	0.42		0.04	12/7/2000
CB-5	25a-021239	Cobalt, Total	4		0.11	12/7/2000
CB-5	25a-021239	Chromium, Total	7.1		0.07	12/7/2000
CB-5	25a-021239	Copper, Total	19.1		0.11	12/7/2000
CB-5	25a-021239	Iron, Total	8660		2.6	12/7/2000
CB-5	25a-021239	Potassium, Total	553		4.8	12/7/2000
CB-5	25a-021239	Lithium, Total	7.4		0.02	12/7/2000
CB-5	25a-021239	Magnesium, Total	2870		0.79	12/7/2000
CB-5	25a-021239	Manganese, Total	73.4		0.02	12/7/2000
CB-5	25a-021239	Sodium, Total	258		0.48	12/7/2000
CB-5	25a-021239	Nickel, Total	9.4		0.11	12/7/2000
CB-5	25a-021239	Lead, Total	30.9	J	0.25	12/7/2000
CB-5	25a-021239	Vanadium, Total	14.6		0.09	12/7/2000
CB-5	25a-021239	Zinc, Total	97.2		0.05	12/7/2000

Notes:
J = Estimated Concentration

Table 4-70

Summary of Metals in Coles Brook Sediment Exceeding Standards - Phase II

GWRI Site Name:	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
SR-3	24a-020873	Arsenic, Total	8.3	0.36		10/25/2000	6	9.79
SR-3	24a-020873	Copper, Total	26.6	0.09		10/25/2000	16	31.6
SR-3	24a-020873	Lead, Total	47.5	0.26		10/25/2000	31	35.8
SR-3	24a-020873	Zinc, Total	176	0.08		10/25/2000	120	121
SR-4	24a-020875	Lead, Total	34.3	0.30		10/25/2000	31	35.8
SR-7	24a-020881	Copper, Total	23	0.09		10/25/2000	16	31.6

Notes:

mg/kg = Milligrams per Kilogram

Table 4-71
Summary of Rare Earth Elements in Saddle River Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
SR-2	24a-020871	Yttrium, Total	1.1		0.22	10/25/2000
SR-3	24a-020873	Cerium, Total	12.7		3.8	10/25/2000
SR-3	24a-020873	Dysprosium, Total	1.2		0.33	10/25/2000
SR-3	24a-020873	Lanthanum, Total	5.5		3.6	10/25/2000
SR-3	24a-020873	Neodymium, Total	6.2		1.4	10/25/2000
SR-3	24a-020873	Yttrium, Total	6.6		0.20	10/25/2000
SR-4	24a-020875	Cerium, Total	10.5		4.5	10/25/2000
SR-4	24a-020875	Dysprosium, Total	0.86		0.39	10/25/2000
SR-4	24a-020875	Lanthanum, Total	5.5		4.3	10/25/2000
SR-4	24a-020875	Neodymium, Total	3.3		1.7	10/25/2000
SR-4	24a-020875	Yttrium, Total	2.9		0.24	10/25/2000
SR-6	24a-020879	Cerium, Total	9.3		4.5	10/25/2000
SR-6	24a-020879	Dysprosium, Total	0.49		0.39	10/25/2000
SR-6	24a-020879	Lanthanum, Total	6.3		4.3	10/25/2000
SR-6	24a-020879	Neodymium, Total	3.2		1.7	10/25/2000
SR-6	24a-020879	Yttrium, Total	2.2		0.24	10/25/2000
SR-7	24a-020881	Cerium, Total	9.7		4.0	10/25/2000
SR-7	24a-020881	Dysprosium, Total	0.85		0.35	10/25/2000
SR-7	24a-020881	Lanthanum, Total	6.7		3.8	10/25/2000
SR-7	24a-020881	Neodymium, Total	4.1		1.5	10/25/2000
SR-7	24a-020881	Yttrium, Total	2.9		0.22	10/25/2000

Table 4-72
Summary of U-238 Soil Results - Phase I Geoprobe Soil Samples

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	U-238 Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	4.71	U		4.71	3/15/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	13.10	U		13.10	3/31/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	3.90	J	5.91	19.60	4/3/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	12.50	U		12.50	3/16/2000
02d	8 Mill Street	02d-020512	02d001	0-4	4.87	U		4.87	3/15/2000
02d	8 Mill Street	02d-020514	02d002	0-4	17.30	U		17.30	3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	7.17	U		7.17	3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	8.32	U		8.32	3/16/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	16.10	U		16.10	3/22/2000
04a	160/174 Essex Street	04a-020522	04a002	0-4	6.63	U		6.63	3/17/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	6.85	U		6.85	3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	7.90	U		7.90	3/22/2000
05b	113 Essex Street	05b-020528	05b001	0-4	2.84	J	4.87	14.30	3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	5.05	U		5.05	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	4.60	U		4.60	3/23/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	5.10	U		5.10	3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	5.73	U		5.73	3/24/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	8.70	U		8.70	3/27/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	14.34	J	8.93	29.30	3/24/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	7.49	U		7.49	3/28/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	**61.60**	U		61.60	3/27/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	6.99	U		6.99	3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	34.90	U		34.90	3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		7.11	U		7.11	3/30/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	5.30	U		5.30	3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	6.36	J	1.7	9.62	3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	2.96	J	0.2	3.32	3/28/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	2.81	J	0.72	5.65	3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	6.83	U		6.83	3/31/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	31.85	J	3.57	34.40	4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	24.31	J	8.36	55.30	4/11/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	32.90	U		32.90	4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	9.12	U		9.12	4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	15.40	U		15.40	4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	7.45	U		7.45	4/12/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	10.30	U		10.30	4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	16.00	U		16.00	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	3.43	J	0.96	5.88	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	0.74	J	0.55	5.86	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	1.06	J	0.41	5.61	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	0.23	J	2.35	4.48	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	2.05	J	1.09	6.54	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	2.41	J	3.04	3.60	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	1.79	J	1.87	4.30	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	2.81	J	0.91	6.47	4/4/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	4.15	J	2.86	9.48	3/27/2000

Table 4-72
Summary of U-238 Soil Results - Phase I Geoprobe Soil Samples

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	U-238 Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	8.02	U		8.02	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	3.96	U		3.96	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	8.76	U		8.76	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	6.68	U		6.68	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	30.20	U		30.20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	4.61	U		4.61	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	8.81	U		8.81	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020610	12b007	1-3.5	3.07	J	3.46	16.20	4/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	9.14		4.04	3.40	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	8.30	U		8.30	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	40.40	U		40.40	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020618	12b010	4-6	10.10	U		10.10	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	6.92		2.95	19.50	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020623	12b011	6-8	12.96	J	7.86	31.90	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	1.34	J	1.99	6.34	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	1.02	J	3.96	14.40	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	3.36	J	3.1	3.62	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	**80.49**		12.17	66.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	2.88	J	2.33	4.14	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	4.22	U		4.22	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	12.40	U		12.40	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	7.68	J	8.5	18.50	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	9.52	U		9.52	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	8.25	U		8.25	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	16.30	U		16.30	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	**81.86**		14.96	65.70	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	10.70	U		10.70	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	4.29	J	3.72	12.30	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	9.92	U		9.92	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	14.30	U		14.30	4/24/2000
18a	Transect J	18a-020696	18a001	2-4	12.83	J	9.36	25.70	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	7.72	J	5.37	7.97	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	31.75		5.37	30.70	4/26/2000
18a	Transect J	18a-020701	18a002	2-4	9.63	J	2.03	11.30	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	1.39	J	3.15	6.44	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	1.41	J	1.08	5.36	4/26/2000
18a	Transect J	18a-020708	18a004	0-3	2.15	J	1.38	10.50	4/27/2000
18a	Transect J	18a-020709	18a004	3-6	4.13	J	9.99	5.16	4/27/2000

Notes:
U = Non-Detect
J = Estimated concentration
Bolded value denotes exceedance of FMSS Cleanup concentration of 50 pCi/g
bgs = Feet below ground surface

Table 4-73

Summary of Metals in Westerly Brook Sediment Exceeding Standards - Phase II

GWRI Site Name:	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
CB-1	25a-020921	Cadmium, Total	0.79	0.03		10/30/2000	0.6	0.99
CB-1	25a-020921	Copper, Total	29	0.1		10/30/2000	16	31.6
CB-1	25a-020921	Lead, Total	40.2	0.22		10/30/2000	31	35.8
CB-2	25a-020925	Copper, Total	19.1	0.10		10/30/2000	16	31.6
CB-3	25a-021242	Arsenic, Total	6.7	0.90		12/7/2000	6	9.79
CB-3	25a-021242	Cadmium, Total	3	0.11		12/7/2000	0.6	0.99
CB-3	25a-021242	Chromium, Total	59.4	0.23		12/7/2000	26	43.4
CB-3	25a-021242	Copper, Total	131	0.34		12/7/2000	16	31.6
CB-3	25a-021242	Lead, Total	304	0.79	J	12/7/2000	31	35.8
CB-3	25a-021242	Nickel, Total	36.8	0.34		12/7/2000	16	22.7
CB-3	25a-021242	Zinc, Total	565	0.15		12/7/2000	120	121
CB-4	25a-021241	Copper, Total	19.8	0.11		12/7/2000	16	31.6
CB-5	25a-021239	Copper, Total	19.1	0.11		12/7/2000	16	31.6

Notes:

mg/kg = Milligrams per Kilogram

Table 4-74
Summary of Rare Earth Elements in Coles Brook Sediments - Phase II

Sediment Location	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
CB-3	25a-021242	Cerium, Total	30.3		13.3	12/7/2000
CB-3	25a-021242	Lanthanum, Total	50.8		12.7	12/7/2000
CB-3	25a-021242	Neodymium, Total	15.6		5.0	12/7/2000
CB-3	25a-021242	Yttrium, Total	10.3		0.72	12/7/2000
CB-4	25a-021241	Cerium, Total	13.3		4.4	12/7/2000
CB-4	25a-021241	Dysprosium, Total	1		0.38	12/7/2000
CB-4	25a-021241	Neodymium, Total	11.1		1.6	12/7/2000
CB-4	25a-021241	Yttrium, Total	5.6		0.24	12/7/2000
CB-5	25a-021239	Cerium, Total	12.2		4.2	12/7/2000
CB-5	25a-021239	Dysprosium, Total	0.63		0.37	12/7/2000
CB-5	25a-021239	Neodymium, Total	6.3		1.6	12/7/2000
CB-5	25a-021239	Yttrium, Total	3.6		0.22	12/7/2000

Table 4-75
Summary of RA-226 and TH-232 Soil Results - Phase I Geoprobe Soil Samples

Property ID	Property Name	Geoprobe ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA-226 Analytical Result (pCi/g)	RA-226 Qualifier	RA-226 Measurement Error (pCi/g)	RA-226 MDA (pCi/g)	Th-232 Analytical Result (pCi/g)	Th-232 Qualifier	Th-232 Measurement Error (pCi/g)	Th-232 MDA (pCi/g)	Ra-226 + Th-232 (pCi/g)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a001	01a-020500	0-4	0.61		0.07	0.19	0.99		0.06	0.19	1.61	3/15/2000
02a	100 Hancock Street	02a001	02a-020502	5-8	1.78		0.09	0.33	5.01		0.13	0.26	**6.79**	3/31/2000
02a	100 Hancock Street	02a002	02a-020504	5-8	4.75		0.18	0.71	28.91		0.45	0.50	**33.66**	4/3/2000
02c	80 Industrial Road	02c001	02c-020510	0-4	1.10		0.08	0.29	4.57		0.13	0.24	**5.68**	3/16/2000
02d	8 Mill Street	02d001	020512	0-4	0.52		0.06	0.17	0.55		0.05	0.19	1.07	3/15/2000
02d	8 Mill Street	02d002	020514	0-4	2.14		0.11	0.44	8.15		0.18	0.34	**10.29**	3/16/2000
02d	8 Mill Street	02d003	020516	0-4	1.43		0.1	0.27	2.80		0.09	0.19	4.24	3/16/2000
03a	170 Gregg Street	03a001	03a-020518	0-4	1.18		0.08	0.20	0.84		0.07	0.26	2.02	3/16/2000
04a	160/174 Essex Street	04a001	04a-020520	0-4	2.97		0.14	0.51	20.26		0.33	0.39	**23.22**	3/22/2000
04a	160/174 Essex Street	04a002	04a-020522	0-4	0.62		0.07	0.18	0.62		0.05	0.20	1.24	3/17/2000
04a	160/174 Essex Street	04a003	04a-020524	0-4	0.95		0.07	0.23	1.41		0.08	0.26	2.36	3/22/2000
05a	99 Essex Street	05a001	05a-020526	0-4	0.47		0.07	0.23	0.79		0.06	0.22	1.26	3/22/2000
05b	113 Essex Street	05b001	020528	0-4	2.31		0.08	0.23	3.63		0.08	0.22	**5.94**	3/23/2000
05c	200 NJ Rt. 17 South	05c001	05c-020530	0-4	0.65		0.07	0.21	0.87		0.06	0.22	1.52	3/23/2000
06a	85-101 NJ Rt. 17 North	06a001	06a-020532	5-8	0.64		0.06	0.13	0.69		0.05	0.17	1.33	3/23/2000
06b	137 NJ Rt. 17 North	06b001	020534	6'-8'	0.87		0.08	0.19	0.88		0.06	0.23	1.74	3/24/2000
06c	167 NJ Rt. 17 North	06c001	06c-020536	5'-7'	0.72		0.08	0.22	0.74		0.06	0.22	1.47	3/24/2000
06c	167 NJ Rt. 17 North	06c002	06c-020538	4.5'-7'	1.19		0.08	0.25	1.02		0.06	0.18	2.21	3/27/2000
06d	239 NJ Rt. 17 North	06d001	020540	6'-9'	32.55		0.56	0.76	28.52		0.45	0.62	**61.07**	3/24/2000
06e	29 Essex Street	06e001	06e-020542	6'-9'	0.48		0.06	0.20	1.02		0.06	0.23	1.50	3/28/2000
07a	111 Essex Street	07a001	07a-020544	5'-8'	40.99		0.85	2.25	254.00		2.88	1.56	**294.99**	3/27/2000
08a	23 West Howcroft Road	08a001	08a-020548	9'-12'	0.54		0.06	0.17	0.59		0.05	0.20	1.13	3/30/2000
08a	23 West Howcroft Road	08a002	08a-020550	1'-3'	22.40		0.48	1.25	79.07		1.04	0.89	**101.47**	3/30/2000
08a	23 West Howcroft Road	08a003	08a-020772		0.58		0.07	0.22	0.78		0.06	0.22	1.36	3/30/2000
09a	149-151 Maywood Avenue	09a001	09a-020552	5'-8'	0.58		0.07	0.17	0.71		0.05	0.19	1.29	3/28/2000
09a	149-151 Maywood Avenue	09a002	09a-020554	6'-9'	0.81		0.04	0.17	0.93		0.04	0.18	1.75	3/28/2000
09a	149-151 Maywood Avenue	09a003	09a-020556	6'-9'	0.72		0.04	0.14	0.99		0.04	0.13	1.71	3/28/2000
09a	149-151 Maywood Avenue	09a004	09a-020558	6'-9'	1.10		0.04	0.17	1.49		0.07	0.17	2.60	3/31/2000
09a	149-151 Maywood Avenue	09a005	09a-020560	5'-9'	0.05	J	0.01	0.14	0.82		0.03	0.13	0.87	3/31/2000
09a	149-151 Maywood Avenue	09a007	09a-020566	1-3	19.41		0.34	1.19	110.06		1.32	0.93	**129.47**	4/11/2000
09a	149-151 Maywood Avenue	09a007	09a-020567	3-5	33.19		0.71	1.52	136.68		1.59	1.17	**169.87**	4/11/2000
09a	149-151 Maywood Avenue	09a008	09a-020570	2-4	10.87		0.29	0.87	33.88		0.53	0.63	**44.75**	4/12/2000
09a	149-151 Maywood Avenue	09a008	09a-020571	4-6	0.84		0.08	0.21	1.21		0.07	0.25	2.05	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020574	2-4	1.83		0.1	0.39	9.66		0.19	0.42	**11.49**	4/12/2000
09a	149-151 Maywood Avenue	09a009	09a-020575	4-6	0.66		0.06	0.22	1.07		0.05	0.15	1.73	4/12/2000
09a	149-151 Maywood Avenue	09a010	09a-020578	0-2	1.25		0.07	0.26	2.57		0.08	0.20	3.81	4/13/2000
09a	149-151 Maywood Avenue	09a010	09a-020579	2-4	2.39		0.11	0.40	10.59		0.20	0.29	**12.99**	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a001	10a-020582	5'-8'	0.73		0.05	0.24	1.11		0.03	0.15	1.84	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a002	10a-020584	6'-9'	1.48		0.04	0.31	1.25		0.03	0.15	2.73	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a003	10a-020586	5'-8'	1.97		0.09	0.29	3.00		0.10	0.22	4.96	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a004	10a-020588	10'-13'	1.16		0.03	0.19	1.62		0.04	0.17	2.78	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a005	10a-020590	5'-9'	0.99		0.08	0.17	1.35		0.06	0.16	2.33	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a006	10a-020592	5'-9'	0.87		0.06	0.18	1.10		0.05	0.14	1.97	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a007	10a-020779	2'-5'	0.92		0.06	0.14	1.48		0.06	0.17	2.41	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a008	10a-020781	10'-15'	0.61		0.05	0.09	0.68		0.04	0.13	1.29	4/4/2000
11a	205 Maywood Avenue	11a001	11a-020594	3-6	0.87		0.06	0.20	1.07		0.05	0.15	1.94	3/27/2000
11b	61 West Hunter Avenue	11b001	020596	2'-5'	0.85		0.08	0.25	1.22		0.07	0.25	2.07	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b001	020598	16'-20'	0.34		0.05	0.15	0.47		0.04	0.13	0.81	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b002	020600	7'-10'	0.87		0.09	0.23	0.76		0.06	0.27	1.63	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b003	020602	8'-12'	0.90		0.09	0.25	1.19		0.08	0.27	2.10	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b004	020604	8'-12'	9.10		0.26	0.77	26.04		0.43	0.52	**35.14**	4/5/2000

Table 4-75
Summary of RA-226 and TH-232 Soil Results - Phase I Geoprobe Soil Samples

Property ID	Property Name	Geoprobe ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	RA-226 Analytical Result (pCi/g)	RA-226 Qualifier	RA-226 Measurement Error (pCi/g)	RA-226 MDA (pCi/g)	Th-232 Analytical Result (pCi/g)	Th-232 Qualifier	Th-232 Measurement Error (pCi/g)	Th-232 MDA (pCi/g)	Ra-226 + Th-232 (pCi/g)	Date Collected
12b	100 West Hunter Avenue (MISS)	12b005	020606	8'-12'	0.45		0.05	0.15	0.57		0.05	0.16	1.02	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b006	020608	4'-8'	1.13		0.07	0.24	1.38		0.06	0.18	2.51	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b007	020610	1-3.5	0.59		0.08	0.25	0.22		0.04	0.23	0.81	4/27/2000
12b	100 West Hunter Avenue (MISS)	12b009	020614	7-9	0.72		0.07	0.24	1.14		0.05	0.17	1.86	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b009	020615	9-11	0.68		0.07	0.19	0.93		0.07	0.24	1.61	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b010	020619	10-12	10.50		0.28	1.05	67.92		0.89	0.74	**78.41**	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b010	020618	4-6	1.69		0.17	0.48	0.69		0.13	0.48	2.37	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b011	020622	0-4	7.16		0.21	0.69	17.87		0.33	0.50	**25.03**	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b011	020623	6-8	3.30		0.22	0.90	25.71		0.49	0.63	**29.01**	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	020626	2-4	2.66		0.12	0.33	4.71		0.13	0.26	**7.37**	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b012	020627	6-8	2.39		0.11	0.24	2.59		0.09	0.23	4.98	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b013	020630	3-5	0.58		0.05	0.19	0.80		0.04	0.15	1.37	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b013	020631	6-8	7.60		0.6	2.30	209.89		2.63	1.67	**217.49**	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b014	020634	2-4	1.15		0.08	0.23	1.54		0.06	0.17	2.69	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b014	020635	4-6	0.99		0.07	0.18	1.48		0.06	0.16	2.47	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b015	020638	0-2	1.48		0.11	0.33	2.43		0.10	0.23	3.91	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b015	020639	2-4	17.43		0.33	0.98	70.30		0.83	0.77	**87.73**	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b016	020642	1-3	0.76		0.08	0.27	1.73		0.08	0.25	2.49	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b016	020643	5-7	0.89		0.06	0.19	1.28		0.06	0.16	2.17	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b017	020646	0-2	1.49		0.1	0.42	12.42		0.22	0.31	**13.91**	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b017	020647	2-4	1.88	U		1.88	194.15		2.21	1.32	**196.03**	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b018	020650	0-2	1.27		0.08	0.30	3.51		0.11	0.21	4.78	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b018	020651	2-4	2.26		0.11	0.36	5.39		0.14	0.26	**7.65**	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b019	020654	0-2	1.05		0.07	0.23	2.94		0.09	0.28	3.98	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b019	020655	2-4	2.63		0.12	0.40	4.19		0.13	0.29	**6.83**	4/24/2000
18a	Transect J	18a001	18a-020696	2-4	3.88		0.33	1.23	131.88		1.53	0.96	**135.76**	4/26/2000
18a	Transect J	18a001	18a-020697	8-10	1.04		0.1	0.37	13.60		0.23	0.31	**14.64**	4/26/2000
18a	Transect J	18a002	18a-020700	0-2	3.07		0.29	1.09	67.34		0.95	0.78	**70.41**	4/26/2000
18a	Transect J	18a002	18a-020701	2-4	0.46		0.07	0.28	2.24		0.09	0.20	2.70	4/26/2000
18a	Transect J	18a003	18a-020704	0-2	1.13		0.08	0.22	1.61		0.07	0.17	2.74	4/26/2000
18a	Transect J	18a003	18a-020705	2-4	0.70		0.06	0.21	2.36		0.07	0.17	3.07	4/26/2000
18a	Transect J	18a004	18a-020708	0-3	0.43		0.08	0.32	0.29		0.04	0.20	0.72	4/27/2000
18a	Transect J	18a004	18a-020709	3-6	0.25		0.08	0.21	0.18	J	0.04	0.40	0.43	4/27/2000

Notes:
U = Non-Detect
J = Estimated concentration
Bolded value denotes exceedance of FMSS Cleanup concentration of 5 pCi/g
bgs = Feet below ground surface

Table 4-76
Summary of U-238 Soil Results - Phase I Geoprobe Soil Samples

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	U-238 Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	4.71	U		4.71	3/15/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	13.10	U		13.10	3/31/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	3.90	J	5.91	19.60	4/3/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	12.50	U		12.50	3/16/2000
02d	8 Mill Street	02d-020512	02d001	0-4	4.87	U		4.87	3/15/2000
02d	8 Mill Street	02d-020514	02d002	0-4	17.30	U		17.30	3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	7.17	U		7.17	3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	8.32	U		8.32	3/16/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	16.10	U		16.10	3/22/2000
04a	160/174 Essex Street	04a-020522	04a002	0-4	6.63	U		6.63	3/17/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	6.85	U		6.85	3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	7.90	U		7.90	3/22/2000
05b	113 Essex Street	05b-020528	05b001	0-4	2.84	J	4.87	14.30	3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	5.05	U		5.05	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	4.60	U		4.60	3/23/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	5.10	U		5.10	3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	5.73	U		5.73	3/24/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	8.70	U		8.70	3/27/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	14.34	J	8.93	29.30	3/24/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	7.49	U		7.49	3/28/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	**61.60**	U		61.60	3/27/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	6.99	U		6.99	3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	34.90	U		34.90	3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		7.11	U		7.11	3/30/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	5.30	U		5.30	3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	6.36	J	1.7	9.62	3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	2.96	J	0.2	3.32	3/28/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	2.81	J	0.72	5.65	3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	6.83	U		6.83	3/31/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	31.85	J	3.57	34.40	4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	24.31	J	8.36	55.30	4/11/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	32.90	U		32.90	4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	9.12	U		9.12	4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	15.40	U		15.40	4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	7.45	U		7.45	4/12/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	10.30	U		10.30	4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	16.00	U		16.00	4/13/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	3.43	J	0.96	5.88	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	0.74	J	0.55	5.86	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	1.06	J	0.41	5.61	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	0.23	J	2.35	4.48	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	2.05	J	1.09	6.54	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	2.41	J	3.04	3.60	4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	1.79	J	1.87	4.30	4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	2.81	J	0.91	6.47	4/4/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	4.15	J	2.86	9.48	3/27/2000

Table 4-76
Summary of U-238 Soil Results - Phase I Geoprobe Soil Samples

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	U-238 Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	8.02	U		8.02	3/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	3.96	U		3.96	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	8.76	U		8.76	4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	6.68	U		6.68	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	30.20	U		30.20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	4.61	U		4.61	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	8.81	U		8.81	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020610	12b007	1-3.5	3.07	J	3.46	16.20	4/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	9.14		4.04	3.40	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	8.30	U		8.30	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	40.40	U		40.40	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020618	12b010	4-6	10.10	U		10.10	4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	6.92		2.95	19.50	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020623	12b011	6-8	12.96	J	7.86	31.90	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	1.34	J	1.99	6.34	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	1.02	J	3.96	14.40	4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	3.36	J	3.1	3.62	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	**80.49**		12.17	66.60	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	2.88	J	2.33	4.14	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	4.22	U		4.22	4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	12.40	U		12.40	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	7.68	J	8.5	18.50	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	9.52	U		9.52	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	8.25	U		8.25	4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	16.30	U		16.30	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	**81.86**		14.96	65.70	4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	10.70	U		10.70	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	4.29	J	3.72	12.30	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	9.92	U		9.92	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	14.30	U		14.30	4/24/2000
18a	Transect J	18a-020696	18a001	2-4	12.83	J	9.36	25.70	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	7.72	J	5.37	7.97	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	31.75		5.37	30.70	4/26/2000
18a	Transect J	18a-020701	18a002	2-4	9.63	J	2.03	11.30	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	1.39	J	3.15	6.44	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	1.41	J	1.08	5.36	4/26/2000
18a	Transect J	18a-020708	18a004	0-3	2.15	J	1.38	10.50	4/27/2000
18a	Transect J	18a-020709	18a004	3-6	4.13	J	9.99	5.16	4/27/2000

Notes:
U = Non-Detect
J = Estimated concentration
Bolded value denotes exceedance of FMSS Cleanup concentration of 50 pCi/g
bgs = Feet below ground surface

Table 4-77A
Site Specific Soil Screening Levels for Metals

Parameters	Site Specific SSL (mg/Kg) (1)
Antimony	5
Arsenic	122
Barium	1600
Beryllium	63
Boron	52
Cadmium	8
Chromium, Total	242
Copper	426
Lead	400
Lithium	194
Mercury	2
Nickel	214
Selenium	5
Thallium	1.2

Notes:

mg/Kg = Milligrams per Kilogram

(1) = Source of Data presented in Soil Screening Level (SSL) Technical Memorandum, USACE October 2004

Table 4-77b
Summary of Metals in Soil Exceeding Site Specific Soil Screening Levels - Phase 1

GWRI Site ID	S&W Lab Sample ID	Depth of Measure (ft bgs)	Analysis Name	Result (mg/Kg)	Detection Limit (mg/Kg)	Result Qualifier	Site Specific SSL (mg/Kg)	Collection Date
12b002	12b-020600	7-10	Arsenic, Total	172	0.33		122	4/4/2000
12b010	12b-020618	4-6	Arsenic, Total	134	0.52		122	4/6/2000
18a004	18a-020709	3-6	Arsenic, Total	297	0.51		122	4/27/2000
04a003	04a-020524	0-4	Cadmium, Total	10.1	0.03	J	8	3/22/2000
04a001	04a-020520	0-4	Chromium, Total	251	0.08		242	3/22/2000
06d001	06d-020540	6'-9'	Chromium, Total	796	0.07		242	3/24/2000
08a002	08a-020550	1'-3'	Chromium, Total	262	0.08		242	3/20/2000
09a007	09a-020566	1-3	Chromium, Total	490	0.07		242	4/11/2000
10a003	10a-020586	5-8	Chromium, Total	5850	0.07		242	3/29/2000
12b006	12b-020608	4-8	Chromium, Total	356	0.06	J	242	4/5/2000
12b011	12b-020622	0-4	Chromium, Total	382	0.07		242	4/7/2000
12b018	12b-020650	0-2	Chromium, Total	386	0.06	J	242	4/24/2000
12b019	12b-020654	0-2	Chromium, Total	463	0.06	J	242	4/24/2000
09a007	09a-020567	3-5	Copper, Total	460	0.09	J	426	4/11/2000
09a007	09a-020566	1-3	Lead, Total	556	0.28		400	4/11/2000
12b018	12b-020651	2-4	Lead, Total	404	0.23	J	400	4/24/2000
08a002	08a-020550	1-3	Lithium, Total	548	0.01		194	3/20/2000
09a007	09a-020567	3-5	Lithium, Total	374	0.01		194	4/11/2000
09a008	09a-020570	2-4	Lithium, Total	250	0.02		194	4/12/2000
12b004	12b-020604	8-12	Lithium, Total	250	0.01		194	4/5/2000
12b007	12b-020610	1-3.5	Lithium, Total	773	0.02		194	4/27/2000
12b010	12b-020618	4-6	Lithium, Total	1880	0.02	J	194	4/6/2000
12b011	12b-020622	0-4	Lithium, Total	1390	0.01		194	4/7/2000
12b011	12b-020623	6-8	Lithium, Total	2090	0.02		194	4/7/2000
12b013	12b-020630	3-5	Lithium, Total	742	0.02		194	4/10/2000
12b017	12b-020647	2-4	Lithium, Total	614	0.02		194	4/20/2000
12b018	12b-020651	2-4	Lithium, Total	584	0.01	J	194	4/24/2000
18a002	18a-020700	0-2	Lithium, Total	516	0.01	J	194	4/26/2000
18a002	18a-020701	2-4	Lithium, Total	772	0.01	J	194	4/26/2000
18a004	18a-020708	0-3	Lithium, Total	589	0.01	J	194	4/27/2000
18a004	18a-020709	3-6	Lithium, Total	1080	0.02		194	4/27/2000
04a001	04a-020520	0-4	Mercury, Total	5.3	0.12		2	3/22/2000
09a007	09a-020567	3-5	Mercury, Total	9	0.20		2	4/11/2000
09a007	09a-020566	1-3	Mercury, Total	12.4	0.18		2	4/11/2000
09a009	09a-020574	2-4	Mercury, Total	2.4	0.05	J	2	4/12/2000
12b019	12b-020655	2-4	Mercury, Total	3.1	0.06		2	4/24/2000
12b017	12b-020646	0-2	Nickel, Total	297	0.13		214	4/20/2000
09a007	09a-020566	1-3	Selenium, Total	7	5.4		5	4/11/2000
12b013	12b-020630	3-5	Thallium, Total	1.3	0.68		1.2	4/10/2000

Notes:

mg/Kg = Milligrams per Kilogram
SSL = Soil Screening Level
DAF = Dilution Attenuation Factor
ft bgs = Feet below ground surface

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	Cerium, Total	12.9	3.5		3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	Dysprosium, Total	0.85	0.31		3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	Lanthanum, Total	6.3	3.4	J	3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	Neodymium, Total	7.3	1.3		3/15/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020500	01a001	0-4	Yttrium, Total	3.4	0.19	J	3/15/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	Cerium, Total	85.6	4.0		3/31/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	Dysprosium, Total	2.9	0.35		3/31/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	Lanthanum, Total	50.3	3.8		3/31/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	Neodymium, Total	43.4	1.5		3/31/2000
02a	100 Hancock Street	02a-020502	02a001	5-8	Yttrium, Total	12.6	0.22		3/31/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	Cerium, Total	575	3.9		4/3/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	Dysprosium, Total	6.9	0.34		4/3/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	Lanthanum, Total	393	3.7		4/3/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	Neodymium, Total	320	1.5		4/3/2000
02a	100 Hancock Street	02a-020504	02a002	5-8	Yttrium, Total	25	0.21		4/3/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	Cerium, Total	43	3.1		3/16/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	Dysprosium, Total	1.6	0.28		3/16/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	Lanthanum, Total	23.1	3.0	J	3/16/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	Neodymium, Total	24.6	1.2		3/16/2000
02c	80 Industrial Road	02c-020510	02c001	0-4	Yttrium, Total	8.3	0.17	J	3/16/2000
02d	8 Mill Street	02d-020512	02d001	0-4	Cerium, Total	20.1	3.8		3/15/2000
02d	8 Mill Street	02d-020512	02d001	0-4	Dysprosium, Total	1.1	0.33		3/15/2000
02d	8 Mill Street	02d-020512	02d001	0-4	Lanthanum, Total	9.7	3.6	J	3/15/2000
02d	8 Mill Street	02d-020512	02d001	0-4	Neodymium, Total	9.9	1.4		3/15/2000
02d	8 Mill Street	02d-020512	02d001	0-4	Yttrium, Total	6.3	0.20	J	3/15/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Cerium, Total	174	4.0		3/16/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Dysprosium, Total	3.5	0.35		3/16/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Lanthanum, Total	122	3.8	J	3/16/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Neodymium, Total	87.2	1.5		3/16/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Yttrium, Total	17.3	0.22	J	3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	Cerium, Total	53.4	4.1		3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	Dysprosium, Total	1.6	0.36		3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	Lanthanum, Total	34	4.0	J	3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	Neodymium, Total	27.8	1.5		3/16/2000
02d	8 Mill Street	02d-020516	02d003	0-4	Yttrium, Total	8.3	0.22	J	3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	Cerium, Total	31	3.9		3/16/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
03a	170 Gregg Street	03a-020518	03a001	0-4	Dysprosium, Total	1.8	0.34		3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	Lanthanum, Total	17.9	3.8	J	3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	Neodymium, Total	14.8	1.5		3/16/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	Yttrium, Total	10.2	0.21	J	3/16/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	Cerium, Total	308	4.3		3/22/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	Dysprosium, Total	5.6	0.38		3/22/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	Lanthanum, Total	173	4.1	J	3/22/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	Neodymium, Total	107	1.6		3/22/2000
04a	160/174 Essex Street	04a-020520	04a001	0-4	Yttrium, Total	24.1	0.23	J	3/22/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	Cerium, Total	34.6	3.8		3/22/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	Dysprosium, Total	1.9	0.34		3/22/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	Lanthanum, Total	17.4	3.7	J	3/22/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	Neodymium, Total	17.2	1.4		3/22/2000
04a	160/174 Essex Street	04a-020524	04a003	0-4	Yttrium, Total	9.4	0.21	J	3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	Cerium, Total	22.4	3.6		3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	Dysprosium, Total	1	0.32		3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	Lanthanum, Total	8.5	3.5	J	3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	Neodymium, Total	10.9	1.4		3/22/2000
05a	99 Essex Street	05a-020526	05a001	0-4	Yttrium, Total	4.9	0.20	J	3/22/2000
05b	113 Essex Street	05b-020528	05b001	0-4	Cerium, Total	62	3.9	J	3/23/2000
05b	113 Essex Street	05b-020528	05b001	0-4	Dysprosium, Total	2.4	0.35		3/23/2000
05b	113 Essex Street	05b-020528	05b001	0-4	Lanthanum, Total	36.2	3.8	J	3/23/2000
05b	113 Essex Street	05b-020528	05b001	0-4	Neodymium, Total	34.7	1.5	J	3/23/2000
05b	113 Essex Street	05b-020528	05b001	0-4	Yttrium, Total	9.3	0.21		3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	Cerium, Total	27.5	3.0	J	3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	Dysprosium, Total	1.7	0.27		3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	Lanthanum, Total	11.1	2.9	J	3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	Neodymium, Total	13.9	1.1	J	3/23/2000
05c	200 NJ Rt. 17 South	05c-020530	05c001	0-4	Yttrium, Total	7.1	0.16		3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	Cerium, Total	19.9	3.0	J	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	Dysprosium, Total	1.1	0.27		3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	Lanthanum, Total	8.6	2.9	J	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	Neodymium, Total	9.7	1.1	J	3/23/2000
06a	85-101 NJ Rt. 17 North	06a-020532	06a001	5-8	Yttrium, Total	4.6	0.16		3/23/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	Cerium, Total	25.2	3.1	J	3/24/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	Dysprosium, Total	1.5	0.27		3/24/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	Lanthanum, Total	10.8	3.0	J	3/24/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	Neodymium, Total	12	1.2	J	3/24/2000
06b	137 NJ Rt. 17 North	06b-020534	06b001	6'-8'	Yttrium, Total	6.3	0.17		3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	Cerium, Total	19.5	2.8	J	3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	Dysprosium, Total	1.4	0.25		3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	Lanthanum, Total	9.5	2.7	J	3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	Neodymium, Total	11	1.0	J	3/24/2000
06c	167 NJ Rt. 17 North	06c-020536	06c001	5'-7'	Yttrium, Total	5.7	0.15		3/24/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	Cerium, Total	33.4	3.6	J	3/27/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	Dysprosium, Total	2.1	0.32		3/27/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	Lanthanum, Total	16.3	3.5	J	3/27/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	Neodymium, Total	16.8	1.4	J	3/27/2000
06c	167 NJ Rt. 17 North	06c-020538	06c002	4.5'-7'	Yttrium, Total	9.5	0.20		3/27/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	Cerium, Total	98.2	4.1	J	3/24/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	Dysprosium, Total	2.7	0.37		3/24/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	Lanthanum, Total	51.1	4.0	J	3/24/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	Neodymium, Total	37.1	1.6	J	3/24/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6'-9'	Yttrium, Total	10.6	0.22		3/24/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	Cerium, Total	16.1	3.1	J	3/28/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	Dysprosium, Total	1.2	0.28		3/28/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	Lanthanum, Total	8.9	3.0	J	3/28/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	Neodymium, Total	11.1	1.2	J	3/28/2000
06e	29 Essex Street	06e-020542	06e001	6'-9'	Yttrium, Total	5.6	0.17		3/28/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	Cerium, Total	992	6.1	J	3/27/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	Dysprosium, Total	5.5	0.54		3/27/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	Lanthanum, Total	428	5.9	J	3/27/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	Neodymium, Total	430	2.3	J	3/27/2000
07a	111 Essex Street	07a-020544	07a001	5'-8'	Yttrium, Total	13.7	0.33		3/27/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	Cerium, Total	18.8	3.3		3/30/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	Dysprosium, Total	1.4	0.29		3/30/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	Lanthanum, Total	8.9	3.2		3/30/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	Neodymium, Total	10.3	1.2		3/30/2000
08a	23 West Howcroft Road	08a-020548	08a001	9'-12'	Yttrium, Total	5.2	0.18		3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	Cerium, Total	3500	4.3		3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	Dysprosium, Total	26.5	0.38		3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	Lanthanum, Total	1680	4.2		3/30/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	Neodymium, Total	1550	1.6		3/30/2000
08a	23 West Howcroft Road	08a-020550	08a002	1'-3'	Yttrium, Total	57.2	0.24		3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		Cerium, Total	30	3.5		3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		Dysprosium, Total	1.8	0.31		3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		Lanthanum, Total	10	3.4		3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		Neodymium, Total	15.9	1.3		3/30/2000
08a	23 West Howcroft Road	08a-020772	08a003		Yttrium, Total	8	0.19		3/30/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	Cerium, Total	22.1	3.7	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	Dysprosium, Total	1.6	0.33		3/28/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	Lanthanum, Total	11	3.6	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	Neodymium, Total	13	1.4	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020552	09a001	5'-8'	Yttrium, Total	7.5	0.20		3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	Cerium, Total	21.5	3.1	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	Dysprosium, Total	1.2	0.28		3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	Lanthanum, Total	11	3.0	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	Neodymium, Total	12.2	1.2	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020554	09a002	6'-9'	Yttrium, Total	5.9	0.17		3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	Cerium, Total	10.8	3.8	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	Dysprosium, Total	0.83	0.33		3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	Lanthanum, Total	6.2	3.6	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	Neodymium, Total	8.6	1.4	J	3/28/2000
09a	149-151 Maywood Avenue	09a-020556	09a003	6'-9'	Yttrium, Total	4.3	0.20		3/28/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	Cerium, Total	31.9	3.6		3/31/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	Dysprosium, Total	2.6	0.32		3/31/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	Lanthanum, Total	11.7	3.5		3/31/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	Neodymium, Total	18.9	1.4		3/31/2000
09a	149-151 Maywood Avenue	09a-020558	09a004	6'-9'	Yttrium, Total	11.4	0.20		3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	Cerium, Total	17.6	3.9		3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	Dysprosium, Total	1.4	0.35		3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	Lanthanum, Total	6.9	3.8		3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	Neodymium, Total	10.2	1.5		3/31/2000
09a	149-151 Maywood Avenue	09a-020560	09a005	5'-9'	Yttrium, Total	5.5	0.21		3/31/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	Cerium, Total	2090	4.3		4/11/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	Dysprosium, Total	13.6	0.38		4/11/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	Lanthanum, Total	972	4.1		4/11/2000
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	Neodymium, Total	901	1.6		4/11/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
09a	149-151 Maywood Avenue	09a-020566	09a007	1-3	Yttrium, Total	32.5	0.23		4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	Cerium, Total	1880	3.9		4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	Dysprosium, Total	15.5	0.35		4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	Lanthanum, Total	870	3.8		4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	Neodymium, Total	785	1.5		4/11/2000
09a	149-151 Maywood Avenue	09a-020567	09a007	3-5	Yttrium, Total	35.6	0.21		4/11/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	Cerium, Total	517	5.4		4/12/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	Dysprosium, Total	6.3	0.48		4/12/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	Lanthanum, Total	247	5.2		4/12/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	Neodymium, Total	230	2.0		4/12/2000
09a	149-151 Maywood Avenue	09a-020570	09a008	2-4	Yttrium, Total	17.7	0.29		4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	Cerium, Total	35.4	3.3		4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	Dysprosium, Total	3.7	0.29		4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	Lanthanum, Total	16.7	3.2		4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	Neodymium, Total	22.1	1.2		4/12/2000
09a	149-151 Maywood Avenue	09a-020571	09a008	4-6	Yttrium, Total	17.6	0.18		4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	Cerium, Total	47.3	3.9		4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	Dysprosium, Total	1.5	0.34		4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	Lanthanum, Total	17.2	3.7		4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	Neodymium, Total	20.1	1.5		4/12/2000
09a	149-151 Maywood Avenue	09a-020574	09a009	2-4	Yttrium, Total	3.5	0.21		4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	Cerium, Total	38.5	3.6		4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	Dysprosium, Total	1.9	0.32		4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	Lanthanum, Total	16.5	3.5		4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	Neodymium, Total	21	1.4		4/12/2000
09a	149-151 Maywood Avenue	09a-020575	09a009	4-6	Yttrium, Total	7.3	0.20		4/12/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	Cerium, Total	34.2	4.0	J	4/13/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	Dysprosium, Total	1.8	0.36		4/13/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	Lanthanum, Total	15.3	3.9	J	4/13/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	Neodymium, Total	18.9	1.5	J	4/13/2000
09a	149-151 Maywood Avenue	09a-020578	09a010	0-2	Yttrium, Total	6.5	0.22	J	4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	Cerium, Total	329	4.0	J	4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	Dysprosium, Total	5.3	0.35		4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	Lanthanum, Total	158	3.8		4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	Neodymium, Total	172	1.5		4/13/2000
09a	149-151 Maywood Avenue	09a-020579	09a010	2-4	Yttrium, Total	10.5	0.21	J	4/13/2000

Table 4-78
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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	Cerium, Total	103	2.7	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	Dysprosium, Total	1.2	0.23		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	Lanthanum, Total	58.4	2.6	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	Neodymium, Total	43.2	1.0	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020582	10a001	5'-8'	Yttrium, Total	3.9	0.14		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	Cerium, Total	16.5	3.2	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	Dysprosium, Total	0.94	0.29		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	Lanthanum, Total	6.2	3.1	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	Neodymium, Total	7	1.2	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020584	10a002	6'-9'	Yttrium, Total	4.5	0.18		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	Cerium, Total	34	4.5	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	Dysprosium, Total	1.3	0.40		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	Lanthanum, Total	20.7	4.4	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	Neodymium, Total	15.4	1.7	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020586	10a003	5'-8'	Yttrium, Total	6.9	0.25		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	Cerium, Total	23.2	3.0	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	Dysprosium, Total	2	0.27		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	Lanthanum, Total	10.3	2.9	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	Neodymium, Total	14.7	1.1	J	3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020588	10a004	10'-13'	Yttrium, Total	8.4	0.16		3/29/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	Cerium, Total	30.3	3.4		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	Dysprosium, Total	2	0.30		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	Lanthanum, Total	12	3.3		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	Neodymium, Total	17	1.3		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020590	10a005	5'-9'	Yttrium, Total	8.2	0.18		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	Cerium, Total	28.9	3.4		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	Dysprosium, Total	2.3	0.30		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	Lanthanum, Total	10.8	3.3		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	Neodymium, Total	16.1	1.3		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020592	10a006	5'-9'	Yttrium, Total	8.3	0.18		4/3/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	Cerium, Total	29	3.3		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	Dysprosium, Total	2.3	0.29		4/4/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	Lanthanum, Total	10.8	3.2		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	Neodymium, Total	17.4	1.3		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020779	10a007	2'-5'	Yttrium, Total	9.2	0.18		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	Cerium, Total	24.2	3.5		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	Dysprosium, Total	1.6	0.31		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	Lanthanum, Total	11	3.4		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	Neodymium, Total	12.4	1.3		4/4/2000
10a	100 West Hunter Avenue (Stepan)	10a-020781	10a008	10'-15'	Yttrium, Total	6.7	0.19		4/4/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	Cerium, Total	15.2	3.2	J	3/27/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	Dysprosium, Total	0.6	0.28		3/27/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	Lanthanum, Total	6.7	3.1	J	3/27/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	Neodymium, Total	8	1.2	J	3/27/2000
11a	205 Maywood Avenue	11a-020594	11a001	3-6	Yttrium, Total	2.7	0.17		3/27/2000
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	Cerium, Total	23.7	3.3	J	3/27/2000
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	Dysprosium, Total	1.3	0.29		3/27/2000
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	Lanthanum, Total	9.6	3.2	J	3/27/2000
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	Neodymium, Total	11.6	1.2	J	3/27/2000
11b	61 West Hunter Avenue	11b-020596	11b001	2'-5'	Yttrium, Total	6.7	0.18		3/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	Cerium, Total	14.9	3.7		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	Dysprosium, Total	1.2	0.33		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	Lanthanum, Total	6.5	3.6		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	Neodymium, Total	8.9	1.4		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020598	12b001	16'-20'	Yttrium, Total	4.9	0.20		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	Cerium, Total	38.2	3.8		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	Dysprosium, Total	1.4	0.34		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	Lanthanum, Total	16.4	3.7		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	Neodymium, Total	15.7	1.4		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020600	12b002	7'-10'	Yttrium, Total	5	0.21		4/4/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	Cerium, Total	11.6	3.6		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	Dysprosium, Total	0.86	0.3		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	Neodymium, Total	7.6	1.4		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020602	12b003	8'-12'	Yttrium, Total	4	0.2		4/5/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	Cerium, Total	298	4.5		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	Dysprosium, Total	3.4	0.4		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	Lanthanum, Total	130	4.3		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	Neodymium, Total	124	1.7		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020604	12b004	8'-12'	Yttrium, Total	8.7	0.2		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	Cerium, Total	17.9	3.2		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	Dysprosium, Total	1.1	0.3		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	Lanthanum, Total	8.2	3.1		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	Neodymium, Total	9.3	1.2		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020606	12b005	8'-12'	Yttrium, Total	4.8	0.2		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	Cerium, Total	16	3.5		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	Dysprosium, Total	1.6	0.3		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	Lanthanum, Total	8	3.4		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	Neodymium, Total	13.1	1.3		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4'-8'	Yttrium, Total	6.8	0.2		4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020610	12b007	1-3.5	Neodymium, Total	5.9	2.2	J	4/27/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	Cerium, Total	30.2	4.0		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	Dysprosium, Total	1.5	0.35		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	Lanthanum, Total	13.8	3.8		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	Neodymium, Total	15.3	1.5		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020614	12b009	7-9	Yttrium, Total	7	0.22		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	Cerium, Total	26.9	3.7		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	Dysprosium, Total	1.8	0.33		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	Lanthanum, Total	13.8	3.6		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	Neodymium, Total	15	1.4		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020615	12b009	9-11	Yttrium, Total	8.3	0.20		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	Cerium, Total	406	3.7		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	Dysprosium, Total	3.1	0.33		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	Lanthanum, Total	193	3.6		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	Neodymium, Total	165	1.4		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020619	12b010	10-12	Yttrium, Total	8.9	0.20		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020618	12b010	4-6	Neodymium, Total	6.6	2.3		4/6/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020618	12b010	4-6	Yttrium, Total	1.6	0.34		4/6/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	Cerium, Total	194	4.1		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	Dysprosium, Total	1.2	0.36		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	Lanthanum, Total	90	3.9		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	Neodymium, Total	77.6	1.5		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020622	12b011	0-4	Yttrium, Total	3.5	0.22		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020623	12b011	6-8	Dysprosium, Total	5.8	0.59		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020623	12b011	6-8	Neodymium, Total	15.3	2.5		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020623	12b011	6-8	Yttrium, Total	22.2	0.36		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	Cerium, Total	39.5	3.9		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	Dysprosium, Total	0.64	0.35		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	Lanthanum, Total	15.4	3.8		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	Neodymium, Total	15	1.5		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020626	12b012	2-4	Yttrium, Total	2.7	0.21		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	Cerium, Total	9.9	4.9		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	Dysprosium, Total	1.1	0.44		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	Neodymium, Total	4.8	1.9		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020627	12b012	6-8	Yttrium, Total	4.7	0.27		4/7/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	Cerium, Total	5270	6.4		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	Dysprosium, Total	58.2	0.57		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	Lanthanum, Total	2620	6.2		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	Neodymium, Total	2130	2.4		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020630	12b013	3-5	Yttrium, Total	139	0.35		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	Cerium, Total	15.2	3.7		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	Dysprosium, Total	0.98	0.33		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	Lanthanum, Total	8.8	3.6		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	Neodymium, Total	9.2	1.4		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020631	12b013	6-8	Yttrium, Total	6.5	0.20		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	Cerium, Total	32.8	4.0		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	Dysprosium, Total	1.4	0.35		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	Lanthanum, Total	15.1	3.8		4/10/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	Neodymium, Total	14.8	1.5		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020634	12b014	2-4	Yttrium, Total	5.8	0.21		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	Cerium, Total	35.4	4.1		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	Dysprosium, Total	2	0.36		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	Lanthanum, Total	17.7	4.0		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	Neodymium, Total	18.5	1.5		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020635	12b014	4-6	Yttrium, Total	9.2	0.22		4/10/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	Cerium, Total	35.8	3.8		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	Dysprosium, Total	1.9	0.34		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	Lanthanum, Total	16.8	3.7		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	Neodymium, Total	19.2	1.4		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020638	12b015	0-2	Yttrium, Total	7.8	0.21		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	Cerium, Total	1160	4.0		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	Dysprosium, Total	19.2	0.35		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	Lanthanum, Total	672	3.8		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	Neodymium, Total	461	1.5		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020639	12b015	2-4	Yttrium, Total	46.2	0.22		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	Cerium, Total	30.4	3.4		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	Dysprosium, Total	2	0.30		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	Lanthanum, Total	11.6	3.3		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	Neodymium, Total	16.5	1.3		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020642	12b016	1-3	Yttrium, Total	6.3	0.18		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	Cerium, Total	25.8	4.3		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	Dysprosium, Total	1.5	0.38		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	Lanthanum, Total	4.6	4.2		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	Neodymium, Total	11.8	1.6		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020643	12b016	5-7	Yttrium, Total	3.9	0.23		4/19/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	Cerium, Total	94	3.4		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	Dysprosium, Total	1.9	0.30		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	Lanthanum, Total	44.8	3.2		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	Neodymium, Total	43.8	1.3		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020646	12b017	0-2	Yttrium, Total	5.9	0.18		4/20/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	Cerium, Total	353	5.5		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	Dysprosium, Total	38.8	0.49		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	Lanthanum, Total	107	5.3		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	Neodymium, Total	294	2.1		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020647	12b017	2-4	Yttrium, Total	75.9	0.30		4/20/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	Cerium, Total	50	3.7	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	Dysprosium, Total	1.3	0.33	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	Lanthanum, Total	24.6	3.6	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	Neodymium, Total	23	1.4	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020650	12b018	0-2	Yttrium, Total	7.3	0.20	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	Cerium, Total	39.9	3.6	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	Dysprosium, Total	0.7	0.32	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	Lanthanum, Total	21.1	3.5	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	Neodymium, Total	18	1.3	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020651	12b018	2-4	Yttrium, Total	3.2	0.19	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	Cerium, Total	71.3	17.0	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	Dysprosium, Total	2.1	1.5	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	Lanthanum, Total	40.9	16.5	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	Neodymium, Total	29.4	6.4	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020654	12b019	0-2	Yttrium, Total	7.5	0.93	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	Cerium, Total	55	3.8	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	Dysprosium, Total	1.1	0.33	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	Lanthanum, Total	27.4	3.6	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	Neodymium, Total	25.7	1.4	J	4/24/2000
12b	100 West Hunter Avenue (MISS)	12b-020655	12b019	2-4	Yttrium, Total	5.9	0.21	J	4/24/2000
18a	Transect J	18a-020696	18a001	2-4	Cerium, Total	361	3.5	J	4/26/2000
18a	Transect J	18a-020696	18a001	2-4	Dysprosium, Total	6.5	0.31	J	4/26/2000
18a	Transect J	18a-020696	18a001	2-4	Lanthanum, Total	171	3.4	J	4/26/2000
18a	Transect J	18a-020696	18a001	2-4	Neodymium, Total	151	1.3	J	4/26/2000
18a	Transect J	18a-020696	18a001	2-4	Yttrium, Total	18.6	0.19	J	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	Cerium, Total	27.5	3.9		4/26/2000

Table 4-78
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
18a	Transect J	18a-020697	18a001	8-10	Dysprosium, Total	0.92	0.35	J	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	Lanthanum, Total	13	3.8	J	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	Neodymium, Total	12.1	1.5	J	4/26/2000
18a	Transect J	18a-020697	18a001	8-10	Yttrium, Total	4.8	0.21	J	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	Cerium, Total	336	5.1	J	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	Dysprosium, Total	12.4	0.45		4/26/2000
18a	Transect J	18a-020700	18a002	0-2	Lanthanum, Total	124	4.9	J	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	Neodymium, Total	124	1.9	J	4/26/2000
18a	Transect J	18a-020700	18a002	0-2	Yttrium, Total	48.3	0.28	J	4/26/2000
18a	Transect J	18a-020701	18a002	2-4	Yttrium, Total	0.64	0.28	J	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	Cerium, Total	24.4	3.8		4/26/2000
18a	Transect J	18a-020704	18a003	0-2	Dysprosium, Total	1.4	0.34	J	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	Lanthanum, Total	15	3.7	J	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	Neodymium, Total	13.9	1.4	J	4/26/2000
18a	Transect J	18a-020704	18a003	0-2	Yttrium, Total	6.3	0.21	J	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	Cerium, Total	86.8	3.8	J	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	Dysprosium, Total	2.8	0.34	J	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	Lanthanum, Total	39.8	3.7	J	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	Neodymium, Total	34.1	1.4	J	4/26/2000
18a	Transect J	18a-020705	18a003	2-4	Yttrium, Total	11.1	0.21	J	4/26/2000
18a	Transect J	18a-020708	18a004	0-3	Neodymium, Total	7.2	1.8	J	4/27/2000
18a	Transect J	18a-020708	18a004	0-3	Yttrium, Total	0.64	0.26	J	4/27/2000
18a	Transect J	18a-020709	18a004	3-6	Neodymium, Total	6.5	2.3	J	4/27/2000

Table 4-79
Summary of Detectable VOCs in Geoprobe Soil Samples & Associated Soil Exceedances - Phase I

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (ug/kg)	Result Qualifier	IDL (ug/kg)	NJ Soil Impact to GW (ug/kg)	EPA Generic Soil Impact to Groundwater (ug/kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-020830	12b012	2 - 4	Benzene	**120**	J	480	1,000	30	8/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020834	12b013	3 - 5	Benzene	**200**	J	290	1,000	30	8/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020831	12b012	6 - 8	Bromoform	210	J	600	1,000	800	8/18/2000
02d	8 Mill Street	02d-020514	02d002	0-4	Carbon tetrachloride	**180**	J	710	1,000	70	3/16/2000
06d	239 NJ Rt. 17 North	06d-020540	06d001	6 -9	Chloromethane	1400		1400	10,000	N/A	3/24/2000
03a	170 Gregg Street	03a-020518	03a001	0-4	Methylene Chloride	**880**	B	520	1,000	20	3/16/2000
12b	100 West Hunter Avenue (MISS)	12b-020608	12b006	4 -8	Methylene Chloride	***2400***		640	1,000	20	4/5/2000
12b	100 West Hunter Avenue (MISS)	12b-020834	12b013	3 - 5	Toluene	87	J	290	500,000	12000	8/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020831	12b012	6 - 8	Toluene	240	J	600	500,000	12000	8/18/2000
12b	100 West Hunter Avenue (MISS)	12b-020831	12b012	6 - 8	Total Xylene	270	J	600	67,000	0	8/18/2000

Notes:
J = Estimated concentration
bgs = Feet below ground surface
Bolded concentration denotes exceedance of soil standard

Table 4-80
Summary of RA-226 and TH-232 in Monitoring Well Soil Samples - Phase II

Property ID	Property Name	GWRI Site Name	Depth of Measure (ft bgs)	S&W Lab Sample ID	Analyte	RA-226 Analytical Result (pCi/g)	RA-226 Qualifier	RA-226 Measurement Error (pCi/g)	RA-226 MDA (pCi/g)	Th-232 Analytical Result (pCi/g)	Th-232 Qualifier	Th-232 Measurement Error (pCi/g)	Th-232 MDA (pCi/g)	Ra-226 + Th-232 (pCi/g)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	MW-16S	4-6	01a-021000	RA-226	8.43		1.23	0.37	18.43		3.71	0.11	**26.86**	11/8/2000
02a	100 Hancock Street	MW-14S	2-4	02a-020976	RA-226	9.97		2.39	1.23	44.13		9.48	0.86	**54.10**	11/10/2000
02d	8 Mill Street	MW-15S	4-6	021001	RA-226	0.88	J	0.37	0.36	1.01		0.31	0.13	1.89	11/17/2000
05a	99 Essex Street	MW-13S	1-3	05a-021006	RA-226	0.44	J	0.19	0.16	0.57		0.22	0.11	1.01	12/5/2000
07a	111 Essex Street	MW-21S		07a-021581	RA-226	1.10		0.30	0.20	2.35		0.65	0.17	3.45	6/26/2001
08a	23 West Howcroft Road	MW-12S	6-8	08a-021182	RA-226	0.62	J	0.25	0.20	1.39		0.42	0.16	2.01	11/29/2000
09a	149-151 Maywood Avenue	MW-11S	2-4	09a-020970	RA-226	0.97	J	0.30	0.21	1.13		0.34	0.14	2.09	11/28/2000
12a	NY, Susquehanna, & Western Railway	MW-20S	6-8	12a-020988	RA-226	0.60		0.22	0.21	0.41		0.17	0.11	1.00	11/22/2000
12a	NY, Susquehanna, & Western Railway	MW-3S	2-4	12a-021003	RA-226	0.64	J	0.29	0.35	0.23		0.15	0.13	0.87	11/3/2000
17a	Transect G	MW-22S		17a-021564	RA-226	0.90	U	0.35	0.25	0.62		0.26	0.14	1.52	6/11/2001
22b	Lodi Brook Drainage Basin	MW-10S	5-7	020998	RA-226	1.55	J	0.48	0.46	1.26		0.41	0.12	2.81	10/30/2000
22b	Lodi Brook Drainage Basin	MW-9S	0-2	020999	RA-226	3.15	J	0.81	0.54	0.89	J	0.32	0.10	4.04	11/1/2000
22b	Lodi Brook Drainage Basin	MW-18S	3-5	021002	RA-226	1.20		0.44	0.47	1.12		0.35	0.13	2.32	11/20/2000
22b	Lodi Brook Drainage Basin	MW-17S	5-7	021004	RA-226	0.90		0.34	0.36	0.89		0.30	0.11	1.79	11/20/2000
23b	Westerly Brook Drainage Basin	MW-2S	5-7'	020952	RA-226	2.27		0.65	0.39	0.80	J	0.31	0.14	3.07	10/23/2000
23b	Westerly Brook Drainage Basin	MW-4S	1-3	020956	RA-226	2.51	J	0.63	0.42	0.93		0.34	0.23	3.43	10/26/2000
23b	Westerly Brook Drainage Basin	MW-5S	3-5	020958	RA-226	1.34	J	0.46	0.43	0.87		0.30	0.13	2.21	11/8/2000
23b	Westerly Brook Drainage Basin	MW-6S	1-3	020960	RA-226	1.24	J	0.43	0.37	0.71	J	0.28	0.19	1.95	10/27/2000
23b	Westerly Brook Drainage Basin	MW-8S	0-2	020964	RA-226	1.84		0.45	0.21	0.75		0.26	0.12	2.59	11/30/2000
23b	Westerly Brook Drainage Basin	MW-19S	1-3	020986	RA-226	1.05	J	0.44	0.54	0.55	J	0.23	0.16	1.60	11/1/2000
23b	Westerly Brook Drainage Basin	MW-7S	2-4	021005	RA-226	1.07	J	0.34	0.28	1.33		0.39	0.15	2.40	12/4/2000
23b	Westerly Brook Drainage Basin	MW-1S	6-8	021007	RA-226	1.50	J	0.49	0.38	1.26		0.38	0.09	2.76	12/8/2000

Notes:
U = Non-Detect
J = Estimated concentration
Bolded value denotes exceedance of FMSS Cleanup concentration of 5 pCi/g
bgs = Feet below ground surface

Table 4-81
Summary of RA-226 and TH-232 in Geoprobe Soil Samples - Phase II

Property ID	Property Name	GWRI Site Name	GWRI Site ID#	Depth of Measure	S&W Lab Sample ID	Analyte	RA-226 Analytical Result (pCi/g)	RA-226 Qualifier	RA-226 Measurement Error (pCi/g)	RA-226 MDA (pCi/g)	Th-232 Analytical Result (pCi/g)	Th-232 Qualifier	Th-232 Measurement Error (pCi/g)	Th-232 MDA (pCi/g)	Ra-226 + Th-232 (pCi/g)	Date Collected
02b	80 Hancock Street	02bGWR001	02b001	12'-14'	02b-020506	RA-226	0.79		0.29	0.25	0.46		0.22	0.14	1.25	8/22/2001
02b	80 Hancock Street	02bGWR002	02b002	6'-8'	02b-020508	RA-226	2.49		0.51	0.21	5.85		1.44	0.25	**8.34**	8/22/2001
07a	111 Essex Street	07aGWR002	07a002	6.5'-7.5'	07a-021151	RA-226	12.21		4.41	4.05	540.00		97.14	1.19	**552.21**	11/30/2000
07a	111 Essex Street	07aGWR003	07a003	5.25'-7.75'	07a-021152	RA-226	17.44		4.49	2.20	210.40		41.84	1.09	**227.84**	11/30/2000
12b	100 West Hunter Avenue (MISS)	12bGWR020	12b020	13'-14'	12b-021161	RA-226	1.53	J	0.34	0.14	4.28		0.99	0.17	**5.81**	12/1/2000
12b	100 West Hunter Avenue (MISS)	12bGWR026	12b026	8'-9'	12b-021155	RA-226	15.49		1.95	0.46	23.02		4.28	0.09	**38.51**	12/1/2000
13a	Transect H & I	13aGWR001	13a001	2-4	13a-021164	RA-226	0.52	J	0.19	0.14	0.83		0.28	0.10	1.35	12/4/2000
13a	Transect H & I	13aGWR001	13a001	7.5-8.5	13a-021165	RA-226	0.71	J	0.24	0.21	0.87		0.29	0.10	1.58	12/4/2000
13a	Transect H & I	13aGWR002	13a002	0-1	13a-021166	RA-226	0.57	J	0.22	0.18	0.78		0.25	0.10	1.35	12/4/2000
13a	Transect H & I	13aGWR002	13a002	5-6	13a-021167	RA-226	0.46	J	0.18	0.14	0.71		0.27	0.09	1.17	12/4/2000
13a	Transect H & I	13aGWR003	13a003	5.5-6.5	13a-021168	RA-226	0.90	J	0.28	0.24	0.57		0.23	0.14	1.46	12/5/2000
13a	Transect H & I	13aGWR003	13a003	7-8	13a-021169	RA-226	0.52	J	0.20	0.18	0.57		0.24	0.17	1.09	12/5/2000
13a	Transect H & I	13aGWR004	13a004	0-1.5	13a-021200	RA-226	0.53	J	0.24	0.24	0.34		0.18	0.16	0.87	12/5/2000
13a	Transect H & I	13aGWR004	13a004	0-7	13a-021201	RA-226	0.35	J	0.15	0.16	0.23		0.14	0.13	0.58	12/5/2000

Notes:
U = Non-Detect
J = Estimated concentration
Bolded value denotes exceedance of FMSS Cleanup concentration of 5 pCi/g
bgs = Feet below ground surface

Table 4-81a
Summary of Metals in Soil Exceeding Soil Impact to Groundwater Standards - Phase II

GWRI Site	S&W Lab Sample ID	Depth of Measure (ft bgs)	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	EPA Generic Soil Impact to GW	Collection Date
MW-3S	12a-020954	6-8	Arsenic	52.1	0.25		29	11/3/2000
02b002	02b-020508	6-8	Chromium	42.2	0.16		38	8/22/2001
MW-15S	02d-020978	2-4	Chromium	47	0.08		38	11/17/2000
MW-16S	01a-020980	0-2	Chromium	49.8	0.06		38	11/8/2000
MW-3S	12a-020954	6-8	Chromium	329	0.06		38	11/3/2000
MW-20S	12a-020988	6-8	Chromium	454	0.09		38	11/22/2000
MW-14S	02a-020976	2-4	Chromium	579	0.08		38	11/10/2000
MW-14S	02a-020976	2-4	Thallium	0.88	0.54		0.7	11/10/2000

Notes:
mg/kg = Milligrams per Kilogram

Table 4-82
Summary of U-238 Results in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-021000	MW-16S	4-6	37.53		7.75	0.18	11/8/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	33.41		7.70	1.14	11/10/2000
02d	8 Mill Street	02d-021001	MW-15S	4-6	1.07		0.40	0.21	11/17/2000
05a	99 Essex Street	05a-021006	MW-13S	1-3	1.10		0.36	0.14	12/5/2000
07a	111 Essex Street	07a-021581	MW-21S		1.38	J	0.44	0.06	6/26/2001
08a	23 West Howcroft Road	08a-021182	MW-12S	6-8	0.62		0.23	0.13	11/29/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	0.96		0.32	0.12	11/28/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	1.90		0.52	0.15	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-021003	MW-3S	2-4	0.41	J	0.26	0.30	11/3/2000
17a	Transect G	17a-021564	MW-22S		0.71	J	0.28	0.16	6/11/2001
22b	Lodi Brook Drainage Basin	22b-020998	MW-10S	5-7	0.74		0.30	0.17	10/30/2000
22b	Lodi Brook Drainage Basin	22b-021004	MW-17S	5-7	0.86		0.32	0.15	11/20/2000
22b	Lodi Brook Drainage Basin	22b-021002	MW-18S	3-5	0.71		0.27	0.13	11/20/2000
22b	Lodi Brook Drainage Basin	22b-020999	MW-9S	0-2	0.56		0.23	0.17	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	0.48		0.21	0.14	11/1/2000
23b	Westerly Brook Drainage Basin	23b-021007	MW-1S	6-8	0.89		0.31	0.19	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	1.38		0.44	0.21	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	0.89		0.32	0.15	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	0.74		0.29	0.14	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	0.76		0.29	0.16	10/27/2000
23b	Westerly Brook Drainage Basin	23b-021005	MW-7S	2-4	1.30		0.41	0.14	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	1.06		0.38	0.14	11/30/2000

Notes:
U = Non-Detect
J = Estimated concentration
bgs = Feet below ground surface

Table 4-83
Summary of U-238 Soil Results - Phase II Geoprobe Soil Samples

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Depth of Measure (ft bgs)	Analytical Result (pCi/g)	Data Qualifier	Measurement Error (pCi/g)	MDA (pCi/g)	Date Collected
02b	80 Hancock Street	02b-020506	02b001	12'-14'	0.50	J	0.24	0.26	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	6.65		1.43	0.22	8/22/2001
07a	111 Essex Street	07a-021152	07a003	5.25'-7.75'	6.46		3.42	2.44	11/30/2000
07a	111 Essex Street	07a-021151	07a002	6.5'-7.5'	8.63		3.78	2.31	11/30/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	2.22		0.61	0.10	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021155	12b026	8'-9'	7.66		2.02	0.26	12/1/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	0.84		0.30	0.12	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	2.90		0.68	0.13	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	0.31		0.16	0.12	12/4/2000
13a	Transect H & I	13a-021169	13a003	7-8	0.34		0.18	0.16	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	0.54		0.23	0.16	12/5/2000
13a	Transect H & I	13a-021201	13a004	0-7	0.44		0.20	0.13	12/5/2000
13a	Transect H & I	13a-021200	13a004	0-1.5	0.46		0.23	0.18	12/5/2000
13a	Transect H & I	13a-021167	13a002	5-6	0.50		0.22	0.11	12/4/2000

Table 4-84

Summary of Rd/Kd Results from Batch Sorption Tests - Radiologic Parameters

Geoprobe Boring	Field Sample ID	Sample Depth (ft bgs)	RA-226 Spike Level Identifier	RA-226 Spike Concentrations (pCi/L)	RA-226 Post Contact Liquid Concentration (pCi/L)	RA-226 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	RA-226 Distribution Coefficient (Kd) as Determined from Isotherm Plot (mL/g)		U-238 Spike Level Identifier	U-238 Spike Level Concentrations (pCi/L)	Post Contact Liquid Concentration (pCi/L)	U-238 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	U-238 Distribution Coefficient (Kd) determined from Isotherm Plot (mL/g)		TH-232 Spike Level Identifier	TH-232 Spike Concentrations (pCi/L)	TH-232 Post Contact Liquid Concentration (pCi/L)	TH-232 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	Distribution Coefficient (Kd) Determined from Isotherm Plot - Th-232 (mL/g)		Total Organic Carbon - mg/Kg and Percent	USCS Classification Based on Grain Size Distribution
							3 point Plot	4 point Plot					3 point Plot	4 point Plot					3 point Plot	4 point Plot		
12B-021	12b-021203	0'-2'	A	1,886.16	ND	1,519.09	467	210	A	38.68	25.21	23.83	136	83	A	7,768.71	ND	2,387.04	7339	5105	51400 (5.14%)	SW (Sand Well Sorted)
12B-021	12b-021204	0'-2'	B	9,430.79	439.1	409.55	NA	NA	B	193.41	41.63	475.36	NA	NA	B	38,843.57	ND	24,128.94	NA	NA		
12B-021	12b-021205	0'-2'	C	18,861.57	881.1	408.14	NA	NA	C	386.82	66.77	494.74	NA	NA	C	77,687.13	ND	6,975.69	NA	NA		
12B-021	12b-021206	0'-2'	D	37,723.15	3074	225.43	NA	NA	D	773.65	159.5	291.20	NA	NA	D	155,374.26	246.2	5,607.46	NA	NA		
12B-022	12b-021208	4'-6'	A	34,687.10	521.7	1,309.77	422	262	A	38.68	ND	10.69	52.4	39.6	A	7,769.00	ND	2,315.88	10826	19661	9400 (0.94%)	GM (Silty Gravel)
12B-022	12b-021209	4'-6'	B	173,435.50	5892	568.72	NA	NA	B	193.41	23.74	72.92	NA	NA	B	38,943.00	ND	5,544.75	NA	NA		
12B-022	12b-021210	4'-6'	C	346,871.01	15030	441.57	NA	NA	C	386.82	ND	95.87	NA	NA	C	79,682.00	ND	5,990.38	NA	NA		
12B-022	12b-021211	4'-6'	D	693,742.01	45060	287.92	NA	NA	D	773.65	191.9	77.01	NA	NA	D	155,374.00	ND	5,067.26	NA	NA		
12B-023	12b-021213	1.5'-3.5'	A	34,687.10	376.7	1,821.63	363	202	A	38.68	ND	72.92	45.8	54.8	A	7,768.71	ND	6,600.12	NC	5686	1990 (0.199%)	SM (Silty Sand)
12B-023	12b-021214	1.5'-3.5'	B	173,435.50	5002	673.46	NA	NA	B	193.41	19.35	95.87	NA	NA	B	38,843.57	23.04	54,306.66	NA	NA		
12B-023	12b-021215	1.5'-3.5'	C	346,871.01	16710	395.17	NA	NA	C	386.82	63.72	77.01	NA	NA	C	77,687.13	ND	18,175.84	NA	NA		
12B-023	12b-021216	1.5'-3.5'	D	693,742.01	55780	228.74	NA	NA	D	773.65	179.9	66.00	NA	NA	D	155,374.26	147.3	14,534.97	NA	NA		
12B-024	12b-021218	2'-4'	A	34,687.10	506.8	1,348.87	322	233	A	38.68	17.65	37.91	221	252	A	7,768.71	ND	15,943.66	NC	4353	1540 (0.154%)	SM (Silty Sand)
12B-024	12b-021219	2'-4'	B	173,435.50	5563	603.53	NA	NA	B	193.41	ND	142.94	NA	NA	B	38,843.57	ND	19,285.95	NA	NA		
12B-024	12b-021220	2'-4'	C	346,871.01	18720	350.59	NA	NA	C	386.82	15.03	901.67	NA	NA	C	77,687.13	ND	15,522.09	NA	NA		
12B-024	12b-021221	2'-4'	D	693,742.01	50170	256.56	NA	NA	D	773.65	18.65	60.63	NA	NA	D	155,374.26	162.6	31,207.87	NA	NA		
12B-025	12b-021223	2'-4'	A	34,687.10	517.1	1,321.60	438	254	A	38.68	69.43	142.05	29.3	36.9	A	7,768.71	ND	9,034.44	NC	11349	15900 (1.59%)	SM (Silty Sand)
12B-025	12b-021224	2'-4'	B	173,435.50	5290	635.71	NA	NA	B	193.41	55.7	179.91	NA	NA	B	38,843.57	22.31	12,000.29	NA	NA		
12B-025	12b-021225	2'-4'	C	346,871.01	14440	460.43	NA	NA	C	386.82	106.5	101.41	NA	NA	C	77,687.13	ND	6,614.26	NA	NA		
12B-025	12b-021226	2'-4'	D	693,742.01	45890	282.35	NA	NA	D	773.65	267.1	66.01	NA	NA	D	155,374.26	ND	7,312.43	NA	NA		

Notes:
NA - Not Applicable
NC - Not Calculated
ND - Non-Detect

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Aluminum, Total	8920		2.4	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Antimony, Total	9.4	J	0.24	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Arsenic, Total	2.7		0.25	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Barium, Total	86.7		0.02	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Beryllium, Total	0.74		0.01	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Boron, Total	15.2	J	0.29	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Cadmium, Total	2.4	J	0.03	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Calcium, Total	20200		2.0	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Chromium, Total	49.8		0.06	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Cobalt, Total	7.2	J	0.1	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Copper, Total	75.7	J	0.1	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Iron, Total	14600		2.3	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Lead, Total	193	J	0.22	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Lithium, Total	9.7		0.02	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Magnesium, Total	10300	J	0.71	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Manganese, Total	448		0.02	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Mercury, Total	0.18		0.02	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Nickel, Total	19.3	J	0.1	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Potassium, Total	572		4.3	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Silver, Total	0.12		0.12	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Sodium, Total	450		0.43	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Vanadium, Total	32.6		0.08	11/8/2000
01a	72 Sidney Street (a.k.a. 88 Money Street)	01a-020980	MW-16S	0-2 ft	Zinc, Total	192	J	0.04	11/8/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Aluminum, Total	7610		3.1	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Arsenic, Total	26.7		4.6	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Barium, Total	446		0.03	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Beryllium, Total	0.43		0.01	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Boron, Total	2.8		0.36	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Cadmium, Total	0.07		0.04	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Calcium, Total	2580		2.6	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Chromium, Total	579		0.08	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Cobalt, Total	4.2		0.12	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Copper, Total	149		0.12	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Iron, Total	11000		2.9	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Lead, Total	280		0.28	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Lithium, Total	20.1		0.03	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Magnesium, Total	1190		0.90	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Manganese, Total	283	J	0.03	11/10/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Mercury, Total	1.9	J	0.02	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Nickel, Total	12.6		0.12	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Potassium, Total	477		5.5	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Silver, Total	0.68		0.34	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Sodium, Total	197		0.55	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Thallium, Total	0.88		0.54	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Vanadium, Total	31		0.11	11/10/2000
02a	100 Hancock Street	02a-020976	MW-14S	2-4	Zinc, Total	96.1		0.05	11/10/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Aluminum, Total	10200		2.9	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Arsenic, Total	6.5		0.31	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Barium, Total	89.5		0.03	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Beryllium, Total	0.37		0.01	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Cadmium, Total	0.08		0.04	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Calcium, Total	653		2.5	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Chromium, Total	47		0.08	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Cobalt, Total	3		0.12	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Copper, Total	8.5		0.12	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Iron, Total	9640		2.8	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Lead, Total	26.8		0.27	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Lithium, Total	11.5		0.03	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Magnesium, Total	1100		0.86	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Manganese, Total	53.1	J	0.03	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Mercury, Total	0.07	J	0.02	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Nickel, Total	12		0.12	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Potassium, Total	267		5.3	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Selenium, Total	0.95		0.43	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Sodium, Total	194		0.53	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Vanadium, Total	23		0.10	11/17/2000
02d	8 Mill Street	02d-020978	MW-15S	2-4	Zinc, Total	50.5		0.05	11/17/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Aluminum, Total	5150		2.4	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Arsenic, Total	5.4		0.25	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Barium, Total	134		0.02	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Beryllium, Total	0.27		0.01	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Calcium, Total	1230		2.0	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Chromium, Total	10.9		0.06	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Cobalt, Total	3.3		0.1	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Copper, Total	4.4		0.1	12/5/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
05a	99 Essex Street	05a-020974	MW-13S	3-5	Iron, Total	7080		2.3	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Lead, Total	3.9		0.22	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Lithium, Total	8.8		0.02	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Magnesium, Total	1340		0.71	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Manganese, Total	53.7		0.02	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Nickel, Total	6.6		0.1	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Potassium, Total	490	J	4.3	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Vanadium, Total	14.5		0.08	12/5/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Zinc, Total	16.7	J	0.04	12/5/2000
07a	111 Essex Street	07a-021581	MW-21S		Aluminum, Total	8810		1.4	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Antimony, Total	0.3	J	0.21	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Arsenic, Total	3	J	0.26	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Barium, Total	66.4		0.02	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Beryllium, Total	0.45		0.02	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Cadmium, Total	0.15		0.03	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Calcium, Total	8880		0.90	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Chromium, Total	21.8	J	0.10	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Cobalt, Total	6.1		0.09	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Copper, Total	23.7	J	0.08	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Iron, Total	15900		1.7	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Lead, Total	63.7	J	0.29	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Lithium, Total	11.2		0.02	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Magnesium, Total	3510		0.98	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Manganese, Total	306		0.01	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Mercury, Total	0.08		0.02	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Nickel, Total	14.8		0.13	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Potassium, Total	1580		3.9	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Sodium, Total	430		0.19	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Vanadium, Total	39		0.08	6/26/2001
07a	111 Essex Street	07a-021581	MW-21S		Zinc, Total	68.7	J	0.03	6/26/2001
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Aluminum, Total	3170		2.6	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Arsenic, Total	5		0.27	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Barium, Total	105		0.02	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Beryllium, Total	0.15		0.01	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Cadmium, Total	0.05		0.03	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Calcium, Total	1250		2.2	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Chromium, Total	11		0.07	11/29/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Cobalt, Total	3		0.10	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Copper, Total	7		0.10	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Iron, Total	7550		2.5	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Lead, Total	7		0.24	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Lithium, Total	10.5		0.02	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Magnesium, Total	1200		0.77	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Manganese, Total	63.6	J	0.02	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Nickel, Total	7.2		0.10	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Potassium, Total	576		4.7	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Sodium, Total	65.7		0.47	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Vanadium, Total	13.8		0.09	11/29/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Zinc, Total	22		0.05	11/29/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Aluminum, Total	6640		2.7	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Arsenic, Total	5.3		0.29	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Barium, Total	114		0.02	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Beryllium, Total	0.32		0.01	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Boron, Total	2.6		0.33	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Cadmium, Total	0.11		0.04	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Calcium, Total	2150		2.3	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Chromium, Total	13.5		0.07	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Cobalt, Total	3.2		0.11	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Copper, Total	7.4		0.11	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Iron, Total	9570		2.6	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Lead, Total	13.4		0.25	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Lithium, Total	8.8		0.02	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Magnesium, Total	1370		0.81	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Manganese, Total	80.9	J	0.02	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Mercury, Total	0.07	J	0.02	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Nickel, Total	8.2		0.11	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Potassium, Total	513		4.9	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Selenium, Total	0.49		0.40	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Sodium, Total	103		0.49	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Vanadium, Total	17.4		0.1	11/28/2000
09a	149-151 Maywood Avenue	09a-020970	MW-11S	2-4	Zinc, Total	56.2		0.05	11/28/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Aluminum, Total	13400		2.4	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Antimony, Total	0.62	J	0.24	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Arsenic, Total	52.1		0.25	11/3/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Beryllium, Total	0.54		0.01	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Calcium, Total	5860	J	2.0	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Chromium, Total	329		0.06	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Cobalt, Total	2.1		0.09	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Copper, Total	32.5		0.09	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Iron, Total	5610		2.3	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Lead, Total	40.4		0.22	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Lithium, Total	141		0.02	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Magnesium, Total	882		0.70	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Manganese, Total	42.5		0.02	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Mercury, Total	0.17		0.02	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Nickel, Total	8.2		0.09	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Potassium, Total	435		4.2	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Selenium, Total	0.54		0.34	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Sodium, Total	454		0.43	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Vanadium, Total	12.9		0.08	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020954	MW-3S	6-8	Zinc, Total	31.5		0.04	11/3/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Aluminum, Total	8550		3.4	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Arsenic, Total	4.2		0.35	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Barium, Total	49.4		0.03	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Beryllium, Total	0.48		0.01	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Boron, Total	6.5		0.40	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Cadmium, Total	0.24		0.04	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Calcium, Total	22700		2.8	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Chromium, Total	454		0.09	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Cobalt, Total	3.3		0.13	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Copper, Total	34.5		0.13	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Iron, Total	770		3.2	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Lead, Total	114		0.31	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Lithium, Total	124		0.03	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Magnesium, Total	733		0.99	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Manganese, Total	176	J	0.03	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Mercury, Total	0.13	J	0.02	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Nickel, Total	12.5		0.13	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Potassium, Total	332		6.0	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Selenium, Total	0.78		0.49	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Sodium, Total	1440		0.61	11/22/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Vanadium, Total	7.8		0.12	11/22/2000
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Zinc, Total	136		0.06	11/22/2000
17a	Transect G	17a-021564	MW-22S		Aluminum, Total	4970		1.4	6/11/2001
17a	Transect G	17a-021564	MW-22S		Arsenic, Total	2.4		0.26	6/11/2001
17a	Transect G	17a-021564	MW-22S		Barium, Total	47.4		0.02	6/11/2001
17a	Transect G	17a-021564	MW-22S		Beryllium, Total	0.28		0.02	6/11/2001
17a	Transect G	17a-021564	MW-22S		Boron, Total	2.7		0.23	6/11/2001
17a	Transect G	17a-021564	MW-22S		Cadmium, Total	0.04	J	0.03	6/11/2001
17a	Transect G	17a-021564	MW-22S		Calcium, Total	1350		0.90	6/11/2001
17a	Transect G	17a-021564	MW-22S		Chromium, Total	11.6		0.10	6/11/2001
17a	Transect G	17a-021564	MW-22S		Cobalt, Total	4.6		0.09	6/11/2001
17a	Transect G	17a-021564	MW-22S		Copper, Total	9.9		0.08	6/11/2001
17a	Transect G	17a-021564	MW-22S		Iron, Total	11700		1.8	6/11/2001
17a	Transect G	17a-021564	MW-22S		Lead, Total	5.6		0.29	6/11/2001
17a	Transect G	17a-021564	MW-22S		Lithium, Total	4.7		0.02	6/11/2001
17a	Transect G	17a-021564	MW-22S		Magnesium, Total	1410		0.98	6/11/2001
17a	Transect G	17a-021564	MW-22S		Manganese, Total	139		0.01	6/11/2001
17a	Transect G	17a-021564	MW-22S		Nickel, Total	8		0.13	6/11/2001
17a	Transect G	17a-021564	MW-22S		Potassium, Total	548		3.9	6/11/2001
17a	Transect G	17a-021564	MW-22S		Selenium, Total	0.33	J	0.29	6/11/2001
17a	Transect G	17a-021564	MW-22S		Sodium, Total	181		0.19	6/11/2001
17a	Transect G	17a-021564	MW-22S		Vanadium, Total	19.4		0.08	6/11/2001
17a	Transect G	17a-021564	MW-22S		Zinc, Total	19.4		0.03	6/11/2001
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Aluminum, Total	4360		2.3	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Arsenic, Total	2.9		0.25	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Barium, Total	50.1		0.02	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Beryllium, Total	0.3		0.01	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Cadmium, Total	0.23		0.03	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Calcium, Total	1590	J	2.0	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Chromium, Total	10.6		0.06	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Cobalt, Total	5.6		0.09	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Copper, Total	17.3		0.09	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Iron, Total	11700		2.2	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Lead, Total	74.4		0.22	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Lithium, Total	4.8		0.02	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Magnesium, Total	1130		0.69	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Manganese, Total	338		0.02	11/1/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Mercury, Total	0.06		0.01	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Nickel, Total	7.1		0.09	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Potassium, Total	508		4.2	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Selenium, Total	0.49		0.34	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Sodium, Total	86.8		0.42	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Vanadium, Total	13		0.08	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Zinc, Total	98.8		0.04	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Aluminum, Total	4050		2.4	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Arsenic, Total	1.3		0.26	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Barium, Total	31.4		0.02	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Beryllium, Total	0.28		0.01	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Calcium, Total	1080	J	2.1	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Chromium, Total	9.9		0.06	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Cobalt, Total	3.3		0.1	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Copper, Total	5.6		0.1	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Iron, Total	10300		2.3	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Lead, Total	4.9		0.22	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Lithium, Total	2.7		0.02	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Magnesium, Total	895		0.72	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Manganese, Total	214		0.02	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Nickel, Total	5.3		0.1	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Potassium, Total	408		4.4	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Sodium, Total	202		0.44	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Vanadium, Total	10.7		0.09	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020968	MW-10S		Zinc, Total	13.6		0.04	10/30/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Aluminum, Total	6810		2.6	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Arsenic, Total	1.8		0.27	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Barium, Total	52.1		0.02	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Beryllium, Total	0.21		0.01	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Cadmium, Total	0.04		0.03	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Calcium, Total	1180		2.2	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Chromium, Total	7.5		0.07	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Cobalt, Total	2.3		0.10	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Copper, Total	4.6		0.10	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Iron, Total	8220		2.5	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Lead, Total	18.7		0.24	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Lithium, Total	6.3		0.02	11/21/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Magnesium, Total	1010		0.77	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Manganese, Total	129	J	0.02	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Mercury, Total	0.09	J	0.02	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Nickel, Total	8		0.10	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Potassium, Total	256		4.7	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Sodium, Total	241		0.47	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Vanadium, Total	11.4		0.09	11/21/2000
22b	Lodi Brook Drainage Basin	22b-020982	MW-17S	1-3	Zinc, Total	29.2		0.05	11/21/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Aluminum, Total	7560		2.8	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Arsenic, Total	3.3		0.30	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Barium, Total	46.4		0.02	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Beryllium, Total	0.43		0.01	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Boron, Total	3.6		0.34	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Calcium, Total	1380		2.4	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Chromium, Total	11.9		0.08	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Cobalt, Total	6.9		0.11	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Copper, Total	12.7		0.11	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Iron, Total	17100		2.7	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Lead, Total	6		0.26	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Lithium, Total	10		0.02	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Magnesium, Total	2490		0.84	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Manganese, Total	494		0.02	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Nickel, Total	13.8		0.11	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Potassium, Total	751		5.1	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Sodium, Total	219		0.51	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Vanadium, Total	18.9		0.10	12/18/2000
22b	Lodi Brook Drainage Basin	22b-021294	MW-18S		Zinc, Total	31.4		0.05	12/18/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Aluminum, Total	6190		2.3	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Arsenic, Total	1.6		0.24	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Barium, Total	19.1		0.02	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Cobalt, Total	7.7		0.09	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Copper, Total	5		0.09	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Iron, Total	11800		2.2	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Lead, Total	4.8	J	0.21	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Lithium, Total	4.4		0.02	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Magnesium, Total	1080		0.67	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Manganese, Total	477		0.02	12/8/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Nickel, Total	5.7		0.09	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Potassium, Total	406		4.1	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Sodium, Total	61.4		0.41	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Vanadium, Total	12.3		0.08	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020950	MW-1S	4-6	Zinc, Total	13.7		0.04	12/8/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Aluminum, Total	4210		1.1	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Arsenic, Total	1		0.36	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Barium, Total	40.2		0.02	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Beryllium, Total	0.38		0.01	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Cadmium, Total	0.07		0.03	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Calcium, Total	5540		0.95	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Chromium, Total	7.9	J	0.1	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Cobalt, Total	4.4		0.09	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Iron, Total	10700		1.7	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Lead, Total	5.1		0.22	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Lithium, Total	4.2	J	0.02	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Magnesium, Total	1930	J	0.83	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Manganese, Total	277		0.02	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Mercury, Total	0.02		0.02	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Nickel, Total	8.5		0.13	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Potassium, Total	727		3.2	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Sodium, Total	257		0.40	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Vanadium, Total	12.6	J	0.1	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020952	MW-2S	5-7'	Zinc, Total	21.4		0.04	10/23/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Aluminum, Total	6050		2.4	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Antimony, Total	0.46		0.24	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Arsenic, Total	3.9		0.25	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Barium, Total	38.6		0.02	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Beryllium, Total	0.35		0.01	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Cadmium, Total	0.16		0.03	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Calcium, Total	1000		2.0	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Chromium, Total	9.5	J	0.06	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Cobalt, Total	4.7		0.09	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Iron, Total	10400		2.3	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Lead, Total	24.5		0.22	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Lithium, Total	8.1	J	0.02	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Magnesium, Total	1360	J	0.70	10/26/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Manganese, Total	161	J	0.02	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Mercury, Total	0.08		0.02	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Nickel, Total	10.1		0.09	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Potassium, Total	499		4.3	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Selenium, Total	0.45		0.35	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Sodium, Total	149		0.43	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Vanadium, Total	20.1	J	0.08	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020956	MW-4S	1-3	Zinc, Total	40.4		0.04	10/26/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Aluminum, Total	4890		2.5	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Arsenic, Total	2		0.27	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Barium, Total	18.2		0.02	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Beryllium, Total	0.3		0.01	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Boron, Total	2	J	0.30	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Calcium, Total	547		2.1	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Chromium, Total	6.4		0.07	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Cobalt, Total	4.3	J	0.10	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Copper, Total	8.4	J	0.10	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Iron, Total	9450		2.4	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Lead, Total	3.4	J	0.23	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Lithium, Total	4.9		0.02	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Magnesium, Total	1220	J	0.75	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Manganese, Total	188	J	0.02	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Nickel, Total	7.4	J	0.10	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Potassium, Total	308		4.5	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Sodium, Total	157		0.46	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Vanadium, Total	10.3		0.09	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020958	MW-5S	3-5	Zinc, Total	17.1	J	0.04	11/8/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Aluminum, Total	8570		2.3	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Arsenic, Total	11.8		0.25	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Barium, Total	37.8		0.02	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Beryllium, Total	0.8		0.01	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Cadmium, Total	0.07		0.03	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Calcium, Total	799	J	2.0	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Chromium, Total	16.6		0.06	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Cobalt, Total	5.9		0.09	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Copper, Total	12.5		0.09	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Iron, Total	40100		2.2	10/31/2000

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Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Lead, Total	5.4		0.22	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Lithium, Total	4.1		0.02	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Magnesium, Total	926		0.69	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Manganese, Total	132		0.02	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Nickel, Total	8		0.09	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Potassium, Total	375		4.2	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Selenium, Total	1.4		0.34	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Sodium, Total	171		0.42	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Vanadium, Total	26.4		0.08	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020960	MW-6S	1-3	Zinc, Total	20.9		0.04	10/31/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Aluminum, Total	4740		2.3	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Arsenic, Total	0.65		0.25	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Barium, Total	38.1		0.02	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Beryllium, Total	0.26		0.01	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Calcium, Total	1000		2.0	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Chromium, Total	8		0.06	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Cobalt, Total	3.7		0.09	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Copper, Total	5		0.09	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Iron, Total	9310		2.2	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Lead, Total	5.1		0.22	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Lithium, Total	4.1		0.02	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Magnesium, Total	1140		0.69	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Manganese, Total	74		0.02	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Nickel, Total	6.7		0.09	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Potassium, Total	758	J	4.2	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Sodium, Total	63.2	J	0.42	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Vanadium, Total	11.1		0.08	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020962	MW-7S	8-10	Zinc, Total	19.6	J	0.04	12/4/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Aluminum, Total	6180		2.5	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Arsenic, Total	3		0.27	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Barium, Total	151		0.02	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Beryllium, Total	0.32		0.01	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Boron, Total	3		0.30	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Cadmium, Total	0.14		0.03	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Calcium, Total	1570		2.1	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Chromium, Total	8.9		0.07	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Cobalt, Total	4.1		0.10	11/30/2000

Table 4-85
Summary of Metals in Monitoring Well Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/kg)	Result Qualifier	IDL (mg/kg)	Date of Sample Collection
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Copper, Total	16.5		0.10	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Iron, Total	11100		2.4	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Lead, Total	42.9		0.23	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Lithium, Total	6.5		0.02	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Magnesium, Total	1350		0.75	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Manganese, Total	259	J	0.02	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Mercury, Total	0.09	J	0.02	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Nickel, Total	10.5		0.10	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Potassium, Total	557		4.5	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Selenium, Total	0.37		0.37	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Sodium, Total	75		0.46	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Vanadium, Total	14.3		0.09	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020964	MW-8S	0-2	Zinc, Total	79.1		0.04	11/30/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Aluminum, Total	12000		2.1	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Arsenic, Total	4		0.22	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Barium, Total	47.8		0.02	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Beryllium, Total	0.48		0.009	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Cadmium, Total	0.03		0.03	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Calcium, Total	654	J	1.8	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Chromium, Total	13.8		0.06	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Cobalt, Total	6.6		0.08	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Copper, Total	6.1		0.08	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Iron, Total	18200		2.0	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Lead, Total	6.4		0.20	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Lithium, Total	8.3		0.02	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Magnesium, Total	1730		0.63	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Manganese, Total	385		0.02	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Nickel, Total	11		0.08	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Potassium, Total	503		3.8	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Selenium, Total	0.63		0.31	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Sodium, Total	294		0.38	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Vanadium, Total	23.8		0.07	11/1/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Zinc, Total	22		0.04	11/1/2000

Notes:
J = Estimated concentration
bgs = Feet below ground surface

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Aluminum, Total	1880		1.8	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Arsenic, Total	1.3		0.44	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Barium, Total	56.1		0.01	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Beryllium, Total	0.13		0.02	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Boron, Total	1.9		0.18	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Calcium, Total	4230	J	0.89	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Chromium, Total	3.5		0.16	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Cobalt, Total	2		0.10	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Copper, Total	4.4	J	0.06	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Iron, Total	4810		1.8	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Lead, Total	2		0.27	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Lithium, Total	3.3		0.01	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Magnesium, Total	1110		0.91	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Manganese, Total	156	J	0.01	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Nickel, Total	4		0.19	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Potassium, Total	438		1.2	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Vanadium, Total	5.7		0.06	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Zinc, Total	10.6	J	0.05	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Aluminum, Total	5020		1.8	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Arsenic, Total	6.7		0.44	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Barium, Total	97.3		0.01	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Beryllium, Total	0.33		0.02	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Boron, Total	2		0.18	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Calcium, Total	979	J	0.89	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Chromium, Total	42.2		0.16	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Cobalt, Total	4.5		0.10	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Copper, Total	17.5	J	0.06	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Iron, Total	8420		1.8	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Lead, Total	15.8		0.27	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Lithium, Total	12.8		0.01	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Magnesium, Total	1110		0.91	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Manganese, Total	158	J	0.01	8/22/2001

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Mercury, Total	0.31		0.02	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Nickel, Total	7.1		0.19	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Potassium, Total	413		1.2	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Vanadium, Total	15.3		0.06	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Zinc, Total	23.3	J	0.05	8/22/2001
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Aluminum, Total	7250		2.8	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Arsenic, Total	4.3		0.30	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Barium, Total	133		0.03	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Beryllium, Total	0.69		0.01	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Calcium, Total	19800		2.4	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Chromium, Total	11.5		0.08	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Cobalt, Total	2		0.11	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Copper, Total	11		0.11	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Iron, Total	5590		2.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Lead, Total	8.3		0.26	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Lithium, Total	263		0.03	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Magnesium, Total	1030		0.84	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Manganese, Total	44.4		0.03	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Nickel, Total	9.4		0.11	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Potassium, Total	1070	J	5.1	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Sodium, Total	1200	J	0.51	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Vanadium, Total	8.6		0.10	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Zinc, Total	17.9	J	0.05	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Aluminum, Total	16700		4.5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Arsenic, Total	1.5		0.48	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Barium, Total	7.5		0.04	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Beryllium, Total	1.3		0.02	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Calcium, Total	86500		3.8	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Chromium, Total	1.2		0.12	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Copper, Total	40.4		0.18	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Iron, Total	1760		4.3	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Lead, Total	10.9		0.42	12/1/2000

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Lithium, Total	828		0.04	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Magnesium, Total	1530		1.3	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Manganese, Total	30.2		0.04	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Nickel, Total	19.1		0.18	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Potassium, Total	1390	J	8.1	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Sodium, Total	15000	J	0.81	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Vanadium, Total	1.3		0.16	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026		Zinc, Total	13.2	J	0.08	12/1/2000
13a	Transect H & I	13a-021164	13a001	2-4	Aluminum, Total	6280		2.2	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Arsenic, Total	2		0.23	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Barium, Total	29.2		0.02	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Beryllium, Total	0.28		0.01	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Cadmium, Total	0.07		0.03	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Calcium, Total	1100		1.9	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Chromium, Total	8.2		0.06	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Cobalt, Total	4.3		0.09	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Copper, Total	7.1		0.09	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Iron, Total	10700		2.1	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Lead, Total	10.8		0.20	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Lithium, Total	6.1		0.02	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Magnesium, Total	1410		0.65	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Manganese, Total	186		0.02	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Mercury, Total	0.03		0.02	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Nickel, Total	7.4		0.09	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Potassium, Total	533	J	4.0	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Selenium, Total	0.34		0.32	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Vanadium, Total	13.7		0.08	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Zinc, Total	23.5	J	0.04	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Aluminum, Total	5700		2.3	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Arsenic, Total	1.6		0.25	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Barium, Total	32.2		0.02	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Beryllium, Total	0.29		0.01	12/4/2000

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Cadmium, Total	0.07		0.03	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Calcium, Total	1640		2.0	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Chromium, Total	10.6		0.06	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Cobalt, Total	4		0.09	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Copper, Total	8.4		0.09	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Iron, Total	11400		2.2	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Lead, Total	5.9		0.21	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Lithium, Total	6.1		0.02	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Magnesium, Total	1720		0.68	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Manganese, Total	364		0.02	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Mercury, Total	0.02		0.02	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Nickel, Total	8		0.09	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Potassium, Total	700	J	4.2	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Vanadium, Total	15		0.08	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Zinc, Total	20.7	J	0.04	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Aluminum, Total	6330		2.1	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Arsenic, Total	2.2		0.22	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Barium, Total	26.3		0.02	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Beryllium, Total	0.29		0.009	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Calcium, Total	902		1.8	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Chromium, Total	8.5		0.06	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Cobalt, Total	4.3		0.08	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Copper, Total	8.8		0.08	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Iron, Total	11800		2.0	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Lead, Total	3.7		0.20	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Lithium, Total	6.4		0.02	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Magnesium, Total	1720		0.63	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Manganese, Total	293		0.02	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Mercury, Total	0.02		0.02	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Nickel, Total	8.1		0.08	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Potassium, Total	528	J	3.8	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Vanadium, Total	16		0.07	12/4/2000

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
13a	Transect H & I	13a-021166	13a002	0-1	Zinc, Total	20	J	0.04	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Aluminum, Total	5090		2.5	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Arsenic, Total	1.3		0.26	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Barium, Total	60.8		0.02	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Beryllium, Total	0.34		0.01	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Cadmium, Total	0.07		0.03	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Calcium, Total	2150		2.1	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Chromium, Total	10.8		0.07	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Cobalt, Total	5.4		0.1	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Copper, Total	10		0.1	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Iron, Total	12300		2.4	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Lead, Total	4.8		0.23	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Lithium, Total	10.2		0.02	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Magnesium, Total	2070		0.73	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Manganese, Total	129		0.02	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Nickel, Total	10.4		0.1	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Potassium, Total	866	J	4.5	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Vanadium, Total	17.7		0.09	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Zinc, Total	24.2	J	0.04	12/4/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Aluminum, Total	4690		2.2	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Arsenic, Total	1.1		0.23	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Barium, Total	19.4		0.02	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Beryllium, Total	0.23		0.01	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Calcium, Total	925		1.9	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Chromium, Total	6.3		0.06	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Cobalt, Total	2.8		0.09	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Copper, Total	5		0.09	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Iron, Total	9850		2.1	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Lead, Total	5.5	J	0.20	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Lithium, Total	4		0.02	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Magnesium, Total	1130		0.65	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Manganese, Total	196		0.02	12/5/2000

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Nickel, Total	5		0.09	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Potassium, Total	412		3.9	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Sodium, Total	80.3		0.40	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Vanadium, Total	12.8		0.08	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Zinc, Total	13.8		0.04	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Aluminum, Total	6620		2.2	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Arsenic, Total	2.1		0.24	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Barium, Total	55		0.02	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Beryllium, Total	0.28		0.01	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Calcium, Total	1380		1.9	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Chromium, Total	17.8		0.06	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Cobalt, Total	4		0.09	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Copper, Total	8.2		0.09	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Iron, Total	12400		2.1	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Lead, Total	5.7	J	0.21	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Lithium, Total	7.6		0.02	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Magnesium, Total	1760		0.66	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Manganese, Total	231		0.02	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Nickel, Total	8.6		0.09	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Potassium, Total	721		4.0	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Sodium, Total	121		0.40	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Vanadium, Total	20.4		0.08	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Zinc, Total	23.9		0.04	12/5/2000
13a	Transect H & I	13a-021170	13a004		Aluminum, Total	6030		2.3	12/5/2000
13a	Transect H & I	13a-021170	13a004		Arsenic, Total	3.4		0.24	12/5/2000
13a	Transect H & I	13a-021170	13a004		Barium, Total	45.8		0.02	12/5/2000
13a	Transect H & I	13a-021170	13a004		Beryllium, Total	0.26		0.01	12/5/2000
13a	Transect H & I	13a-021170	13a004		Cadmium, Total	0.06		0.03	12/5/2000
13a	Transect H & I	13a-021170	13a004		Calcium, Total	2550		1.9	12/5/2000
13a	Transect H & I	13a-021170	13a004		Chromium, Total	19.1		0.06	12/5/2000
13a	Transect H & I	13a-021170	13a004		Cobalt, Total	4.4		0.09	12/5/2000
13a	Transect H & I	13a-021170	13a004		Copper, Total	9.2		0.09	12/5/2000

Table 4-86
Summary of Metals in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name:	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
13a	Transect H & I	13a-021170	13a004		Iron, Total	13200		2.2	12/5/2000
13a	Transect H & I	13a-021170	13a004		Lead, Total	7.1	J	0.21	12/5/2000
13a	Transect H & I	13a-021170	13a004		Lithium, Total	7.3		0.02	12/5/2000
13a	Transect H & I	13a-021170	13a004		Magnesium, Total	2330		0.67	12/5/2000
13a	Transect H & I	13a-021170	13a004		Manganese, Total	239		0.02	12/5/2000
13a	Transect H & I	13a-021170	13a004		Nickel, Total	9.1		0.09	12/5/2000
13a	Transect H & I	13a-021170	13a004		Potassium, Total	1170		4.1	12/5/2000
13a	Transect H & I	13a-021170	13a004		Sodium, Total	126		0.41	12/5/2000
13a	Transect H & I	13a-021170	13a004		Vanadium, Total	24.8		0.08	12/5/2000
13a	Transect H & I	13a-021170	13a004		Zinc, Total	23.1		0.04	12/5/2000
13a	Transect H & I	13a-021171	13a004		Aluminum, Total	2860		2.1	12/5/2000
13a	Transect H & I	13a-021171	13a004		Arsenic, Total	11.1		0.23	12/5/2000
13a	Transect H & I	13a-021171	13a004		Barium, Total	76.7		0.02	12/5/2000
13a	Transect H & I	13a-021171	13a004		Beryllium, Total	0.18		0.009	12/5/2000
13a	Transect H & I	13a-021171	13a004		Calcium, Total	565		1.8	12/5/2000
13a	Transect H & I	13a-021171	13a004		Chromium, Total	7.1		0.06	12/5/2000
13a	Transect H & I	13a-021171	13a004		Cobalt, Total	2.5		0.08	12/5/2000
13a	Transect H & I	13a-021171	13a004		Copper, Total	3.2		0.08	12/5/2000
13a	Transect H & I	13a-021171	13a004		Iron, Total	11100		2.1	12/5/2000
13a	Transect H & I	13a-021171	13a004		Lead, Total	2	J	0.20	12/5/2000
13a	Transect H & I	13a-021171	13a004		Lithium, Total	5.6		0.02	12/5/2000
13a	Transect H & I	13a-021171	13a004		Magnesium, Total	816		0.63	12/5/2000
13a	Transect H & I	13a-021171	13a004		Manganese, Total	216		0.02	12/5/2000
13a	Transect H & I	13a-021171	13a004		Nickel, Total	3.9		0.08	12/5/2000
13a	Transect H & I	13a-021171	13a004		Potassium, Total	703		3.9	12/5/2000
13a	Transect H & I	13a-021171	13a004		Sodium, Total	38		0.39	12/5/2000
13a	Transect H & I	13a-021171	13a004		Vanadium, Total	20.1		0.08	12/5/2000
13a	Transect H & I	13a-021171	13a004		Zinc, Total	13.5		0.04	12/5/2000

Table 4-87
Summary of Metals in Soil Exceeding Site Specific Soil Screening Levels - Phase 2

Boring	S&W Lab Sample ID	Depth of Measure (ft bgs)	Analysis Name	Result (mg/Kg)	Detection Limit (mg/Kg)	Result Qualifier	Site Specific SSL (mg/Kg)	Collection Date
MW-16S	01a-020980	0-2 ft	Antimony, Total	9.4	0.24	J	5	11/8/2000
MW-14S	02a-020976	2-4	Chromium, Total	579	0.08		242	11/10/2000
MW-3S	12a-020954	6-8	Chromium, Total	329	0.06		242	11/3/2000
MW-20S	12a-020988	6-8	Chromium, Total	454	0.09		242	11/22/2000
12b026	12b-021157		Lithium, Total	828	0.04		194	12/1/2000
12b020	12b-021161	13'-14'	Lithium, Total	263	0.03		194	12/1/2000

Notes:

mg/Kg = Milligrams per Kilogram
SSL = Soil Screening Level
DAF = Dilution Attenuation Factor
ft bgs = Feet below ground surface

Table 4-88
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Cerium, Total	8.9		4.8	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Lanthanum, Total	4.5		1.6	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Neodymium, Total	4.3		1.7	8/22/2001
02b	80 Hancock Street	02b-020506	02b001	12'-14'	Yttrium, Total	3.4		0.14	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Cerium, Total	188		5.2	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Dysprosium, Total	3		0.35	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Lanthanum, Total	119		1.8	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Neodymium, Total	44.4		1.8	8/22/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Yttrium, Total	17.3		0.15	8/22/2001
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Cerium, Total	33.9		4.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Dysprosium, Total	1.9		0.41	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Lanthanum, Total	9.4		4.5	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Neodymium, Total	17.1		1.7	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Yttrium, Total	7	J	0.25	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026	13'-14'	Neodymium, Total	3.8		2.3	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026	13'-14'	Yttrium, Total	0.62	J	0.33	12/1/2000
13a	Transect H & I	13a-021164	13a001	2-4	Cerium, Total	20.6		3.5	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Dysprosium, Total	1.6		0.31	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Lanthanum, Total	11.5		3.3	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Neodymium, Total	9.8		1.3	12/4/2000
13a	Transect H & I	13a-021164	13a001	2-4	Yttrium, Total	5.9	J	0.19	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Cerium, Total	34.1		3.7	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Dysprosium, Total	2.2		0.32	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Lanthanum, Total	13.8		3.5	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Neodymium, Total	15.9		1.4	12/4/2000
13a	Transect H & I	13a-021165	13a001	7.5-8.5	Yttrium, Total	8	J	0.20	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Cerium, Total	30		3.3	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Dysprosium, Total	2.1		0.29	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Lanthanum, Total	11		3.2	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Neodymium, Total	12.6		1.2	12/4/2000
13a	Transect H & I	13a-021166	13a002	0-1	Yttrium, Total	7.2	J	0.18	12/4/2000

Table 4-88
Summary of Rare Earth Elements in Geoprobe Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (mg/Kg)	Result Qualifier	IDL (mg/Kg)	Date of Sample Collection
13a	Transect H & I	13a-021167	13a002	5-6	Cerium, Total	32.1		3.8	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Dysprosium, Total	3		0.33	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Lanthanum, Total	13.1		3.6	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Neodymium, Total	16		1.4	12/4/2000
13a	Transect H & I	13a-021167	13a002	5-6	Yttrium, Total	9.5	J	0.20	12/4/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Cerium, Total	27.1		3.4	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Dysprosium, Total	1.5		0.30	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Neodymium, Total	11.8		1.3	12/5/2000
13a	Transect H & I	13a-021168	13a003	5.5-6.5	Yttrium, Total	6.7		0.18	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Cerium, Total	28.3		3.5	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Dysprosium, Total	1.6		0.31	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Neodymium, Total	13		1.3	12/5/2000
13a	Transect H & I	13a-021169	13a003	7-8	Yttrium, Total	7.6		0.19	12/5/2000
13a	Transect H & I	13a-021170	13a004	5.5-6.5	Cerium, Total	28.7		3.6	12/5/2000
13a	Transect H & I	13a-021170	13a004	5.5-6.5	Dysprosium, Total	1.9		0.32	12/5/2000
13a	Transect H & I	13a-021170	13a004	5.5-6.5	Neodymium, Total	13.5		1.3	12/5/2000
13a	Transect H & I	13a-021170	13a004	5.5-6.5	Yttrium, Total	7.9		0.19	12/5/2000
13a	Transect H & I	13a-021171	13a004	7-8	Cerium, Total	16		3.4	12/5/2000
13a	Transect H & I	13a-021171	13a004	7-8	Dysprosium, Total	1.5		0.30	12/5/2000
13a	Transect H & I	13a-021171	13a004	7-8	Neodymium, Total	8.2		1.3	12/5/2000
13a	Transect H & I	13a-021171	13a004	7-8	Yttrium, Total	5.4		0.18	12/5/2000

Notes:
J = Estimated concentration
bgs = Feet below ground surface

Table 4-89
Summary of Detectable VOCs in Soil Samples - Phase II

Property ID Number	Property Name	S&W Lab Sample ID	Geoprobe ID	Sample Interval (ft bgs)	Analysis Name	Result (ug/kg)	Result Qualifier	IDL (ug/kg)	NJ IGWS (ug/kg)	EPA Generic (kg)	Date of Sample Collection
07a	111 Essex Street	07a-021581	MW-21S		2-Butanone	30	J	10	N/A	N/A	6/26/2001
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Acetone	15		12	100,000	16,000	8/22/2001
07a	111 Essex Street	07a-021581	MW-21S		Acetone	140	J	10	100,000	16,000	6/26/2001
12a	NY, Susquehanna, & Western Railway	12a-020988	MW-20S	6-8	Acetone	1500	J	2400	100,000	16,000	11/22/2000
23b	Westerly Brook Drainage Basin	23b-020986	MW-19S	1-3	Acetone	2200	B	1200	100,000	16,000	11/1/2000
22b	Lodi Brook Drainage Basin	22b-020966	MW-9S	6-8	Acetone	2800	JB	3600	100,000	16,000	11/1/2000
08a	23 West Howcroft Road	08a-020972	MW-12S	4-6	Acetone	2900	J	1200	100,000	16,000	11/29/2000
05a	99 Essex Street	05a-020974	MW-13S	3-5	Chloromethane	160	J	1200	10,000	N/A	12/5/2000
02b	80 Hancock Street	02b-020508	02b002	6'-8'	Methylene Chloride	11	B	6	1,000	20	8/22/2001
12b	100 West Hunter Avenue (MISS)	12b-021157	12b026	13'-14'	Methylene Chloride	**820**	J	1300	1,000	20	12/1/2000
12b	100 West Hunter Avenue (MISS)	12b-021161	12b020	13'-14'	Methylene Chloride	**1400**		790	1,000	20	12/1/2000

Notes:

J = Estimated concentration

B = Present in laboratory blank

bgs = Feet below ground surface

Table 4-90

Summary of Rd/Kd Results from Batch Sorption Tests - Radiologic Parameters

Geoprobe Boring	Field Sample ID	Sample Depth (ft bgs)	RA-226 Spike Level Identifier	RA-226 Spike Concentrations (pCi/L)	RA-226 Post Contact Liquid Concentration (pCi/L)	RA-226 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	RA-226 Distribution Coefficient (Kd) as Determined from Isotherm Plot (mL/g)		U-238 Spike Level Identifier	U-238 Spike Level Concentrations (pCi/L)	Post Contact Liquid Concentration (pCi/L)	U-238 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	U-238 Distribution Coefficient (Kd) determined from Isotherm Plot (mL/g)		TH-232 Spike Level Identifier	TH-232 Spike Concentrations (pCi/L)	TH-232 Post Contact Liquid Concentration (pCi/L)	TH-232 Distribution Ratio as Determined by Laboratory Data - Rd (mL/g)	Distribution Coefficient (Kd) Determined from Isotherm Plot - Th-232 (mL/g)		Total Organic Carbon - mg/Kg and Percent	USCS Classification Based on Grain Size Distribution
							3 point Plot	4 point Plot					3 point Plot	4 point Plot					3 point Plot	4 point Plot		
12B-021	12b-021203	0'-2'	A	1,886.16	ND	1,519.09	467	210	A	38.68	25.21	23.83	136	83	A	7,768.71	ND	2,387.04	7339	5105	51400 (5.14%)	SW (Sand Well Sorted)
12B-021	12b-021204	0'-2'	B	9,430.79	439.1	409.55	NA	NA	B	193.41	41.63	475.36	NA	NA	B	38,843.57	ND	24,128.94	NA	NA		
12B-021	12b-021205	0'-2'	C	18,861.57	881.1	408.14	NA	NA	C	386.82	66.77	494.74	NA	NA	C	77,687.13	ND	6,975.69	NA	NA		
12B-021	12b-021206	0'-2'	D	37,723.15	3074	225.43	NA	NA	D	773.65	159.5	291.20	NA	NA	D	155,374.26	246.2	5,607.46	NA	NA		
12B-022	12b-021208	4'-6'	A	34,687.10	521.7	1,309.77	422	262	A	38.68	ND	10.69	52.4	39.6	A	7,769.00	ND	2,315.88	10826	19661	9400 (0.94%)	GM (Silty Gravel)
12B-022	12b-021209	4'-6'	B	173,435.50	5892	568.72	NA	NA	B	193.41	23.74	72.92	NA	NA	B	38,943.00	ND	5,544.75	NA	NA		
12B-022	12b-021210	4'-6'	C	346,871.01	15030	441.57	NA	NA	C	386.82	ND	95.87	NA	NA	C	79,682.00	ND	5,990.38	NA	NA		
12B-022	12b-021211	4'-6'	D	693,742.01	45060	287.92	NA	NA	D	773.65	191.9	77.01	NA	NA	D	155,374.00	ND	5,067.26	NA	NA		
12B-023	12b-021213	1.5'-3.5'	A	34,687.10	376.7	1,821.63	363	202	A	38.68	ND	72.92	45.8	54.8	A	7,768.71	ND	6,600.12	NC	5686	1990 (0.199%)	SM (Silty Sand)
12B-023	12b-021214	1.5'-3.5'	B	173,435.50	5002	673.46	NA	NA	B	193.41	19.35	95.87	NA	NA	B	38,843.57	23.04	54,306.66	NA	NA		
12B-023	12b-021215	1.5'-3.5'	C	346,871.01	16710	395.17	NA	NA	C	386.82	63.72	77.01	NA	NA	C	77,687.13	ND	18,175.84	NA	NA		
12B-023	12b-021216	1.5'-3.5'	D	693,742.01	55780	228.74	NA	NA	D	773.65	179.9	66.00	NA	NA	D	155,374.26	147.3	14,534.97	NA	NA		
12B-024	12b-021218	2'-4'	A	34,687.10	506.8	1,348.87	322	233	A	38.68	17.65	37.91	221	252	A	7,768.71	ND	15,943.66	NC	4353	1540 (0.154%)	SM (Silty Sand)
12B-024	12b-021219	2'-4'	B	173,435.50	5563	603.53	NA	NA	B	193.41	ND	142.94	NA	NA	B	38,843.57	ND	19,285.95	NA	NA		
12B-024	12b-021220	2'-4'	C	346,871.01	18720	350.59	NA	NA	C	386.82	15.03	901.67	NA	NA	C	77,687.13	ND	15,522.09	NA	NA		
12B-024	12b-021221	2'-4'	D	693,742.01	50170	256.56	NA	NA	D	773.65	18.65	60.63	NA	NA	D	155,374.26	162.6	31,207.87	NA	NA		
12B-025	12b-021223	2'-4'	A	34,687.10	517.1	1,321.60	438	254	A	38.68	69.43	142.05	29.3	36.9	A	7,768.71	ND	9,034.44	NC	11349	15900 (1.59%)	SM (Silty Sand)
12B-025	12b-021224	2'-4'	B	173,435.50	5290	635.71	NA	NA	B	193.41	55.7	179.91	NA	NA	B	38,843.57	22.31	12,000.29	NA	NA		
12B-025	12b-021225	2'-4'	C	346,871.01	14440	460.43	NA	NA	C	386.82	106.5	101.41	NA	NA	C	77,687.13	ND	6,614.26	NA	NA		
12B-025	12b-021226	2'-4'	D	693,742.01	45890	282.35	NA	NA	D	773.65	267.1	66.01	NA	NA	D	155,374.26	ND	7,312.43	NA	NA		

Notes:
NA - Not Applicable
NC - Not Calculated
ND - Non-Detect

Table 4-91
Summary of Rd/Kd for Batch Sorption Tests - Metals

Geoprobe Boring	Field Sample ID	Sample Depth (ft bgs)	Arsenic Spike Level Identifier	Arsenic Spike Concentrations (ug/L)	Arsenic Post Contact Liquid Concentration (ug/L)	Arsenic Distribution Ratio Based on Laboratory Data - Rd (mL/g)	Arsenic Distribution Coefficient (Kd) as Determined from Isotherm Plot	Lithium Spike Level Identifier	Lithium Spike Level Concentrations (ug/L)	Post Contact Liquid Concentration (ug/L)	Lithium Distribution Ratio Based on Laboratory Data - Rd (mL/g)	Lithium Distribution Coefficient (Kd) determined from Isotherm Plot (mL/g)	Chromium Spike Level Identifier	Chromium Spike Concentrations (ug/L)	Chromium Post Contact Liquid Concentration (ug/L)	Chromium Distribution Ratio Based on Laboratory Data - Rd (mL/g)	Distribution Coefficient (Kd) determined from Isotherm Plot - Chromium (mL/g)	Total Organic Carbon - mg/Kg and Percent	USCS Classification Based on Grain Size Distribution
							3 point Plot					3 point Plot					4 point Plot		
12B-021	12b-021203	0'-2'	A	295	ND	NC	NC	A	9880	8630	2.90	2.3	A	20400	102	3,980.00	7447	51400 (5.14%)	SW (Sand Well Sorted)
12B-021	12b-021204	0'-2'	B	603	ND	NC	NA	B	19800	17600	2.50	NA	B	41400	152	5,427.37	NA		
12B-021	12b-021205	0'-2'	C	920	ND	NC	NA	C	49400	44100	2.40	NA	C	62100	237	5,220.51	NA		
12B-021	12b-021206	0'-2'	D	1200	ND	NC	NA	D	96500	93000	0.75	NA	D	102000	310	6,560.65	NA		
12B-022	12b-021208	4'-6'	A	295	18.2	304.18	NC	A	9880	8200	4.10	1.5	A	20400	45.1	9,026.56	11825	9400 (0.94%)	GM (Silty Gravel)
12B-022	12b-021209	4'-6'	B	603	18.1	646.30	NA	B	19800	17500	2.63	NA	B	41400	89.7	9,210.77	NA		
12B-022	12b-021210	4'-6'	C	920	17.8	1013.71	NA	C	49400	45000	1.96	NA	C	62100	108	11,480.00	NA		
12B-022	12b-021211	4'-6'	D	1200	18.5	1277.30	NA	D	96500	91400	1.12	NA	D	102000	185	11,007.03	NA		
12B-023	12b-021213	1.5'-3.5'	A	295	4.4	1320.91	NC	A	9880	6710	9.45	2.5	A	20400	54.6	7,452.53	10133	1990 (0.199%)	SM (Silty Sand)
12B-023	12b-021214	1.5'-3.5'	B	603	3.5	3425.71	NA	B	19800	16000	4.75	NA	B	41400	110	7,507.27	NA		
12B-023	12b-021215	1.5'-3.5'	C	920	ND	NC	NA	C	49400	42000	3.52	NA	C	62100	154	8,044.94	NA		
12B-023	12b-021216	1.5'-3.5'	D	1200	4.1	5833.66	NA	D	96500	90200	1.40	NA	D	102000	215	9,468.37	NA		
12B-024	12b-021218	2'-4'	A	295	11.2	506.79	NC	A	9880	6700	9.49	0.9	A	20400	46.3	8,792.10	7381	1540 (0.154%)	SM (Silty Sand)
12B-024	12b-021219	2'-4'	B	603	11.6	1019.66	NA	B	19800	16800	3.57	NA	B	41400	102	8,097.65	NA		
12B-024	12b-021220	2'-4'	C	920	8.8	2070.91	NA	C	49400	41700	3.69	NA	C	62100	144	8,605.00	NA		
12B-024	12b-021221	2'-4'	D	1200	11.7	2031.28	NA	D	96500	89900	1.47	NA	D	102000	267	7,620.45	NA		
12B-025	12b-021223	2'-4'	A	295	4.6	1262.61	NC	A	9880	7590	6.03	0.3	A	20400	77.4	5,251.32	9745	15900 (1.59%)	SM (Silty Sand)
12B-025	12b-021224	2'-4'	B	603	3.8	3153.68	NA	B	19800	17200	3.02	NA	B	41400	112	7,372.86	NA		
12B-025	12b-021225	2'-4'	C	920	ND	NC	NA	C	49400	44700	2.10	NA	C	62100	168	7,372.86	NA		
12B-025	12b-021226	2'-4'	D	1200	ND	NC	NA	D	96500	92900	0.78	NA	D	102000	240	8,480.00	NA		

Notes:
NA - Not Applicable
NC - Not Calculated
ND - Non-Detect

TABLE 4-92
SUMMARY OF HISTORICAL BENZENE SOIL RESULTS

No. of Samples	No. of Sample Location	Boring Name	Sample Depth	Unsaturated/ Saturated Sample	Benzene (mg/kg)	Sample Type	Investigative Program
1	1	CP2	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
2	2	CP3	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
3	2	CP3	2'-4'	Unsaturated	ND	Grab Sample	DOE, 1992
4	3	CP4	2'-4'	Unsaturated	ND	Grab Sample	DOE, 1992
5	4	CP8	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
6	5	CP9	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
7	6	CP10	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
8	6	CP10	2'-4'	Unsaturated	2	Grab Sample	DOE, 1992
9	6	CP10	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
10	7	CP11	2'-6'	Unsaturated	ND	Grab Sample	DOE, 1992
11	7	CP11	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
12	8	CP12	4'-8'	Unsaturated	2	Grab Sample	DOE, 1992
13	8	CP12	8'-9.6'	Unsaturated	ND	Grab Sample	DOE, 1992
14	9	CP14	8'-12'	Unsaturated	ND	Grab Sample	DOE, 1992
15	10	CP15	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
16	11	CP16	4'-6'	Unsaturated	ND	Grab Sample	DOE, 1992
17	12	CP18	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
18	13	CP20	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
19	13	CP20	2'-6'	Unsaturated	ND	Grab Sample	DOE, 1992
20	13	CP20	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
21	14	CP22	6'-8'	Unsaturated	ND	Grab Sample	DOE, 1992
22	14	CP22	12'-14.5'	Unsaturated	ND	Grab Sample	DOE, 1992
23	15	CP28	2'-4'	Unsaturated	ND	Grab Sample	DOE, 1992
24	15	CP28	4'-6'	Unsaturated	ND	Grab Sample	DOE, 1992
25	15	CP28	8'-11'	Unsaturated	ND	Grab Sample	DOE, 1992
26	16	CP32	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
27	17	CP35	0'-2'	Unsaturated	ND	Grab Sample	DOE, 1992
28	18	CP37	8'-12'	Unsaturated	ND	Grab Sample	DOE, 1992
29	19	C001	0'-2	Unsaturated	ND	Soil Boring	DOE, 1992
30	19	C001	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
31	19	C001	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
32	19	C001	10'-12'	Saturated	ND	Soil Boring	DOE, 1992
33	20	C002	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
34	20	C002	10'-12'	Unsaturated	ND	Soil Boring	DOE, 1992
35	21	C003	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
36	21	C003	2'-4'	Unsaturated	ND	Soil Boring	DOE, 1992
37	21	C003	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
38	21	C003	10'-12'	Saturated	ND	Soil Boring	DOE, 1992
39	22	C004	16'-17.5'	Saturated	ND	Soil Boring	DOE, 1992
40	22	C004	17.5'-19.5'	Saturated	ND	Soil Boring	DOE, 1992
41	22	C004	19.5'-21.5'	Saturated	ND	Soil Boring	DOE, 1992
42	23	C005		Unsaturated	ND	Soil Boring	DOE, 1992
43	24	C006	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
44	24	C006	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
45	25	C008	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
46	25	C008	14'-16'	Saturated	ND	Soil Boring	DOE, 1992
47	26	C009	8'-10'	Unsaturated	ND	Soil Boring	DOE, 1992
48	27	C010	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
49	27	C010	4'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
50	27	C010	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
51	28	C011	12'-14'	Saturated	ND	Soil Boring	DOE, 1992
52	29	C012	10'-12'	Unsaturated	ND	Soil Boring	DOE, 1992
53	29	C012	14'-16'	Unsaturated	ND	Soil Boring	DOE, 1992

No. of Samples	No. of Sample Location	Boring Name	Sample Depth	Unsaturated/ Saturated Sample	Benzene (mg/kg)	Sample Type	Investigative Program
54	30	C013	12'-14'	Unsaturated	ND	Soil Boring	DOE, 1992
55	31	C014	12'-14'	Unsaturated	ND	Soil Boring	DOE, 1992
56	32	C015	12'-14'	Saturated	ND	Soil Boring	DOE, 1992
57	33	C016	14'-16'	Unsaturated	ND	Soil Boring	DOE, 1992
58	34	C017	12'-14'	Unsaturated	ND	Soil Boring	DOE, 1992
59	35	C018	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
60	36	C019	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
61	37	C020	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
62	37	C020	8'-10'	Unsaturated	ND	Soil Boring	DOE, 1992
63	38	C021	6'-8'	Unsaturated	21	Soil Boring	DOE, 1992
64	39	C022	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
65	40	C022	8'-10'	Unsaturated	ND	Soil Boring	DOE, 1992
66	40	C022	12'-12.8'	Unsaturated	ND	Soil Boring	DOE, 1992
67	40	C022	13'-13.9'	Unsaturated	ND	Soil Boring	DOE, 1992
68	40	C022	14'-16'	Unsaturated	ND	Soil Boring	DOE, 1992
69	41	C023	2'-4'	Unsaturated	ND	Soil Boring	DOE, 1992
70	42	C024	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
71	42	C024	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
72	42	C024	10'-12'	Unsaturated	ND	Soil Boring	DOE, 1992
73	43	C025	10'-12'	Unsaturated	ND	Soil Boring	DOE, 1992
74	44	C026	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
75	44	C026	12'-14'	Saturated	ND	Soil Boring	DOE, 1992
76	45	C027	5'-7'	Saturated	ND	Soil Boring	DOE, 1992
77	45	C027	8'-10'	Saturated	ND	Soil Boring	DOE, 1992
78	46	C028	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
79	46	C028	8'-11'	Unsaturated	2	Soil Boring	DOE, 1992
80	47	C029	12'-14'	Unsaturated	ND	Soil Boring	DOE, 1992
81	48	C030	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
82	48	C030	10'-14'	Saturated	ND	Soil Boring	DOE, 1992
83	49	C031	10'-12'	Saturated	ND	Soil Boring	DOE, 1992
84	50	C032	4'-6'	Unsaturated	ND	Soil Boring	DOE, 1992
85	51	C033	5'-7'	Unsaturated	ND	Soil Boring	DOE, 1992
86	52	C034	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
87	53	10a001	5'-8'	Saturated	ND	Geoprobe	USACE, 2003
88	54	10a002	6'-9'	Saturated	ND	Geoprobe	USACE, 2003
89	55	10a003	5-8	NR	ND	Geoprobe	USACE, 2003
90	56	10a004	10'-13'	Saturated	ND	Geoprobe	USACE, 2003
91	57	10a005	5'-9'	Unsaturated	ND	Geoprobe	USACE, 2003
92	58	10a006	5'-9'	Unsaturated	ND	Geoprobe	USACE, 2003
93	59	10a007	2'-5'	Saturated	ND	Geoprobe	USACE, 2003
94	60	10a008	10'-15'	Saturated	ND	Geoprobe	USACE, 2003
95	61	12b001	16'-20'	Saturated	ND	Geoprobe	USACE, 2003
96	62	12b002	7'-10'	Saturated	ND	Geoprobe	USACE, 2003
97	63	12b003	8'-12'	Saturated	ND	Geoprobe	USACE, 2003
98	64	12b004	8'-12'	Unsaturated	ND	Geoprobe	USACE, 2003
99	65	12b005	8'-12'	Saturated	ND	Geoprobe	USACE, 2003
100	66	12b006	4'-8'	Saturated	ND	Geoprobe	USACE, 2003
101	67	12b007	1-3.5	Unsaturated	ND	Geoprobe	USACE, 2003
102	68	12b009	7'-9'	Unsaturated	ND	Geoprobe	USACE, 2003
103	68	12b009	9 - 11	Saturated	ND	Geoprobe	USACE, 2003
104	69	12b010	4 - 6	Unsaturated	ND	Geoprobe	USACE, 2003
105	69	12b010	10 - 12	Unsaturated	ND	Geoprobe	USACE, 2003
106	70	12b011	0 - 4	Unsaturated	ND	Geoprobe	USACE, 2003
107	70	12b011	6 - 8	Unsaturated	ND	Geoprobe	USACE, 2003
108	71	12b012	2 - 4	Unsaturated	120	Geoprobe	USACE, 2003
109	71	12b012	6 - 8	Unsaturated	330	Geoprobe	USACE, 2003

No. of Samples	No. of Sample Location	Boring Name	Sample Depth	Unsaturated/ Saturated Sample	Benzene (mg/kg)	Sample Type	Investigative Program
110	72	12b013	3 - 5	Unsaturated	200	Geoprobe	USACE, 2003
111	72	12b013	6 - 8	Unsaturated	ND	Geoprobe	USACE, 2003
112	73	12b014	2 - 4	Unsaturated	ND	Geoprobe	USACE, 2003
113	73	12b014	4'-6'	Unsaturated	ND	Geoprobe	USACE, 2003
114	74	12b015	0'-2'	Unsaturated	ND	Geoprobe	USACE, 2003
115	74	12b015	2 - 4	Unsaturated	ND	Geoprobe	USACE, 2003
116	75	12b016	1-3	Unsaturated	ND	Geoprobe	USACE, 2003
117	75	12b016	5'-7'	Unsaturated	ND	Geoprobe	USACE, 2003
118	76	12b018	0'-2'	Unsaturated	ND	Geoprobe	USACE, 2003
119	77	12b018	2'-4'	Unsaturated	ND	Geoprobe	USACE, 2003
120	77	12b019	0'-2'	Unsaturated	ND	Geoprobe	USACE, 2003
121	77	12b019	2'-4'	Saturated	ND	Geoprobe	USACE, 2003
122	78	12b020	13'-14'	Saturated	ND	Geoprobe	USACE, 2003
123	79	12b026	8'-9'	Unsaturated	ND	Geoprobe	USACE, 2003
124	80	MW-20S	6'-8'	Unsaturated	ND	Soil Boring	USACE, 2003
125	81	MW-3S	6'-8'	Unsaturated	ND	Soil Boring	USACE, 2003
126	82	TP1RELO	6'-9'	Unsaturated	ND	Test Pit	USACE, 2000
127	83	TP1REOV	0'-2'	Unsaturated	ND	Test Pit	USACE, 2000
128	84	TP1REUP	2'-6'	Unsaturated	ND	Test Pit	USACE, 2000
129	85	TP1SULO	6'-9'	Unsaturated	ND	Test Pit	USACE, 2000
130	86	TP1SUOV	0'-2'	Unsaturated	ND	Test Pit	USACE, 2000
131	87	TP1SUUP	2'-6'	Unsaturated	ND	Test Pit	USACE, 2000
132	88	TP1TRLO	6'-9'	Unsaturated	ND	Test Pit	USACE, 2000
133	89	TP1TROV	0'-2'	Unsaturated	ND	Test Pit	USACE, 2000
134	90	TP1TRUP	2'-5'	Unsaturated	ND	Test Pit	USACE, 2000
135	91	TP2RELO	8'-10'	Unsaturated	ND	Test Pit	USACE, 2000
136	92	TP2REOV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
137	93	TP2REUP	1'-8'	Unsaturated	ND	Test Pit	USACE, 2000
138	94	TP2SULO	7'-10'	Unsaturated	ND	Test Pit	USACE, 2000
139	95	TP2SUOV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
140	96	TP2SUUP	1'-2'	Unsaturated	ND	Test Pit	USACE, 2000
141	97	TP2TRLO	8'-10'	Unsaturated	ND	Test Pit	USACE, 2000
142	98	TP2TROV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
143	99	TP2TRUP	1'-8'	Unsaturated	ND	Test Pit	USACE, 2000
144	100	TP3RELO	7'-9'	Unsaturated	ND	Test Pit	USACE, 2000
145	101	TP3REOV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
146	102	TP3REUP	0'-8'	Unsaturated	ND	Test Pit	USACE, 2000
147	103	TP3REUP	0'-8'	Unsaturated	ND	Test Pit	USACE, 2000
148	104	TP3SULO	7'-9'	Unsaturated	ND	Test Pit	USACE, 2000
149	105	TP3SUOV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
150	106	TP3SUUP	1'-8'	Unsaturated	4300	Test Pit	USACE, 2000
151	107	TP3TRLO	7'-9'	Unsaturated	ND	Test Pit	USACE, 2000
152	108	TP3TROV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
153	109	TP3TRUP	1'-3'	Unsaturated	ND	Test Pit	USACE, 2000
154	110	TP4RELO	6'-8'	Unsaturated	640	Test Pit	USACE, 2000
155	111	TP4REOV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
156	112	TP4REUP	1'-2'	Unsaturated	ND	Test Pit	USACE, 2000
157	113	TP4SULO	3'-4'	Unsaturated	ND	Test Pit	USACE, 2000
158	114	TP4SUOV	0'-1'	Unsaturated	850	Test Pit	USACE, 2000
159	115	TP4SUUP	1'-3'	Unsaturated	3600	Test Pit	USACE, 2000
160	116	TP4TRLO	3'-4'	Unsaturated	730	Test Pit	USACE, 2000
161	117	TP4TROV	0'-1'	Unsaturated	ND	Test Pit	USACE, 2000
162	118	TP4TRUP	2'-3'	Unsaturated	ND	Test Pit	USACE, 2000
163	119	TP5LWER	6'-8'	Unsaturated	ND	Test Pit	USACE, 2000
164	120	TP5OVER	0'-2'	Unsaturated	ND	Test Pit	USACE, 2000
165	121	TP5UPER	2'-6'	Unsaturated	380000	Test Pit	USACE, 2000

No. of Samples	No. of Sample Location	Boring Name	Sample Depth	Unsaturated/ Saturated Sample	Benzene (mg/kg)	Sample Type	Investigative Program
166	122	C207	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
167	123	C296	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
168	124	C299	0'-2'	Unsaturated	ND	Soil Boring	DOE, 1992
169	124	C299	2'-4'	Unsaturated	ND	Soil Boring	DOE, 1992
170	124	C299	6'-8'	Unsaturated	ND	Soil Boring	DOE, 1992
171	125	C701	0'-2'	Unsaturated	87	Soil Boring	DOE, 1992
172	125	C701	2'-4'	Unsaturated	ND	Soil Boring	DOE, 1992
173	125	C701	6'-8'	Saturated	ND	Soil Boring	DOE, 1992
174	125	C701	8'-10'	Saturated	87	Soil Boring	DOE, 1992
175	126	TP-22	2'	Unsaturated	ND	Test Pit	Stepan, 1994
176	127	TP-23	3.5	Unsaturated	ND	Test Pit	Stepan, 1994
177	128	TP-25	0.6	Unsaturated	ND	Test Pit	Stepan, 1994
178	129	TP-32	3'	Unsaturated	ND	Test Pit	Stepan, 1994
179	130	C-20	2.5'-4.5'	Unsaturated	ND	Soil Boring	Stepan, 1994
180	130	C-20	4.5'-6.5'	Unsaturated	ND	Soil Boring	Stepan, 1994
181	130	C-20	6.5'-8.5'	Unsaturated	ND	Soil Boring	Stepan, 1994
182	131	C-38	8'-10'	Unsaturated	ND	Soil Boring	Stepan, 1994
183	131	C-38	10'-12'	Unsaturated	ND	Soil Boring	Stepan, 1994
184	131	C-38	12'-14	Unsaturated	ND	Soil Boring	Stepan, 1994
185	132	C-39	0'-2'	Unsaturated	ND	Soil Boring	Stepan, 1994
186	132	C-39	4'-6'	Unsaturated	ND	Soil Boring	Stepan, 1994
187	132	C-39	6'-8'	Unsaturated	ND	Soil Boring	Stepan, 1994
188	133	C-40	2'-4'	Unsaturated	ND	Soil Boring	Stepan, 1994
189	133	C-40	4'-6'	Unsaturated	ND	Soil Boring	Stepan, 1994
190	133	C-40	6'-8'	Unsaturated	ND	Soil Boring	Stepan, 1994
191	134	C-41	0'-2'	Unsaturated	ND	Soil Boring	Stepan, 1994
192	134	C-41	4'-6'	Unsaturated	2	Soil Boring	Stepan, 1994
193	134	C-41	6'-8'	Unsaturated	ND	Soil Boring	Stepan, 1994
194	135	C-42	4'-6'	Unsaturated	ND	Soil Boring	Stepan, 1994
195	135	C-42	6'-8'	Unsaturated	ND	Soil Boring	Stepan, 1994
196	135	C-42	10'-12'	Unsaturated	ND	Soil Boring	Stepan, 1994
197	136	C-43	3'-5'	Unsaturated	ND	Soil Boring	Stepan, 1994
198	136	C-43	7'-9'	Unsaturated	ND	Soil Boring	Stepan, 1994
199	136	C-43	11'-13'	Unsaturated	ND	Soil Boring	Stepan, 1994
200	137	C-44	4'-6'	Unsaturated	4700	Soil Boring	Stepan, 1994
201	137	C-44	6'-8'	Unsaturated	8	Soil Boring	Stepan, 1994
202	137	C-44	10'-12'	Unsaturated	890	Soil Boring	Stepan, 1994

Legend

μg/kg = micrograms per kilogram
ND = Non-Detect

DOE 1992. Remedial Investigation Report Prepared for the U.S. Department of Energy by Bechtel National, Inc., October 1992.

Stepan 1994. Final Remedial Investigation Report. Prepared by CH2M Hill, November 1994

USACE 2000. Final Pilot Demonstration Work Plan, Volume 5, Results of Engineering Test Pits Program At MISS. Prepared by Stone & Webster Engineering Technology & Services, June 2000

USACE 2003. Groundwater Remedial Investigation Report. Prepared by Shaw Environmental, Inc., June 2003.

Table 4-93
Summary of Benzene Groundwater Results

Well	Benzene Result (ppb)	Result Qualifier	Detection Limit (ppb)	Collection Date
B38W02D	0.7	J	1	11/8/2000
B38W05B	ND	U	1	11/17/2000
B38W06B	ND	UJ	1	11/29/2000
B38W07B	0.1	J	1	11/7/2000
B38W07B	ND	U	0.5	7/25/2002
B38W14D	0.1	J	1	11/16/2000
B38W14D	ND		0.5	7/24/2002
B38W15D	0.7	J	1	11/9/2000
B38W15D	0.42	J	1	3/18/2003
B38W15D	ND	U	1	3/18/2003
B38W17B	ND	U	10	11/1/2000
B38W17B	ND	U	25	7/30/2002
B38W18D	ND	U	1	11/13/2000
B38W19D	1		1	11/7/2000
B38W24D	0.2	J	1	11/15/2000
B38W25D	0.4	J	1	11/27/2000
BRPW-1DRE	8		1	8/15/2001
BRPW-1DRE	ND	U	0.5	8/13/2002
BRPZ-2RE	850	D	50	8/14/2001
BRPZ-3RE	200	D	100	8/14/2001
BRPZ-3RE	130		5	8/13/2002
BRPZ-4	890		25	7/19/2001
BRPZ-4	760		20	8/6/2002
BRPZ-5 (Deep Packer Sample)	290		10	6/19/2001
BRPZ-5 (Middle Packer Zone Sample)	480		25	6/19/2001
BRPZ-5 (Shallow Packer Zone Sample)	5000		200	6/19/2001
BRPZ-5	9500	J	200	8/7/2002

Well	Benzene Result (ppb)	Result Qualifier	Detection Limit (ppb)	Collection Date
BRPZ-7	210		10	6/4/2001
BRPZ-9	1500		50	7/19/2001
BRPZ-9	1800	J	50	8/7/2002
MISS01B	ND	U	0.9	6/20/2000
MISS01B	ND	U	1	12/21/2000
MISS01B	ND	U	1	6/19/2001
MISS01B	ND	U	0.5	7/18/2002
MISS01B	ND	U	0.2	7/9/2003
MISS02B	150		NA	1/1/1985
MISS02B	180		NA	1/1/1986
MISS02B	150		NA	1/1/1987
MISS02B	62		NA	1/1/1988
MISS02B	70		NA	1/1/1989
MISS02B	180		NA	1/1/1990
MISS02B	ND	U	NA	1/1/1991
MISS02B	3	J	5	10/15/1992
MISS02B	7		5	7/20/1993
MISS02B	2	J	5	5/13/1994
MISS02B	1	J	5	5/9/1995
MISS02B	1		1	5/14/1996
MISS02B	1		0.5	6/23/2000
MISS02B	0.6	J	1	11/21/2000
MISS02B	0.7	J	1	11/21/2000
MISS02B	0.3	J	1	7/5/2001
MISS02B	0.2	J	0.5	7/8/2002
MISS02B	0.2		0.08	6/30/2003
MISS03B	ND	U	NA	1/1/1985
MISS03B	47		NA	1/1/1986
MISS03B	ND	U	NA	1/1/1987
MISS03B	ND	U	NA	1/1/1988
MISS03B	ND	U	NA	1/1/1989
MISS03B	ND	U	NA	1/1/1990
MISS03B	ND	U	NA	1/1/1991
MISS03B	ND	U	1	11/13/2000
MISS03B	ND	U	1	7/12/2001
MISS03B	ND	U	0.5	7/29/2002
MISS04B	6	J	1	11/14/2000
MISS04B	5		2	7/29/2002
MISS05B	660		NA	1/1/1985

Well	Benzene Result (ppb)	Result Qualifier	Detection Limit (ppb)	Collection Date
MISS05B	ND	U	NA	1/1/1986
MISS05B	ND	U	NA	1/1/1987
MISS05B	ND	U	NA	1/1/1988
MISS05B	ND	U	NA	1/1/1990
MISS05B	ND	U	NA	1/1/1991
MISS05B	200		5	10/14/1992
MISS05B	83		5	8/12/1993
MISS05B	170		5	5/17/1994
MISS05B	89		5	5/11/1995
MISS05B	97		2	5/16/1996
MISS05B	62		5	5/14/1997
MISS05B	15		5	6/30/1998
MISS05B	6		5	7/11/2000
MISS05B	3500	D	100	11/6/2000
MISS05B	330	D	25	6/18/2001
MISS05B	680		25	7/31/2002
MISS07B	7		NA	1/1/1985
MISS07B	31		NA	1/1/1986
MISS07B	77		NA	1/1/1987
MISS07B	ND	U	NA	1/1/1988
MISS07B	ND	U	NA	1/1/1990
MISS07B	ND	U	NA	1/1/1991
MISS07B	ND	U	5	7/12/2000
MISS07B	0.2	J	1	11/6/2000
MISS07B	0.2	J	1	6/11/2001
MISS07B	ND	U	0.5	7/11/2002
MW-19D	ND	U	1	2/28/2001
MW-19DD	0.1	J	1	3/1/2001
MW-20D	0.4	J	1	3/14/2001
MW-20D	ND	U	0.5	8/5/2002
MW-23D	ND	U	1	7/9/2001
MW-23D	ND	U	0.5	7/26/2002
MW-23DD	ND	U	1	7/9/2001
MW-24D	78		10	9/6/2001
MW-24D	29		0.5	7/25/2002
MW-24DD	33		5	9/6/2001
MW-24DD	9		0.5	7/25/2002
MW-25D	0.3	J	1	1/3/2002
MW-25D	0.4	J	0.5	7/26/2002

Well	Benzene Result (ppb)	Result Qualifier	Detection Limit (ppb)	Collection Date
MW-26D	520	D	25	1/3/2002
MW-26D	180		5	8/15/2002
MW-2D	ND	U	1	2/14/2001
MW-2D	ND	U	1	7/30/2002
MW-3D	5		1	4/19/2001
MW-3D	15		2	8/8/2002
MW-4D	ND	U	1	2/20/2001
MW-4D	ND	U	0.5	8/1/2002
MW-5D	ND	U	1	2/15/2001
MW-5D	ND	U	0.5	8/2/2002
MW-6D	ND	U	1	2/21/2001
MW-6D	ND	U	1	8/14/2002
MW-7D	0.3	J	1	2/28/2001
MW-7D	0.4	J	0.5	8/5/2002

Legend

ppb - parts per billion
ND - Not Detected
U - Non-Detect Qualifier, result reported at the detection limit
NA - Historical Detection Limits not readily available
D - Diluted Sample Result
J - Estimated Concentration

Table 4-94
Summary of Detectable TCL VOCs - RI Addendum

Well	Sample I.D.	Analysis Name	Result (ug/L)	Detection Limit (ug/L)	Result Qualifier	Result Type	Date of Sample Collection
B38W02D	12a-024639	Chloromethane	0.7	0.5		REG	7/17/2002
B38W14D	19a-024641	cis-1,2-Dichloroethene	100	25		DIL	7/24/2002
B38W14D	19a-024641	Tetrachloroethene	640	25		DIL	7/24/2002
B38W14D	19a-024641	Trichloroethene	160	25		DIL	7/24/2002
B38W15D	20a-021738	1,1,1-Trichloroethane	0.45		J	REG	3/18/2003
B38W15D	20a-021738	1,1-Dichloroethene	2.1			REG	3/18/2003
B38W15D	20a-021738	1,2-Dichloroethene (cis)	43		J	REG	3/18/2003
B38W15D	20a-021738	1,2-Dichloroethene (total)	76		J	REG	3/18/2003
B38W15D	20a-021738	1,2-Dichloroethene (trans)	32		J	REG	3/18/2003
B38W15D	20a-021738	1,2-Dichloropropane	0.25		J	REG	3/18/2003
B38W15D	20a-021738	Benzene	0.42		J	REG	3/18/2003
B38W15D	20a-021738	Chloroform	0.16		J	REG	3/18/2003
B38W15D	20a-021738	Tetrachloroethene	150		J	REG	3/18/2003
B38W15D	20a-021738	Toluene	0.68		J	REG	3/18/2003
B38W15D	20a-021738	Trichloroethene	37		J	REG	3/18/2003
B38W15D	20a-021738	Vinyl chloride	1.1			REG	3/18/2003
B38W17B	20a-021659	Acetone	89	250	J	DIL	7/30/2002
B38W17B	20a-024645	cis-1,2-Dichloroethene	0.5	5	J	REG	7/2/2002
B38W18D	12b-024681	Acetone	3	5	J	REG	7/18/2002
B38W19D	12b-024648	Benzene	0.7	0.5		REG	7/9/2002
B38W19D	12b-024648	Chlorobenzene	0.2	0.5	J	REG	7/9/2002
B38W19D	12b-024648	cis-1,2-Dichloroethene	0.2	0.5	J	REG	7/9/2002
B38W24D	10a-024650	Chloromethane	0.3	0.5	J	REG	7/15/2002
B38W25D	12b-024652	Chloromethane	0.2	0.5	J	REG	7/10/2002
BRPW-1DRE	12b-021664	1,1-Dichloroethane	0.2	0.5	J	REG	8/13/2002
BRPW-1DRE	12b-021664	cis-1,2-Dichloroethene	0.5	0.5		REG	8/13/2002
BRPW-1DRE	12b-021664	Tetrachloroethene	4	0.5		REG	8/13/2002
BRPW-1DRE	12b-021664	Trichloroethene	0.8	0.5		REG	8/13/2002
BRPZ-3	12b-021670	Benzene	130	5		DIL	8/13/2002
BRPZ-3	12b-021670	Chlorobenzene	17	5		DIL	8/13/2002
BRPZ-3	12b-021670	Ethylbenzene	1	5	J	DIL	8/13/2002
BRPZ-3	12b-021670	Toluene	5	5	J	DIL	8/13/2002
BRPZ-3	12b-021670	Total Xylene	5	10	J	DIL	8/13/2002
BRPZ-4	12b-021684	Benzene	760	20		DIL	8/6/2002

Well	Sample I.D.	Analysis Name	Result (ug/L)	Detection Limit (ug/L)	Result Qualifier	Result Type	Date of Sample Collection
BRPZ-4	12b-021684	Toluene	10	20	J	DIL	8/6/2002
BRPZ-5	12b-021671	Benzene	9500	200	J	DIL	8/7/2002
BRPZ-5	12b-021671	Toluene	610	200		DIL	8/7/2002
BRPZ-9	12b-021672	Benzene	1800	50	J	DIL	8/7/2002
MISS01B	12b-024631	Acetone	5	5	J	REG	7/18/2002
MISS01B	12b-024631	Bromodichloromethane	3	0.5		REG	7/18/2002
MISS01B	12b-024631	Chloroform	7	0.5		REG	7/18/2002
MISS01B	12b-024631	Chloromethane	0.6	0.5	J	REG	7/18/2002
MISS01B	12b-024631	cis-1,2-Dichloroethene	0.4	0.5	J	REG	7/18/2002
MISS01B	12b-024631	Dibromochloromethane	0.9	0.5		REG	7/18/2002
MISS01B	12b-024631	Tetrachloroethene	4	0.5		REG	7/18/2002
MISS01B	12b-024631	Total Xylene	0.4	1	J	REG	7/18/2002
MISS01B	12b-024631	Trichloroethene	0.3	0.5	J	REG	7/18/2002
MISS02B	12b-024633	1,1-Dichloroethane	0.1	0.5	J	REG	7/8/2002
MISS02B	12b-024633	Benzene	0.2	0.5	J	REG	7/8/2002
MISS03B	10a-021655	Chloromethane	0.2	0.5	J	REG	7/29/2002
MISS04B	10a-021656	Benzene	5	2		DIL	7/29/2002
MISS04B	10a-021656	cis-1,2-Dichloroethene	7	2		DIL	7/29/2002
MISS04B	10a-021656	Vinyl chloride	57	2		DIL	7/29/2002
MISS05B	12b-024635	Benzene	680	25		DIL	7/31/2002
MISS05B	12b-024635	Toluene	6	25	J	DIL	7/31/2002
MISS07B	12b-024638	1,1-Dichloroethane	0.6	0.5		REG	7/11/2002
MISS07B	12b-024638	1,1-Dichloroethene	0.3	0.5	J	REG	7/11/2002
MISS07B	12b-024638	cis-1,2-Dichloroethene	2	0.5		REG	7/11/2002
MISS07B	12b-024638	Tetrachloroethene	4	0.5		REG	7/11/2002
MISS07B	12b-024638	trans-1,2-Dichloroethene	3	0.5		REG	7/11/2002
MISS07B	12b-024638	Trichloroethene	1	0.5		REG	7/11/2002
MISS07B	12b-024638	Vinyl chloride	0.9	0.5		REG	7/11/2002
MW-24D	12b-021645	1,1-Dichloroethane	0.2	0.5	J	REG	7/25/2002
MW-24D	12b-021645	Acetone	2	5	J	REG	7/25/2002
MW-24D	12b-021645	Benzene	29	0.5		REG	7/25/2002
MW-24D	12b-021645	Chlorobenzene	4	0.5		REG	7/25/2002
MW-24D	12b-021645	cis-1,2-Dichloroethene	2	0.5		REG	7/25/2002
MW-24D	12b-021645	Tetrachloroethene	0.1	0.5	J	REG	7/25/2002
MW-24D	12b-021645	trans-1,2-Dichloroethene	0.6	0.5		REG	7/25/2002

Well	Sample I.D.	Analysis Name	Result (ug/L)	Detection Limit (ug/L)	Result Qualifier	Result Type	Date of Sample Collection
MW-24DD	12b-021646	1,1-Dichloroethane	0.2	0.5	J	REG	7/25/2002
MW-24DD	12b-021646	Acetone	12	5	J	REG	7/25/2002
MW-24DD	12b-021646	Benzene	9	0.5		REG	7/25/2002
MW-24DD	12b-021646	Chlorobenzene	0.9	0.5		REG	7/25/2002
MW-24DD	12b-021646	cis-1,2-Dichloroethene	2	0.5		REG	7/25/2002
MW-24DD	12b-021646	Tetrachloroethene	0.1	0.5	J	REG	7/25/2002
MW-24DD	12b-021646	trans-1,2-Dichloroethene	0.8	0.5		REG	7/25/2002
MW-24DD	12b-021646	Trichloroethene	0.4	0.5	J	REG	7/25/2002
MW-25D	12b-021652	Benzene	0.4	0.5	J	REG	7/26/2002
MW-26D	12b-021703	Benzene	180	5		DIL	8/15/2002
MW-26D	12b-021703	Chloroform	1	5	J	DIL	8/15/2002
MW-27D	12b-021721	1,1-Dichloroethane	0.2	0.5	J	REG	10/14/2002
MW-27D	12b-021721	Acetone	1	5	J	REG	10/14/2002
MW-27D	12b-021721	Benzene	5	0.5		REG	10/14/2002
MW-27D	12b-021721	cis-1,2-Dichloroethene	0.8	0.5		REG	10/14/2002
MW-27D	12b-021721	Toluene	0.2	0.5	J	REG	10/14/2002
MW-27D	12b-021721	Trichloroethene	1	0.5		REG	10/14/2002
MW-28D	12b-021722	1,1-Dichloroethane	0.2	0.5	J	REG	10/15/2002
MW-28D	12b-021722	Benzene	6	0.5		REG	10/15/2002
MW-28D	12b-021722	cis-1,2-Dichloroethene	0.3	0.5	J	REG	10/15/2002
MW-28D	12b-021722	Trichloroethene	0.5	0.5		REG	10/15/2002
MW-2D	23b-021661	1,1-Dichloroethane	0.4	1	J	DIL	7/30/2002
MW-2D	23b-021661	1,1-Dichloroethene	0.5	1	J	DIL	7/30/2002
MW-2D	23b-021661	cis-1,2-Dichloroethene	11	1		DIL	7/30/2002
MW-2D	23b-021661	Tetrachloroethene	46	1		DIL	7/30/2002
MW-2D	23b-021661	trans-1,2-Dichloroethene	6	1		DIL	7/30/2002
MW-2D	23b-021661	Trichloroethene	4	1		DIL	7/30/2002
MW-2D	23b-021661	Vinyl chloride	0.7	1	J	DIL	7/30/2002
MW-31D	23b-021734	1,1-Dichloroethane	0.8	0.5		REG	3/13/2003
MW-31D	23b-021734	cis-1,2-Dichloroethene	14	0.5		REG	3/13/2003
MW-31D	23b-021734	Tetrachloroethene	7	0.5		REG	3/13/2003
MW-31D	23b-021734	trans-1,2-Dichloroethene	20	0.5		REG	3/13/2003
MW-31D	23b-021734	Trichloroethene	3	0.5		REG	3/13/2003
MW-31D	23b-021734	Vinyl chloride	5	0.5		REG	3/13/2003
MW-32D	23b-021742	1,1-Dichloroethane	0.6	1		REG	5/28/2003
MW-32D	23b-021742	cis-1,2-Dichloroethene	2	1		REG	5/28/2003
MW-32D	23b-021742	Tetrachloroethene	2	1		REG	5/28/2003
MW-32D	23b-021742	Toluene	0.4	1	J	REG	5/28/2003

Well	Sample I.D.	Analysis Name	Result (ug/L)	Detection Limit (ug/L)	Result Qualifier	Result Type	Date of Sample Collection
MW-32D	23b-021742	trans-1,2-Dichloroethene	0.7	1		REG	5/28/2003
MW-32D	23b-021742	Trichloroethene	0.3	1	J	REG	5/28/2003
MW-32D	23b-021742	Vinyl chloride	3	1		REG	5/28/2003
MW-33D	12b-021725	Benzene	10	0.5		REG	10/15/2002
MW-33D	12b-021725	cis-1,2-Dichloroethene	1	0.5		REG	10/15/2002
MW-33D	12b-021725	Ethylbenzene	0.2	0.5	J	REG	10/15/2002
MW-33D	12b-021725	Toluene	0.1	0.5	J	REG	10/15/2002
MW-33D	12b-021725	Total Xylene	0.2	1	J	REG	10/15/2002
MW-34D	12b-021726	Benzene	16	0.5		REG	10/15/2002
MW-34D	12b-021726	cis-1,2-Dichloroethene	0.2	0.5	J	REG	10/15/2002
MW-34D	12b-021726	Ethylbenzene	0.1	0.5	J	REG	10/15/2002
MW-34D	12b-021726	Toluene	3	0.5		REG	10/15/2002
MW-34D	12b-021726	Total Xylene	0.2	1	J	REG	10/15/2002
MW-3D	12a-021665	Benzene	15	2		DIL	8/8/2002
MW-3D	12a-021665	cis-1,2-Dichloroethene	0.9	2	J	DIL	8/8/2002
MW-3D	12a-021665	Total Xylene	0.6	1	J	REG	8/8/2002
MW-3D	12a-021665	Trichloroethene	0.9	2	J	DIL	8/8/2002
MW-4D	23b-021666	1,1-Dichloroethene	0.7	0.5		REG	8/1/2002
MW-4D	23b-021666	Chloroform	0.3	0.5	J	REG	8/1/2002
MW-4D	23b-021666	Tetrachloroethene	13	0.5		REG	8/1/2002
MW-4D	23b-021666	Trichloroethene	0.4	0.5	J	REG	8/1/2002
MW-5D	23b-021667	Chloroform	1	0.5		REG	8/2/2002
MW-5D	23b-021667	Tetrachloroethene	0.8	0.5		REG	8/2/2002
MW-6D	23b-021668	1,1-Dichloroethane	0.3	1	J	DIL	8/14/2002
MW-6D	23b-021668	1,1-Dichloroethene	1	1		DIL	8/14/2002
MW-6D	23b-021668	Chloroform	2	1		DIL	8/14/2002
MW-6D	23b-021668	cis-1,2-Dichloroethene	1	1		DIL	8/14/2002
MW-6D	23b-021668	Tetrachloroethene	39	1		DIL	8/14/2002
MW-6D	23b-021668	Trichloroethene	3	1		DIL	8/14/2002
MW-7D	23b-021669	cis-1,2-Dichloroethene	320	25		DIL	8/5/2002
MW-7D	23b-021669	Tetrachloroethene	1300	25		DIL	8/5/2002
MW-7D	23b-021669	Trichloroethene	300	25		DIL	8/5/2002

Legend:
ug/L = Micrograms per Liter
J = Estimated Result
Reg = Regular Sample (Non-Diluted) Result
Dil = Diluted Sample Result

Table 4-95
Summary of Benzene Results Exceeding Groundwater Standards

Well	Sample ID	Analysis Name:	Result (ug/L)	Result Qualifier	Detection Limit (ug/L)	Sample Type:	Greater of NJ GWQC or NJ PQL (ug/L)	NJ MCL (ug/L)	Federal MCL (ug/L)	Collection Date:
BRPZ-3	12b-021670	Benzene	130		5	DIL	1	1	5	8/13/2002
BRPZ-4	12b-021684	Benzene	760		20	DIL	1	1	5	8/6/2002
BRPZ-5	12b-021671	Benzene	9500	J	200	DIL	1	1	5	8/7/2002
BRPZ-9	12b-021672	Benzene	1800	J	50	DIL	1	1	5	8/7/2002
MISS04B	10a-021656	Benzene	5		2	DIL	1	1	5	7/29/2002
MISS05B	12b-024635	Benzene	680		25	DIL	1	1	5	7/31/2002
MW-24D	12b-021645	Benzene	29		0.5	REG	1	1	5	7/25/2002
MW-24DD	12b-021646	Benzene	9		0.5	REG	1	1	5	7/25/2002
MW-26D	12b-021703	Benzene	180		5	DIL	1	1	5	8/15/2002
MW-27D	12b-021721	Benzene	5		0.5	REG	1	1	5	10/14/2002
MW-28D	12b-021722	Benzene	6		0.5	REG	1	1	5	10/15/2002
MW-33D	12b-021725	Benzene	10		0.5	REG	1	1	5	10/15/2002
MW-34D	12b-021726	Benzene	16		0.5	REG	1	1	5	10/15/2002
MW-3D	12a-021665	Benzene	15		2	DIL	1	1	5	8/8/2002

Legend:
ug/L = Micrograms per Liter
J = Estimated Result
Reg = Regular Sample (Non-Diluted) Result
Dil = Diluted Sample Result
NJ GWQC = New Jersey Groundwater Quality Criteria
MCL = Maximum Contaminant Level

Table 4-96
Electron Acceptor Data - RI Addendum

FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Sample I.D.	Analysis Name	Result	Result Qualifier	IDL	Units	Sample Collection
B38W15D	20A-021731	Nitrate, nitrogen	0.11		0.1	mg/L	3/12/2003
B38W17B	20a-021659	Nitrate, nitrogen	0.1	U	0.1	mg/L	7/30/2002
BRPZ-4	12b-021684	Nitrate, nitrogen	0.067	B	0.1	mg/L	8/6/2002
BRPZ-9	12b-021729	Nitrate, nitrogen	0.1	U	0.1	mg/L	10/17/2002
MISS05B	12b-024635	Nitrate, nitrogen	0.1	U	0.1	mg/L	7/31/2002
MW-26D	12b-021703	Nitrate, nitrogen	0.1	U	0.1	mg/L	8/15/2002
MW-2D	23b-021661	Nitrate, nitrogen	0.14		0.1	mg/L	7/30/2002
MW-31D	23b-021734	Nitrate, nitrogen	0.1	U	0.1	mg/L	3/13/2003
MW-32D	23b-021742	Nitrate, nitrogen	0.04		0.1	mg/L	5/28/2003
B38W15D	20A-021731	Ammonia, nitrogen	2		0.04	mg/L	3/12/2003
B38W17B	20a-021659	Ammonia, nitrogen	9.6		0.04	mg/L	7/30/2002
BRPZ-4	12b-021684	Ammonia, nitrogen	2.2		0.04	mg/L	8/6/2002
BRPZ-9	12b-021729	Ammonia, nitrogen	2.9		0.04	mg/L	10/17/2002
MISS05B	12b-024635	Ammonia, nitrogen	19		0.04	mg/L	7/31/2002
MW-26D	12b-021703	Ammonia, nitrogen	5.3		0.04	mg/L	8/15/2002
MW-2D	23b-021661	Ammonia, nitrogen	0.88		0.04	mg/L	7/30/2002
MW-31D	23b-021734	Ammonia, nitrogen	2.5		0.04	mg/L	3/13/2003
MW-32D	23b-021742	Ammonia, nitrogen	2.1		0.04	mg/L	5/28/2003
B38W15D	20A-024737	Manganese, Total	1.06		5.4	mg/L	7/1/2003
B38W17B	20a-021659	Manganese, Total	3.01		15	mg/L	7/30/2002
BRPZ-4	12b-021684	Manganese, Total	9.39		15	mg/L	8/6/2002
BRPZ-9	12b-021729	Manganese, Total	4.73	J	15	mg/L	10/17/2002
MISS05B	12b-024635	Manganese, Total	3.01		15	mg/L	7/31/2002
MW-26D	12b-021703	Manganese, Total	1.42		15	mg/L	8/15/2002
MW-2D	23b-021661	Manganese, Total	0.379		15	mg/L	7/30/2002
MW-31D	23b-024788	Manganese, Total	0.871		5.4	mg/L	7/1/2003
MW-32D	23b-021742	Manganese, Total	0.971		15	mg/L	5/28/2003
B38W15D	20A-024790	Manganese (Filtered)	0.991		5.4	mg/L	7/1/2003
B38W17B	20a-021660	Manganese (Filtered)	2.89		15	mg/L	7/30/2002
BRPZ-4	12b-021686	Manganese (Filtered)	5.26		15	mg/L	8/6/2002

Table 4-96
Electron Acceptor Data - RI Addendum

FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Sample I.D.	Analysis Name	Result	Result Qualifier	IDL	Units	Sample Collection
BRPZ-9	12b-021729	Manganese (Filtered)	5.15	J	15	mg/L	10/17/2002
MISS05B	12b-024723	Manganese (Filtered)	2.91		15	mg/L	7/31/2002
MW-26D	12b-021704	Manganese (Filtered)	1.39		15	mg/L	8/15/2002
MW-2D	23b-021662	Manganese (Filtered)	0.358		15	mg/L	7/30/2002
MW-31D	23b-024789	Manganese (Filtered)	0.868		5.4	mg/L	7/1/2003
MW-32D	N/A	Manganese (Filtered)	NA		NA	NA	NA
B38W15D	20A-024737	Iron, Total	ND	U	104	mg/L	7/1/2003
B38W17B	20a-021659	Iron, Total	5.55		200	mg/L	7/30/2002
BRPZ-4	12b-021684	Iron, Total	13.9		200	mg/L	8/6/2002
BRPZ-9	12b-021729	Iron, Total	11.5	J	200	mg/L	10/17/2002
MISS05B	12b-024635	Iron, Total	6.22		200	mg/L	7/31/2002
MW-26D	12b-021703	Iron, Total	63.6		200	mg/L	8/15/2002
MW-2D	23b-021661	Iron, Total	5		200	mg/L	7/30/2002
MW-31D	23b-024788	Iron, Total	0.19		104	mg/L	7/1/2003
MW-32D	23b-021742	Iron, Total	1.42		200	mg/L	5/28/2003
B38W15D	20A-024790	Iron (Filtered)	ND	U	104	mg/L	7/1/2003
B38W17B	20a-021660	Iron (Filtered)	5.14		200	mg/L	7/30/2002
BRPZ-4	12b-021686	Iron (Filtered)	7.07		200	mg/L	8/6/2002
BRPZ-9	12b-021729	Iron (Filtered)	9.07	J	200	mg/L	10/17/2002
MISS05B	12b-024723	Iron (Filtered)	2.82		200	mg/L	7/31/2002
MW-26D	12b-021704	Iron (Filtered)	62.7		200	mg/L	8/15/2002
MW-2D	23b-021662	Iron (Filtered)	0.44		200	mg/L	7/30/2002
MW-31D	23b-024789	Iron (Filtered)	ND		104	mg/L	7/1/2003
MW-32D	N/A	Iron (Filtered)	NA		NA	NA	NA
B38W15D	20A-021731	Sulfate	1	U	1	mg/L	3/12/2003
B38W17B	20a-021659	Sulfate	670		1	mg/L	7/30/2002
BRPZ-4	12b-021684	Sulfate	1500		1	mg/L	8/6/2002
BRPZ-9	12b-021729	Sulfate	1400		1	mg/L	10/17/2002
MISS05B	12b-024635	Sulfate	800		1	mg/L	7/31/2002
MW-26D	12b-021703	Sulfate	3000		1	mg/L	8/15/2002

Table 4-96
Electron Acceptor Data - RI Addendum

FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Sample I.D.	Analysis Name	Result	Result Qualifier	IDL	Units	Sample Collection
MW-2D	23b-021661	Sulfate	350		1	mg/L	7/30/2002
MW-31D	23b-021734	Sulfate	890		1	mg/L	3/13/2003
MW-32D	23b-021742	Sulfate	1100		1	mg/L	5/28/2003
B38W15D	20A-021731	Sulfide	1	U	1	mg/L	3/12/2003
B38W17B	20a-021659	Sulfide	1	U	1	mg/L	7/30/2002
BRPZ-4	12b-021684	Sulfide	0.2	J	1	mg/L	8/6/2002
BRPZ-9	12b-021729	Sulfide	1		1	mg/L	10/17/2002
MISS05B	12b-024635	Sulfide	1	U	1	mg/L	7/31/2002
MW-26D	12b-021703	Sulfide	1	U	1	mg/L	8/15/2002
MW-2D	23b-021661	Sulfide	1	U	1	mg/L	7/30/2002
MW-31D	23b-021734	Sulfide	1	U	1	mg/L	3/13/2003
MW-32D	23b-021742	Sulfide	0.5		1	mg/L	5/28/2003
B38W15D	20A-021731	Methane	0.002	NV	2	mg/L	3/12/2003
B38W17B	20a-021659	Methane	0.059	D	10	mg/L	7/30/2002
BRPZ-4	12b-021684	Methane	3.1	D	40	mg/L	8/6/2002
BRPZ-9	12b-021729	Methane	2.9	NV	40	mg/L	10/17/2002
MISS05B	12b-024635	Methane	0.22		2	mg/L	7/31/2002
MW-26D	12b-021703	Methane	1.8	D	40	mg/L	8/15/2002
MW-2D	23b-021661	Methane	0.28		2	mg/L	7/30/2002
MW-31D	23b-021734	Methane	0.0046	NV	2	mg/L	3/13/2003
MW-32D	23b-021742	Methane	0.038	NV	2	mg/L	3/13/2003

Legend
mg/L = Milligrams per Liter
U = Non-Detect Result
D = Diluted Sample Result
NV = Not Validated
J = Estimated Result Concentration
B = Detected in Blank Sample

Table 4-97
Nutrient Results - RI Addendum

FUSRAP MAYWOOD SUPERFUND SITE, MAYWOOD, NJ

Well	Sample I.D.	Analysis Name	Result (mg/L)	Result Qualifier	Detection Limit (mg/L)	Collection Date
MISS05B	12b-024635	Ammonia	19		0.04	7/31/2002
MISS05B	12b-024635	Nitrate, nitrogen	0.1	U	0.1	7/31/2002
MISS05B	12b-024635	Phosphorous, Total	0.604		0.1	7/31/2002
MISS05B	12b-024635	Total Organic Carbon	3.5		1	7/31/2002
B38W15D	20A-021731	Ammonia	2		0.04	3/12/2003
B38W15D	20A-021731	Nitrate, nitrogen	0.11		0.1	3/12/2003
B38W15D	20A-021731	Phosphorous, total	0.0579	J	0.1	3/12/2003
B38W15D	20A-021731	Total Organic Carbon	2.2		1	3/12/2003
B38W17B	20a-021659	Ammonia	9.6		0.04	7/30/2002
B38W17B	20a-021659	Nitrate, Nitrogen	0.1	U	0.1	7/30/2002
B38W17B	20a-021659	Phosphorous, total	0.474		0.1	7/30/2002
B38W17B	20a-021659	Total Organic Carbon	2.2	U	1	7/30/2002
BRPZ-4	12b-021684	Ammonia	2.2		0.04	8/6/2002
BRPZ-4	12b-021684	Nitrate, nitrogen	0.067	J	0.1	8/6/2002
BRPZ-4	12b-021684	Phosphorous, total	1.37		0.5	8/6/2002
BRPZ-4	12b-021684	Total Organic Carbon	0.38	J	1	8/6/2002
BRPZ-9	12b-021729	Ammonia	2.9		0.04	10/17/2002
BRPZ-9	12b-021729	Nitrate, nitrogen	0.1	U	0.1	10/17/2002
BRPZ-9	12b-021729	Phosphorous, total	0.0059	U	0.1	10/17/2002
BRPZ-9	12b-021729	Total Organic Carbon	25		1	10/17/2002
MW-26D	12b-021703	Ammonia	5.3		0.04	8/15/2002
MW-26D	12b-021703	Nitrate, nitrogen	0.1	U	0.1	8/15/2002
MW-26D	12b-021703	Phosphorous, total	0.201		0.1	8/15/2002
MW-26D	12b-021703	Total Organic Carbon	34		1	8/15/2002
MW-2D	23b-021661	Ammonia	0.88		0.04	7/30/2002
MW-2D	23b-021661	Nitrate, Nitrogen	0.14	U	0.1	7/30/2002
MW-2D	23b-021661	Phosphorous, total	0.0952	J	0.1	7/30/2002
MW-2D	23b-021661	Total Organic Carbon	0.41	U	1	7/30/2002
MW-31D	23b-021734	Ammonia	2.5	U	0.04	3/13/2003
MW-31D	23b-021734	Nitrate, nitrogen	0.1	U	0.1	3/13/2003
MW-31D	23b-021734	Phosphorous, total	0.125		0.1	3/13/2003
MW-31D	23b-021734	Total Organic Carbon	0.78	U	1	3/13/2003
MW-32D	23b-021742	Ammonia	2.1		0.04	5/28/2003
MW-32D	23b-021742	Nitrate, nitrogen	0.04		0.1	5/28/2003
MW-32D	23b-021742	Phosphorous, total	0.302		0.1	5/28/2003
MW-32D	23b-021742	Total Organic Carbon	3.3	U	1	5/28/2003

Legend
mg/L = Milligrams per Liter

Table 4-98
Biological Data - RI Addendum

FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Sample I.D.	Analysis Name	Result	Result Qualifier	Detection Limit	Units	Collection Date
B38W15D	20A-021731	BOD5	1	J	2	mg/L	3/12/2003
B38W15D	20A-021731	BTEX Degrader Bacteria	270	J	300	CFUs/mL	3/12/2003
B38W15D	20A-021731	Total Heterotrophs	160	J	300	CFUs/mL	3/12/2003
B38W15D	20A-021731	Chemical Oxygen Demand	10	U	10	mg/L	3/12/2003
B38W17B	20a-021659	BOD5	4.7		2	MG/L	7/30/2002
B38W17B	20a-021660	BTEX Degrader Bacteria	460		300	CFUs/mL	7/30/2002
B38W17B	20a-021660	Total Heterotrophs	630		300	CFUs/mL	7/30/2002
B38W17B	20a-021659	Chemical Oxygen Demand	33.6		10	mg/L	7/30/2002
BRPZ-4	12b-021684	BOD5	4.8		2	mg/L	8/6/2002
BRPZ-4	12b-021684	BTEX Degrader Bacteria	300	U	300	CFUs/mL	8/6/2002
BRPZ-4	12b-021684	Total Heterotrophs	300	U	300	CFUs/mL	8/6/2002
BRPZ-4	12b-021684	Chemical Oxygen Demand	40.3		10	mg/L	8/6/2002
BRPZ-9	12b-021729	BOD5	9.4		2	mg/L	10/17/2002
BRPZ-9	12b-021729	BTEX Degrader Bacteria	300		300	CFU/mL	10/17/2002
BRPZ-9	12b-021729	Total Heterotrophs	300		300	CFU/mL	10/17/2002
BRPZ-9	12b-021729	Chemical Oxygen Demand	125		100	mg/L	10/17/2002
MISS05B	12b-024635	BOD5	9.1		2	mg/L	7/31/2002
MISS05B	12b-024635	BTEX Degrader Bacteria	2600		300	CFUs/mL	7/31/2002
MISS05B	12b-024635	Total Heterotrophs	1400		300	CFUs/mL	7/31/2002
MISS05B	12b-024635	Chemical Oxygen Demand	19.7		10	mg/L	7/31/2002
MW-26D	12b-021703	BOD5	20		2	mg/L	8/15/2002
MW-26D	12b-021703	BTEX Degrader Bacteria	300	U	300	cfu/ml	8/15/2002
MW-26D	12b-021703	Total Heterotrophs	300	U	300	cfu/ml	8/15/2002
MW-26D	12b-021703	Chemical Oxygen Demand	105		10	mg/L	8/15/2002

Table 4-98
Biological Data - RI Addendum

FUSRAP Maywood Superfund Site, Maywood, NJ

Well	Sample I.D.	Analysis Name	Result	Result Qualifier	Detection Limit	Units	Collection Date
MW-2D	23b-021661	BOD5	2	U	2	mg/L	7/30/2002
MW-2D	23b-021662	BTEX Degrader Bacteria	430		300	CFUs/mL	7/30/2002
MW-2D	23b-021662	Total Heterotrophs	1300		300	CFUs/mL	7/30/2002
MW-2D	23b-021661	Chemical Oxygen Demand	10	U	10	mg/L	7/30/2002
MW-31D	23b-021734	BOD5	0.42	J	2	mg/L	3/13/2003
MW-31D	23b-021734	BTEX Degrader Bacteria	1200		300	CFUs/mL	3/13/2003
MW-31D	23b-021734	Total Heterotrophs	1600		300	CFUs/mL	3/13/2003
MW-31D	23b-021734	Chemical Oxygen Demand	10	U	10	mg/L	3/13/2003
MW-32D	23b-021742	BOD5	3.9		2	mg/L	5/28/2003
MW-32D	23b-021742	BTEX Degrader Bacteria	17000		3000	CFU/mL	5/28/2003
MW-32D	23b-021742	Total Heterotrophs	75000		30000	CFU/mL	5/28/2003
MW-32D	23b-021742	Chemical Oxygen Demand	9.82		10	mg/L	5/28/2003

Legend

mg/L = Milligrams per Liter

CFU/mL = Colony Forming Units per Milliliter

Table 4-99
Summary of Aqueous Replicate Analyses

Program	Number of Samples	Number of Replicate Samples	Number of Samples	Number of Replicate Samples	Number of Samples	Number of Replicate Samples
	Radiological	Radiological	Metals	Metals	VOCs	VOCs
Phase I Geoprobe Water	89	4	84	3	29	3
Phase I Overburden Water	14	0	14	0	0	0
Phase I Bedrock Water	20	3	20	3	0	0
Phase II Geoprobe Water	20	4	8	2	10	1
Phase II Overburden Water	58	3	58	3	55	3
Phase II Bedrock Water	73	13	73	13	71	13
Surface Water	22	1	22	1	0	0
Total Samples	296	28	279	25	165	20
Percent Replicates by Parameter	**9.46**		**8.96**		**12.12**	

Table 4-100
Summary of Soil/Sediment Replicate and Confirmation Analyses

Program	Number of Samples	Number of Duplicate Samples	Number of Samples	Number of Duplicate Samples	Number of Samples	Number of Duplicate Samples
	Radiological	Radiological	Metals	Metals	VOCs	VOCs
Phase I Geoprobe Soils	84	2	84	4	77	4
Phase II Geoprobe Soils	14	2	12	0	12	0
Phase II Overburden Soils	22	1	22	1	22	1
Sediment	22	2	22	2	0	0
Total Soils/Sediments	142	7	140	7	111	5
Percent Replicates by Parameter	4.93		5.00		4.50	

Program	Number of Samples	Number of Confirmation Samples	Number of Confirmation Samples Sent to the USACE Laboratory
	Radiological	Radiological	Radiological
Phase I Geoprobe Soils	84	11	1
Percent of Total Samples	**13.10**		**9.09%**

Table 4-101
Summary of USACE Split Sanple Analyses

Program	Number of Samples	Number of Split Samples
Phase I Geoprobe Waters	89	0
Phase I Overburden Waters	14	0
Phase I Bedrock Waters	20	0
Phase II Geoprobe Waters	20	4
Phase II Overburden Waters	58	3
Phase II Bedrock Waters	73	13
Surface Water	22	3
Sediment	22	4
Phase I Geoprobe Soils	84	1
Phase II Geoprobe Soils	14	0
Phase II Overburden Soils	22	0
Total Number of Samples	438	28
Percent of Total Samples	**6.39**	

Table 5-1
Summary Statistics for Radiological and Chemical Constituents Detected in Overburden Monitoring Wells - Phase II Activities

Parameter Type	Parameter	Frequency of Detection	Concentration Range for Detectable Compounds	Number of Samples Equal to or Exceeding Groundwater Standards	Location of Maximum Detectable Concentration	Applied Groundwater Standard	Units	Federal Groundwater Standard
Radiological	Gross Alpha (Adjusted)	23/45	0.05-289.99	1	OBMW10	15 (1)	pCi/L	15
	Gross Beta (Adjusted)	34/45	0.22 - 31.48	0	MW-21S	50 (2)	pCi/L	4 mrem/yr
	Total Radium	53/58	0.37-17.5	2	OBMW10	5 (1)	pCi/L	5
	Total Uranium	48/58	0.04-73.48	2	MISS-5A	30 (20 pCi/L) (1)	ug/L	30 (20 pCi/L)
	Total Thorium	48/58	0.36-5.19	0	MISS-5A	15 (3)	pCi/L	NA
Metals	Arsenic	24/58	52.4-2600	14	MISS-2A	8 (4)	ug/L	50
	Barium	53/58	3.7-2310	1	MW-13	2000 (1,5)	ug/L	2000
	Cadmium	14/58	0.3-16	1	OBMW13	4 (7)	ug/L	5
	Chromium (total)	29/58	0.76-200	2	B38W14S	100 (1,5)	ug/L	100
	Lead	15/58	2.2-27.7	1	MW-20	10 (4)	ug/L	15 (AL)
	Lithium	54/58	0.82-14,400	15	WELL 8	730 (6)	ug/L	NA
	Thallium	1/58	3.9	1	MW-3	2 (1,5)	ug/L	2
Rare Earth Elements	Cerium	1/56	36.8	NA	MW-21	NA	ug/L	NA
	Dysprosium	15/56	3.4-25.2	0	OBMW12	7300 (6)	ug/L	NA
	Lanthanum	2/56	38.3-60.8	NA	B38W25S	NA	ug/L	NA
	Neodymium	13/56	14.7-57.4	NA	OBMW10	NA	ug/L	NA
	Yttrium	9/56	2-5.3	NA	OBMW12	NA	ug/L	NA
VOCs - Aromatic	Acetone	12/55	1-2900	4	MW-12	700 (7)	ug/L	NA
	Benzene	9/55	0.1-2500	2	PT-2S	1 (5)	ug/L	5
	Xylene (total)	23/55	0.1-4900	3	OBMW18	40 (7)	ug/L	10000
VOCs - Chlorinated	Tetrachloroethene	11/55	0.2-200	5	MW-7	1 (5)	ug/L	5
	Trichloroethene	12/55	0.1-65	5	MW-7	1 (5)	ug/L	5
	1,2-Dichloroethene (total)	15/55	0.3-28	2	MW-7	10 (7,8)	ug/L	70 (represents cis-1,2-dichloroethene)
	1,1,2-Trichloroethane	1/55	3	1	OBMW3	3 (5)	ug/L	5
	Vinyl Chloride	8/55	0.1-2	1	PT-2S	2 (1)	ug/L	2
	Chloroform	14/55	0.1-6	1	B38W14S	6 (7)	ug/L	NA

Notes:
(1) - Federal Maximum Contaminant Level (MCL). With respect to total uranium the activity:mass ratio of 0.677 pCi/ug was used as a conversion factor
(2) - MCL for Gross Beta is 4 mrem/yr. However, a screening level criteria of 50 pCi/L is cited in 40 CFR 141
(3) - A Groundwater Standard for Total Thorium or Individual Isotopes Do not Exist. Comparison to Gross Alpha MCL
(4) - NJ Practical Quantitation Limit
(5) - NJ Maximum Contaminant Level (NJ MCL)
(6) - Region IX Prelimary Remediation Goal - Tap Water Standard
(7) - NJ Groundwater Quality Critieria
(8) - NJ Groundwater Quality Critieria for Cis 1,2-Dichloroethene
NA - Not Available
AL - Action Level

Table 5-2
Summary Statistics for Radiological and Chemical Constituents Detected in Bedrock Monitoring Wells - Phase II Activities

Parameter Type	Parameter	Frequency of Detection	Concentration Range for Detectable Compounds	Number of Samples Equal to or Exceeding Groundwater Standards	Location of Maximum Detectable Concentration	Applied Groundwater Standard	Units	Federal Groundwater Standard
Radiological	Gross Alpha (Adjusted)	31/53	0.00-57.47	3	BRPZ-5	15 (1)	pCi/L	15
	Gross Beta (Adjusted)	45/54	0.51-130.4	4	BRPZ-2	50 (1,2)	pCi/L	4 mrem/yr
	Total Radium	67/73	0.12-19.4	1	B38W18D	5 (1)	pCi/L	5
	Total Uranium	67/73	0.46-15.81	0	BRMW14	30 (20 pCi/L (1)	ug/L	30 (20 pCi/L)
	Total Thorium	64/73	0.43-16.14	1	B38W18D	15 (3)	pCi/L	NA
Metals	Arsenic	19/73	2.5-89.1	4	B38W19D	8 (4)	ug/L	50
	Barium	70/73	2.5-9750	1	MISS-5B	2000 (1,5)	ug/L	2000
	Beryllium	25/73	0.1-5.3	1	BRPZ-5	4 (1,5)	ug/L	4
	Chromium (total)	54/73	1.1-689	5	BRMW6	100 (1,5)	ug/L	100
	Lead	8/73	3.1-33.9	1	MW-3D	10 (4)	ug/L	15 (AL)
	Lithium	71/73	1.5-16100	32	MISS-2B	730 (6)	ug/L	NA
	Nickel	58/73	1.1-160	1	B38W12B	100 (7)	ug/L	NA
	Thallium	3/73	3.1-4.4	3	BRPZ-5	2 (1,5)	ug/L	2
	Cerium	4/70	45.4-312	NA	B38W18D	NA	ug/L	NA
Rare Earth Elements	Dysprosium	12/70	3.2-14.5	0	MISS-5B	7300 (6)	ug/L	NA
	Lanthanum	3/70	39.2-231	NA	B38W18D	NA	ug/L	NA
	Neodymium	11/70	13.9-133.9	NA	B38W18D	NA	ug/L	NA
	Yttrium	5/70	1.8-41.6	NA	B38W18D	NA	ug/L	NA
VOCs - Aromatic	Benzene	31/71	0.1-5000	17	BRPZ-5	1 (5)	ug/L	5
	Benzene (Supplemental Investigation)	19/38	0.2-9500	14	BRPZ-5	1 (5)	ug/L	5
	Toluene	30/71	0.1-1400	1	BRPZ-5	1000 (1)	ug/L	1000
	Xylene (total)	33/71	0.2-460	1	B38W04D	40 (7)	ug/L	10000
VOCs - Chlorinated	Tetrachloroethene	30/71	0.1-1200	18	MW-7D	1 (5)	ug/L	5
	Trichloroethene	27/71	0.2-380	19	MW-7D	1 (5)	ug/L	5
	1,2-Dichloroethene (total)	39/71	0.1-270	6	MW-8D	10 (7)(8)	ug/L	70 (represents cis-1,2-dichloroethene)
	1,1-Dichloroethene	10/71	0.2-4	3	B38W14D	2 (5)	ug/L	7
	Vinyl Chloride	18/71	0.1-200	4	BRMW1	2 (1)	ug/L	2
	Methylene Chloride	7/71	0.6-360	5	BRPZ-3RE	3 (7)	ug/L	5

Notes:

(1) - Federal Maximum Contaminant Level (MCL). With respect to total uranium the activity:mass ratio of 0.677 pCi/ug was used as a conversion factor

(2) - MCL for Gross Beta is 4 mrem/yr. However, a screening level criteria of 50 pCi/L is cited in 40 CFR 141

(3) - A Groundwater Standard for Total Thorium or Individual Isotopes Do not Exist. Comparison to Gross Alpha MCL

(4) - NJ Practical Quantitation Limit

(5) - NJ Maximum Contaminant Level (NJ MCL)

(6) - Region IX Prelimary Remediation Goal - Tap Water Standard

(7) - NJ Groundwater Quality Critieria

(8) - NJ Groundwater Quality Critieria for Cis 1,2-Dichloroethene

NA - Not Available

Table 5-3
Summary Statistics for Radiological and Chemical Constituents Detected in Soil - Phase I/II

Parameter Type	Parameter	Frequency of Detection	Concentration Range for Detectable Compounds	Number of Samples Exceeding Soil Standards	Location of Maximum Detectable Concentration	Radiological Soil Standard (pCi/g)	Site Specific SSL (mg/Kg) (1)	NJ Impact to Groundwater Citeria for VOCs (ug/Kg)
Radiological	RA-226	149/151	0.05 - 40.99	NA	07A001	NA	NA	NA
	TH-232	151/151	0.18 - 540	NA	07A002	NA	NA	NA
	RA-226 + TH-232	149/151	0.43 - 552	35	07A002	5	NA	NA
	U-238	82/151	0.05 - 81.86	3	12B017	50	NA	NA
VOCs - Chlorinated	Methylene Chloride	5/111	820 - 2400	2	12B006	NA	NA	1000
Metals	Antimony	28/118	0.17-9.4	1	MW-16S	NA	5	NA
	Arsenic	118/118	0.65-297	3	18A004	NA	122	NA
	Cadmium	57/118	0.03-10.1	1	04A003	NA	8	NA
	Copper	116/118	3.2-460	1	09A007	NA	426	NA
	Chromium (total)	117/118	1.2-5850	12	10A003	NA	242	NA
	Lead	118/118	2-556	2	09A007	NA	400	NA
	Lithium	109/118	2.7-2090	17	12B011	NA	194	NA
	Mercury	73/118	0.02-12.4	5	09A007	NA	2	NA
	Nickel	118/118	3.9-297	1	12B017	NA	214	NA
	Selenium	39/118	0.34-7	1	09A007	NA	5	NA
	Thallium	10/118	0.41-1.3	1	12B013	NA	1.2	NA

Notes:

NA = Not Applicable
pCi/g = Picocuries per gram
ug/Kg = Micrograms per Kilogram
mg/Kg = Milligrams per Kilogram
DAF = Dilution Attenuation Factor
(1) = Source of Data presented in Soil Screening Level (SSL) Technical Memorandum, USACE October 2004

Table 5-4
Summary Statistics for Radiological and Chemical Constituents Detected in Surface Water Samples - Phase II Activities

Parameter Type	Parameter	Frequency of Detection	Concentration Range for Detectable Compounds	Number of Samples Equal to or Exceeding Surface Water Criteria	Location of Maximum Detectable Concentration	NJ Surface Water Quality Criteria (ug/L)	Federal Ambient Water Quality Criteria (Chronic)
Radiological	Total Radium	21/21	0.38 - 9.25	5	LB-5	5 (1)	NA
	Total Uranium	21/21	0.41 - 6.56	0	CB-1	30 (20 pCi/L) (1)	NA
	Total Thorium	20/21	0.54 - 2.5	0	LB-2	15 (2)	NA
Metals	Aluminum	14/21	22.7-255	5	WB-3	NA	87
	Arsenic	11/21	3.6-48.7	11	WB-3	0.017	150
	Copper	21/21	1.3-23.8	10	LB-3	7.9	9
	Iron	21/21	1.2-5850	4	WB-3	NA	1000 (Acute)
	Lead	7/21	2.6-10.8	7	SR-2	5	2.5
	Silver	6/21	1.1-59.4	2	WB-3	164	3.4
	Thallium	2/21	4.3-6.1	2	WB-3	1.7	NA
	Zinc	19/21	4.9-186	1	WB-3	NA	120

Notes:

(1) - Federal Maximum Contaminant Level (MCL). With respect to total uranium the activity:mass ratio of 0.677 pCi/ug was used as a conversion factor

(2) - A Groundwater Standard for Total Thorium or Individual Isotopes Do not Exist. Comparison to Gross Alpha MCL

NS = No Standard

Table 5-5

Summary of Metals in Surface Water Exceeding Criteria

Sample Location	GWRI Site Name:	Analysis Name	Result:	Result Qualifier	Collection Date	NJ SWQC (ug/L)	Federal AWQC Acute (ug/L)	Federal AWQC Chronic (ug/L)	Organoleptic Criteria (ug/L)
Lodi Brook	LB-2	Aluminum	97.3		10/19/2000	N/A	750	87	N/A
Lodi Brook	LB-3	Aluminum	91.9		10/23/2000	N/A	750	87	N/A
Lodi Brook	LB-5	Aluminum	92		10/19/2000	N/A	750	87	N/A
Lodi Brook	LB-8	Aluminum	87		10/19/2000	N/A	750	87	N/A
Westerly Brook	WB-3	Aluminum	255		10/26/2000	N/A	750	87	N/A
Lodi Brook	LB-2	Arsenic, Total	9.7		10/19/2000	0.017	340	150	N/A
Lodi Brook	LB-4	Arsenic, Total	3.6		10/19/2000	0.017	340	150	N/A
Lodi Brook	LB-5	Arsenic, Total	4		10/19/2000	0.017	340	150	N/A
Lodi Brook	LB-6	Arsenic, Total	3.9		10/19/2000	0.017	340	150	N/A
Lodi Brook	LB-7	Arsenic, Total	4		10/19/2000	0.017	340	150	N/A
Lodi Brook	LB-8	Arsenic, Total	4.6		10/19/2000	0.017	340	150	N/A
Saddle River	SR-3	Arsenic, Total	8.8		10/25/2000	0.017	340	150	N/A
Westerly Brook	WB-1	Arsenic, Total	12		10/23/2000	0.017	340	150	N/A
Westerly Brook	WB-2	Arsenic, Total	18.5		10/23/2000	0.017	340	150	N/A
Westerly Brook	WB-3	Arsenic, Total	48.7		10/26/2000	0.017	340	150	N/A
Westerly Brook	WB-4	Arsenic, Total	3.8		10/23/2000	0.017	340	150	N/A
Lodi Brook	LB-3	Copper, Total	12.5		10/23/2000	7.9	13	9	1000
Lodi Brook	LB-4	Copper, Total	23.8		10/19/2000	7.9	13	9	1000
Lodi Brook	LB-5	Copper, Total	14.1		10/19/2000	7.9	13	9	1000
Lodi Brook	LB-6	Copper, Total	12.1		10/19/2000	7.9	13	9	1000
Lodi Brook	LB-7	Copper, Total	12.3		10/19/2000	7.9	13	9	1000
Lodi Brook	LB-8	Copper, Total	11.7		10/19/2000	7.9	13	9	1000
Saddle River	SR-2	Copper, Total	10.3		10/25/2000	7.9	13	9	1000
Saddle River	SR-4	Copper, Total	10.6		10/25/2000	7.9	13	9	1000
Saddle River	SR-6	Copper, Total	11.3		10/25/2000	7.9	13	9	1000
Saddle River	SR-7	Copper, Total	11.3		10/25/2000	7.9	13	9	1000

Table 5-5

Summary of Metals in Surface Water Exceeding Criteria

Sample Location	GWRI Site Name:	Analysis Name	Result:	Result Qualifier	Collection Date	NJ SWQC (ug/L)	Federal AWQC Acute (ug/L)	Federal AWQC Chronic (ug/L)	Organoleptic Criteria (ug/L)
Lodi Brook	LB-2	Iron, Total	1160		10/19/2000	N/A	1000	N/A	N/A
Westerly Brook	WB-2	Iron, Total	1090		10/23/2000	N/A	1000	N/A	N/A
Westerly Brook	WB-3	Iron, Total	3460		10/26/2000	N/A	1000	N/A	N/A
Westerly Brook	WB-4	Iron, Total	1110		10/23/2000	N/A	1000	N/A	N/A
Lodi Brook	LB-2	Lead, Total	7.7		10/19/2000	5	65	2.5	N/A
Lodi Brook	LB-3	Lead, Total	2.6		10/23/2000	5	65	2.5	N/A
Lodi Brook	LB-4	Lead, Total	3.6		10/19/2000	5	65	2.5	N/A
Lodi Brook	LB-5	Lead, Total	2.8		10/19/2000	5	65	2.5	N/A
Saddle River	SR-2	Lead, Total	10.8		10/25/2000	5	65	2.5	N/A
Westerly Brook	WB-3	Lead, Total	5.4		10/26/2000	5	65	2.5	N/A
Westerly Brook	WB-4	Lead, Total	4		10/23/2000	5	65	2.5	N/A
Westerly Brook	WB-3	Silver, Total	59.4		10/26/2000	164	3.4	N/A	N/A
Westerly Brook	WB-5	Silver, Total	8.6		10/24/2000	164	3.4	N/A	N/A
Lodi Brook	LB-5	Thallium, Total	4.3		10/19/2000	1.7	N/A	N/A	N/A
Westerly Brook	WB-1	Thallium, Total	6.1		10/23/2000	1.7	N/A	N/A	N/A
Westerly Brook	WB-3	Zinc, Total	186	J	10/26/2000	N/A	120	120	5000

Notes:

ug/L = Micrograms per Liter

Table 5-6
Summary Statistics for Radiological and Chemical Constituents Detected in Sediment - Phase II

Parameter Type	Parameter	Frequency of Detection	Concentration Range for Detectable Compounds	Number of Samples Equal to or Exceeding Groundwater Standards	Location of Maximum Detectable Concentration	FMSS Soil Standard (pCi/g)	NJ Freshwater Sediment Criteria (mg/kg)	EPA Consensus Based TEC (mg/kg)
Radiological	RA-226	22/22	0.36 - 10.41	NA	LB-1	NA	NA	NA
	TH-232	22/22	0.24 - 21.48	NA	LB-1	NA	NA	NA
	RA-226 + TH-232	22/22	1.23 - 31.89	1	LB-1	5	NA	NA
	U-238	22/22	0.34 - 5.76	0	LB-1	50	NA	NA
Metals	Arsenic	22/22	0.52 - 30.5	3	WB-3	NA	6	9.79
	Cadmium	22/22	0.05 - 3	5	CB-3	NA	0.6	0.99
	Chromium	22/22	3.7 - 191	7	LB-1	NA	26	43.4
	Copper	14/22 (8 rejects)	5.7 - 131	11	CB-3	NA	16	31.6
	Lead	22/22	7.2 - 427	16	LB-7	NA	313	35.8
	Nickel	22/22	3.1 - 61	7	LB-7	NA	16	22.7
	Zinc	22/22	26.9 - 1020	13	LB-7	NA	120	121

Table 5-7

Summary of Metals in Sediment Exceeding Criteria

Sample Location	GWRI Site Name	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
Coles Brook	CB-3	25a-021242	Arsenic	6.7	0.90		12/7/2000	6	9.79
Lodi Brook	LB-1	22a-020883	Arsenic	30.5	0.43		12/7/2000	6	9.79
Saddle River	SR-3	24a-020873	Arsenic	8.3	0.36		10/25/2000	6	9.79
Coles Brook	CB-1	25a-020921	Cadmium	0.79	0.03		10/30/2000	0.6	0.99
Coles Brook	CB-3	25a-021242	Cadmium	3	0.11		12/7/2000	0.6	0.99
Lodi Brook	LB-1	22a-020883	Cadmium	0.89	0.05		12/7/2000	0.6	0.99
Westerly Brook	UD-6	23a-020911	Cadmium	1.1	0.03		12/7/2000	0.6	0.99
Westerly Brook	UD-7	23a-020915	Cadmium	1.7	0.05		12/7/2000	0.6	0.99
Coles Brook	CB-3	25a-021242	Chromium	59.4	0.23		12/7/2000	26	43.4
Lodi Brook	LB-1	22a-020883	Chromium	191	0.11		12/7/2000	26	43.4
Lodi Brook	LB-4	22a-020889	Chromium	81	0.10	J	10/19/2000	26	43.4
Lodi Brook	LB-6	22a-020895	Chromium	28.2	0.10	J	10/19/2000	26	43.4
Lodi Brook	LB-8	22a-020899	Chromium	27.3	0.09	J	10/19/2000	26	43.4
Westerly Brook	UD-6	23a-020911	Chromium	40.5	0.07		12/7/2000	26	43.4
Westerly Brook	UD-7	23a-020915	Chromium	60.8	0.10		12/7/2000	26	43.4
Coles Brook	CB-1	25a-020921	Copper	29	0.1		10/30/2000	16	31.6
Coles Brook	CB-2	25a-020925	Copper	19.1	0.10		10/30/2000	16	31.6
Coles Brook	CB-3	25a-021242	Copper	131	0.34		12/7/2000	16	31.6
Coles Brook	CB-4	25a-021241	Copper	19.8	0.11		12/7/2000	16	31.6
Coles Brook	CB-5	25a-021239	Copper	19.1	0.11		12/7/2000	16	31.6
Lodi Brook	LB-1	22a-020883	Copper	96	0.16		12/7/2000	16	31.6
Saddle River	SR-3	24a-020873	Copper	26.6	0.09		10/25/2000	16	31.6
Saddle River	SR-7	24a-020881	Copper	23	0.09		10/25/2000	16	31.6
Westerly Brook	UD-6	23a-020911	Copper	96.8	0.10		12/7/2000	16	31.6
Westerly Brook	UD-7	23a-020915	Copper	90.2	0.15		12/7/2000	16	31.6
Westerly Brook	WB-5	23a-020909	Copper	31.7	0.09		10/24/2000	16	31.6
Coles Brook	CB-1	25a-020921	Lead	40.2	0.22		10/30/2000	31	35.8
Coles Brook	CB-3	25a-021242	Lead	304	0.79	J	12/7/2000	31	35.8
Lodi Brook	LB-1	22a-020883	Lead	354	0.38	J	12/7/2000	31	35.8
Lodi Brook	LB-3	22a-020887	Lead	33.8	0.22		10/23/2000	31	35.8
Lodi Brook	LB-4	22a-020889	Lead	229	0.24	J	10/19/2000	31	35.8
Lodi Brook	LB-6	22a-020895	Lead	199	0.24	J	10/19/2000	31	35.8
Lodi Brook	LB-7	22a-020897	Lead	427	0.24	J	10/19/2000	31	35.8
Lodi Brook	LB-8	22a-020899	Lead	128	0.21	J	10/19/2000	31	35.8
Saddle River	SR-3	24a-020873	Lead	47.5	0.26		10/25/2000	31	35.8

Table 5-7

Summary of Metals in Sediment Exceeding Criteria

Sample Location	GWRI Site Name	S&W Lab Sample ID	Analysis Name	Result (mg/kg)	Detection Limit (mg/kg)	Result Qualifier	Collection Date	NJ Freshwater Sediment Criteria (mg/kg)	EPA Freshwater Consensus Based TEC (mg/kg)
Saddle River	SR-4	24a-020875	Lead	34.3	0.30		10/25/2000	31	35.8
Westerly Brook	UD-6	23a-020911	Lead	276	0.24	J	12/7/2000	31	35.8
Westerly Brook	UD-7	23a-020915	Lead	197	0.35	J	12/7/2000	31	35.8
Westerly Brook	WB-1	23a-020901	Lead	65.7	0.25		10/23/2000	31	35.8
Westerly Brook	WB-2	23a-020903	Lead	88.8	0.25		10/23/2000	31	35.8
Westerly Brook	WB-4	23a-020905	Lead	50.9	0.23		10/23/2000	31	35.8
Westerly Brook	WB-5	23a-020909	Lead	93.3	0.23		10/24/2000	31	35.8
Coles Brook	CB-3	25a-021242	Nickel	36.8	0.34		12/7/2000	16	22.7
Lodi Brook	LB-6	22a-020895	Nickel	23.9	0.14		10/19/2000	16	22.7
Lodi Brook	LB-7	22a-020897	Nickel	61	0.14		10/19/2000	16	22.7
Lodi Brook	LB-8	22a-020899	Nickel	24.3	0.12		10/19/2000	16	22.7
Westerly Brook	UD-6	23a-020911	Nickel	48.6	0.10		12/7/2000	16	22.7
Westerly Brook	UD-7	23a-020915	Nickel	30.3	0.15		12/7/2000	16	22.7
Westerly Brook	WB-2	23a-020903	Nickel	17.7	0.14		10/23/2000	16	22.7
Coles Brook	CB-3	25a-021242	Zinc	565	0.15		12/7/2000	120	121
Lodi Brook	LB-1	22a-020883	Zinc	226	0.07		12/7/2000	120	121
Lodi Brook	LB-4	22a-020889	Zinc	179	0.05	J	10/19/2000	120	121
Lodi Brook	LB-6	22a-020895	Zinc	621	0.05	J	10/19/2000	120	121
Lodi Brook	LB-7	22a-020897	Zinc	1020	0.05	J	10/19/2000	120	121
Lodi Brook	LB-8	22a-020899	Zinc	323	0.04	J	10/19/2000	120	121
Saddle River	SR-3	24a-020873	Zinc	176	0.08		10/25/2000	120	121
Westerly Brook	UD-6	23a-020911	Zinc	452	0.05		12/7/2000	120	121
Westerly Brook	UD-7	23a-020915	Zinc	349	0.07		12/7/2000	120	121
Westerly Brook	WB-1	23a-020901	Zinc	221	0.05		10/23/2000	120	121
Westerly Brook	WB-2	23a-020903	Zinc	202	0.05		10/23/2000	120	121
Westerly Brook	WB-4	23a-020905	Zinc	154	0.04		10/23/2000	120	121
Westerly Brook	WB-5	23a-020909	Zinc	158	0.04		10/24/2000	120	121

Notes:

mg/kg = Milligrams per Kilogram

Table 5-8

MAYWOOD FUSRAP COPCs
FUSRAP Maywood Superfund Site, Maywood, NJ

Media	COPC	Number of Exceedances (3)	FUSRAP Waste Criteria	Probable Source
Groundwater	Adjusted Gross Alpha	4 (1)	Derived from probable Thorium Process Waste	Former MCW
	Adjusted Gross Beta	4 (1)	Derived from probable Thorium Process Waste	Former MCW
	Total Radium	3 (1)	Derived from probable Thorium Process Waste	Former MCW
	Total Uranium	2 (1)	Derived from probable Thorium Process Waste	Former MCW
	Arsenic	7 (2)	Detected on and derived from MISS	MISS
	Barium	1 (2)	Detected on MISS	MISS
	Beryllium	1 (2)	Detected on MISS	MISS
	Lead	2 (2)	Detected on MISS	MISS
	Lithium	32 (2)	Detected on and derived from MISS	MISS and Offsite
	Thallium	2 (2)	Detected on MISS	MISS
	Benzene	15 (2)	Detected on MISS	MISS
	Methylene Chloride	4 (2)	Detected on MISS	MISS
	Tetrachloroethene	5 (2)	Detected on MISS	Offsite
	Toluene	1 (2)	Detected on MISS	MISS
	Trichloroethene	7 (2)	Detected on MISS	Offsite
	Vinyl Chloride	1 (2)	Detected on MISS	Offsite
Surface Water	Total Radium	5 (1)	Derived from probable Thorium Process Waste	Former MCW
	Arsenic	11 (1)	Probably derived from MISS	MISS
	Iron	4 (1)	Probably derived from MISS	MISS
	Lead	7 (1)	Probably derived from MISS	MISS
	Thallium	2 (1)	Probably derived from MISS	MISS
Sediment	Radium 226 + Thorium 232	1 (1)	Derived from probable Thorium Process Waste	Former MCW

Notes:
1 - Denotes number of groundwater (radiological), surface water or sediment COPC exceedances detected on the FMSS
2 - Denotes number of groundwater COPCs detected on MISS
3 - Refer to Tables 5-1, 5-2 and 5-4 for total number of exceedances by media (overburden/bedrock) and location/concentration of maximum detection

FUSRAP
Maywood Superfund Site

Groundwater Remedial Investigation Report

Volume 2
Figures 1-1 through 4-30

Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

Prepared for:

US Army Corps
of Engineers®

Contract No. DACW41-99-D-9001

July 2005, Revision 4

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Figure No.	Description
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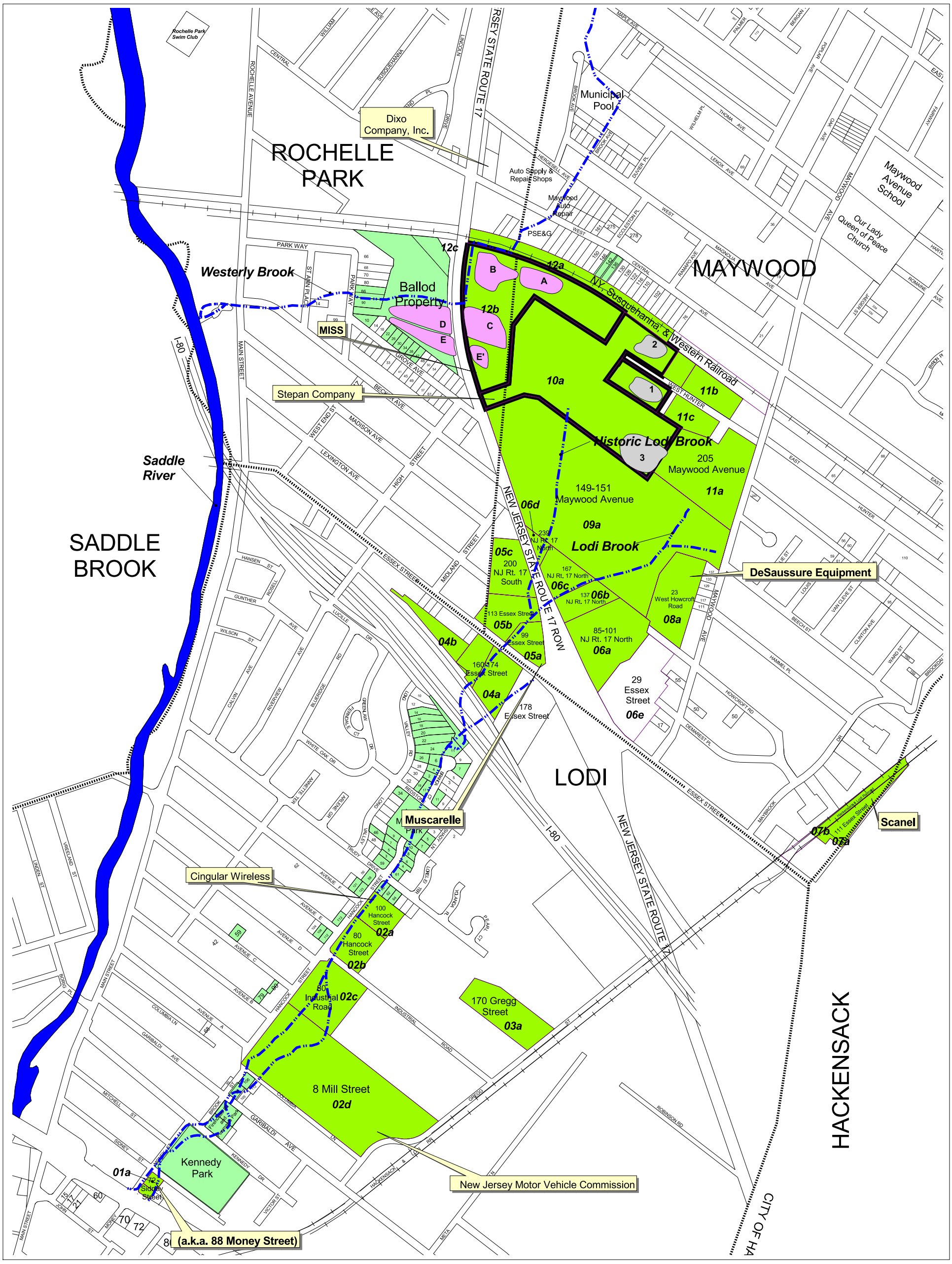


Phase 1 Properties
Remediated

Phase II Properties
Scheduled for remediation

Burial Pits

Retention Ponds

Figure 1-1
FMSS and Surrounding Properties

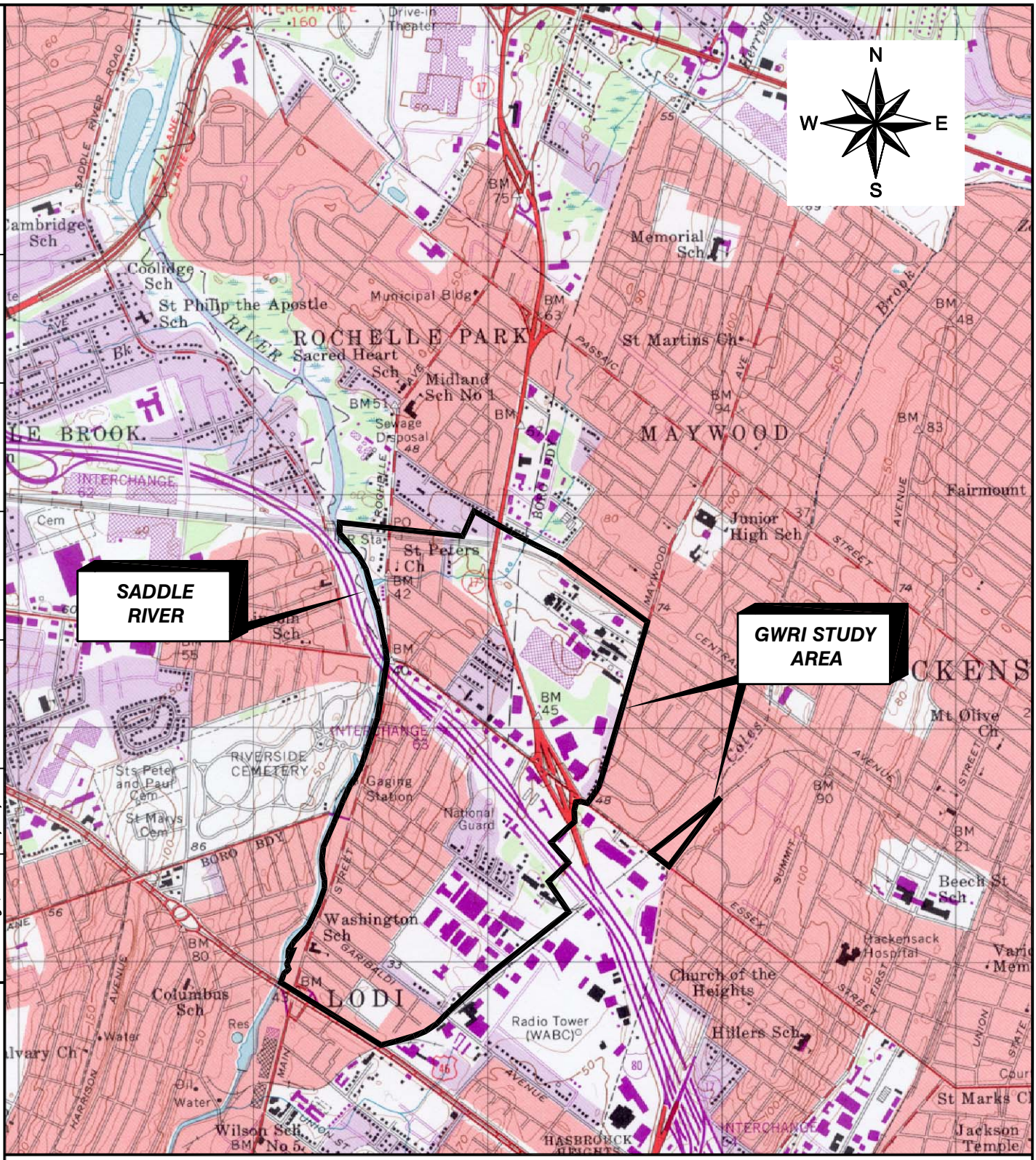
N
W E
S

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental, Inc

0 600 1200 Feet

BOSFS01\maywood\task0205\gis\0205_ri_bra.apr - ri_bra - July 14, 2005



OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	2/15/05	--	A. Smith	G. Gaillot	--	108783-A12

Xref: .
Image: 108783IM-1
FMSS

0:\Project\108783\108783A12.dwg
Plot Date/Time: 07/11/05 03:42pm
Plotted by: greg.jones

SCALE

0 2000 4000 FEET

FIGURE 1-2

GWRI STUDY AREA MAP

MAYWOOD SUPERFUND SITE, NEW JERSEY

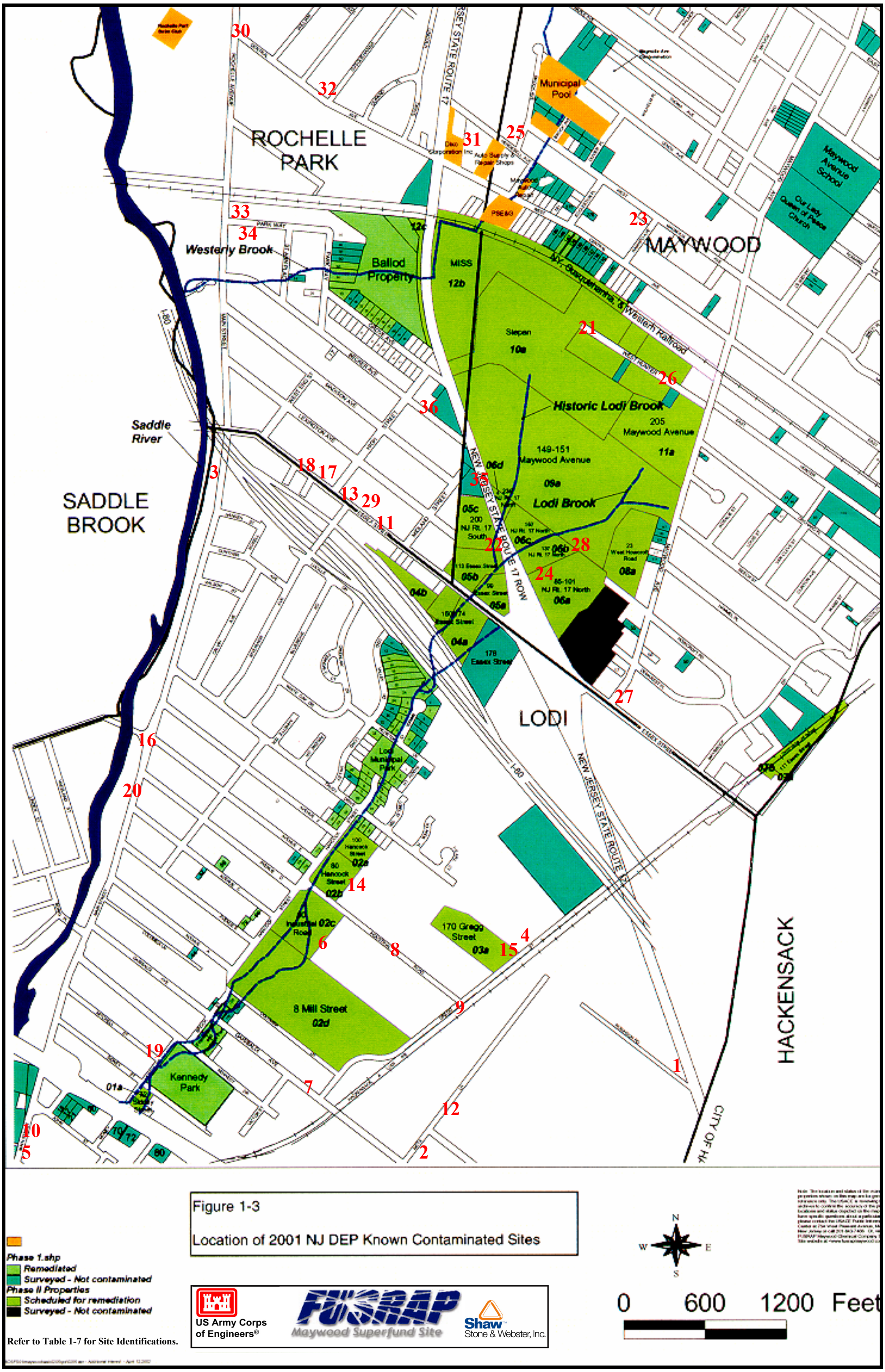
REFERENCE:

7.5 MIN USGS TOPOGRAPHIC MAP OF HACKENSACK, NJ QUADRANGLE. DATED: 1997

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Environmental, Inc.


ROCHELLE PARK
SADDLE BROOK
LODI
MAYWOOD
HACKENSACK
Saddle River
Westerly Brook
Historic Lodi Brook
Lodi Brook
Municipal Pool
Maywood Avenue School
Our Lady Queen of Peace Church
Ballod Property
MISS
12b
Stepan
10a
205 Maywood Avenue
11a
149-151 Maywood Avenue
09a
06d
05c
200 NJ Rt. 17 South
06c
06b
08a
05b
05a
06a
04b
04a
178 Essex Street
02a
02b
02c
03a
170 Gregg Street
8 Mill Street
02d
Kennedy Park
01a
Lodi Municipal Park
NEW JERSEY STATE ROUTE 17
NEW JERSEY STATE ROUTE 17 ROW
I-80
N.Y., Susquehanna & Western Railroad
30
32
31
25
33
34
23
21
26
36
35
18
17
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22
28
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27
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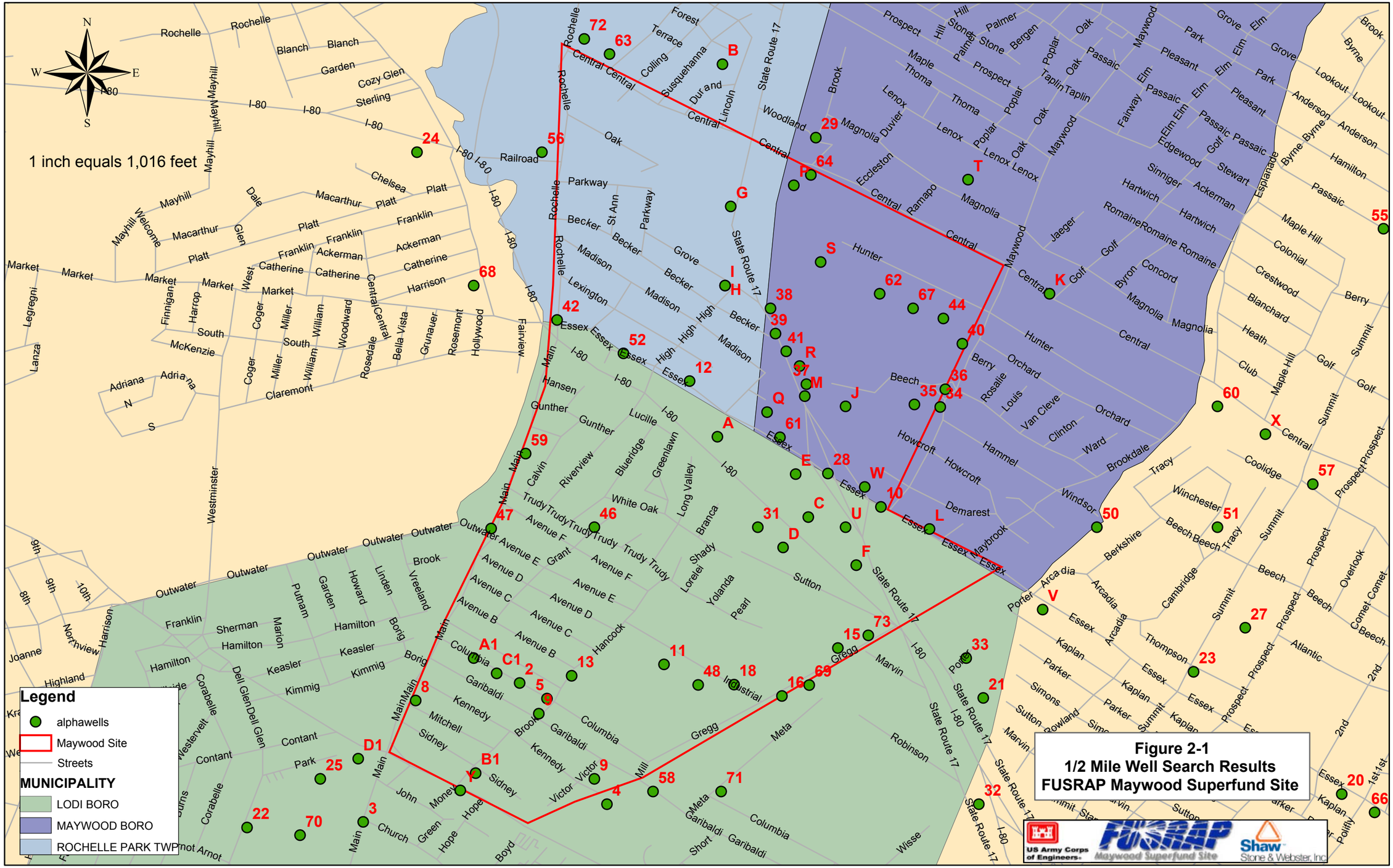
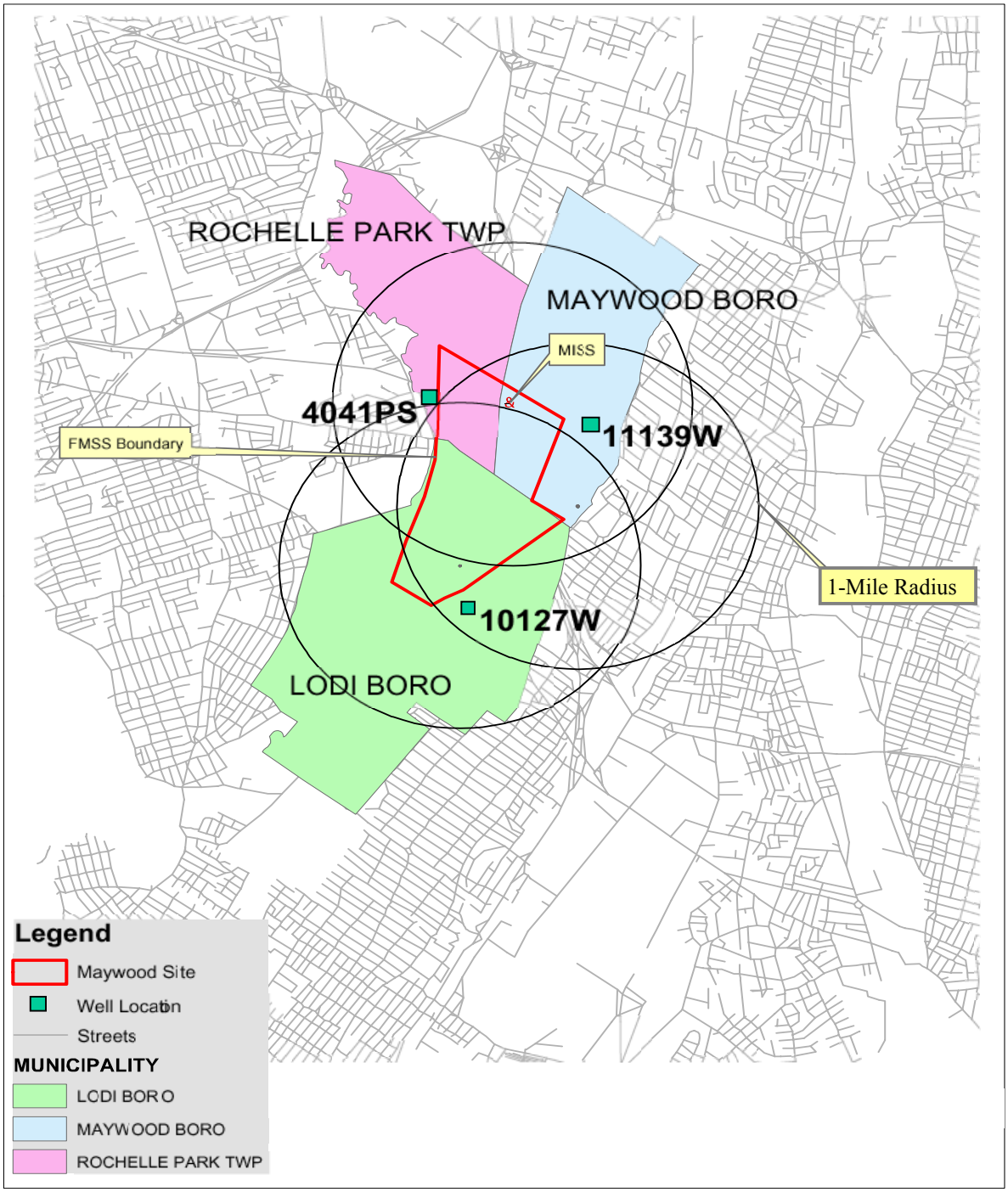
8
4
15
9
19
7
12
1
10
5
2
Figure 1-3
Location of 2001 NJ DEP Known Contaminated Sites
Phase 1.shp
Remediated
Surveyed - Not contaminated
Phase II Properties
Scheduled for remediation
Surveyed - Not contaminated
Refer to Table 1-7 for Site Identifications.
US Army Corps of Engineers®
FUSRAP
Maywood Superfund Site
Shaw
Stone & Webster, Inc.
N
W
E
S
0
600
1200
Feet


1 inch equals 1,016 feet
Legend
alphawells
Maywood Site
Streets
MUNICIPALITY
LODI BORO
MAYWOOD BORO
ROCHELLE PARK TWP
Figure 2-1
1/2 Mile Well Search Results
FUSRAP Maywood Superfund Site
US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 2-2: Water Purveyor and Allocation Permit Well Location Map

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

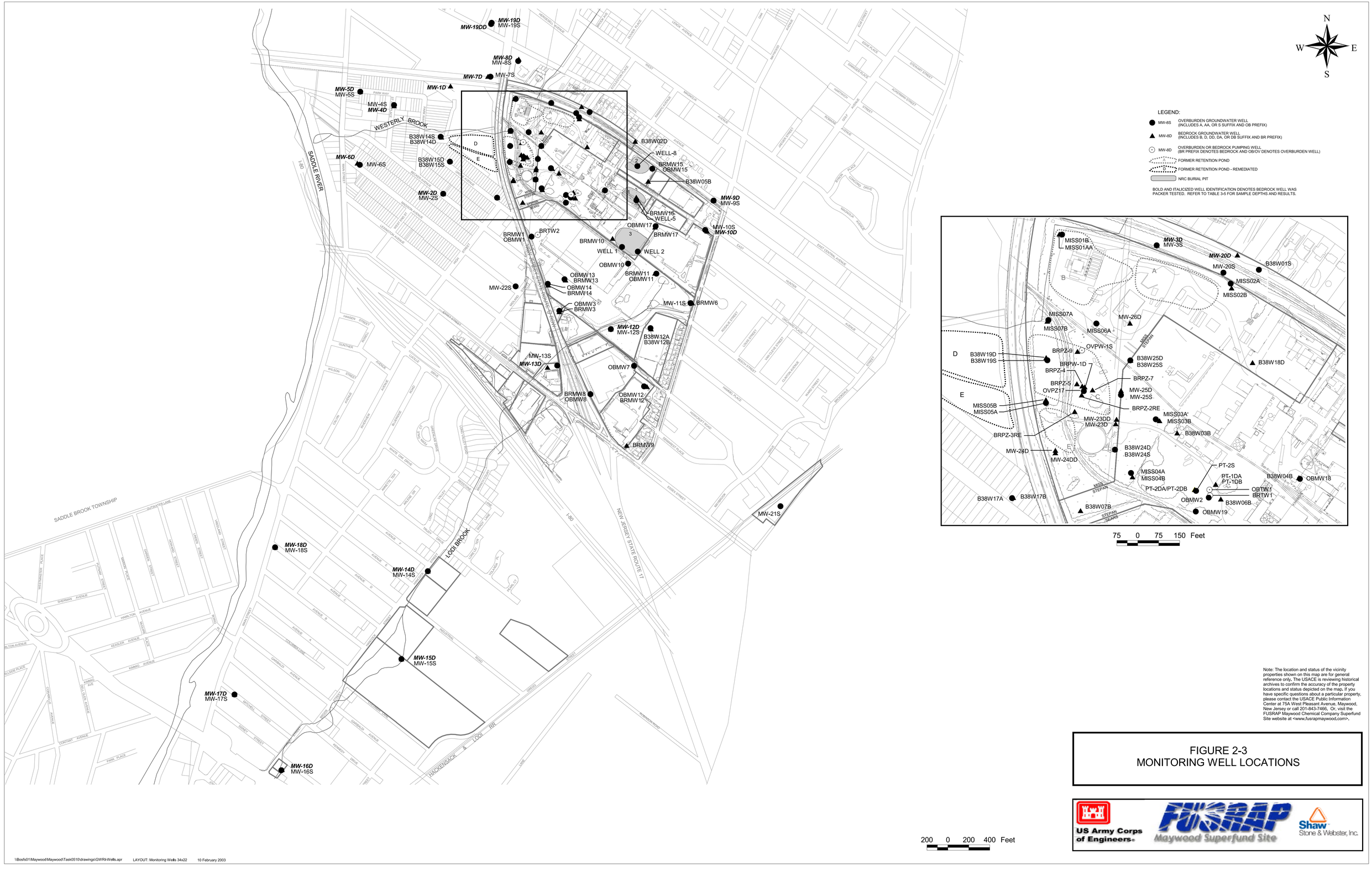


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FIGURE 2-3
MONITORING WELL LOCATIONS

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

LEGEND:

- 12b004 PHASE 1 GEOPROBE LOCATION
- 12b020 PHASE 2 GEOPROBE LOCATION
- FORMER RETENTION POND
- B FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

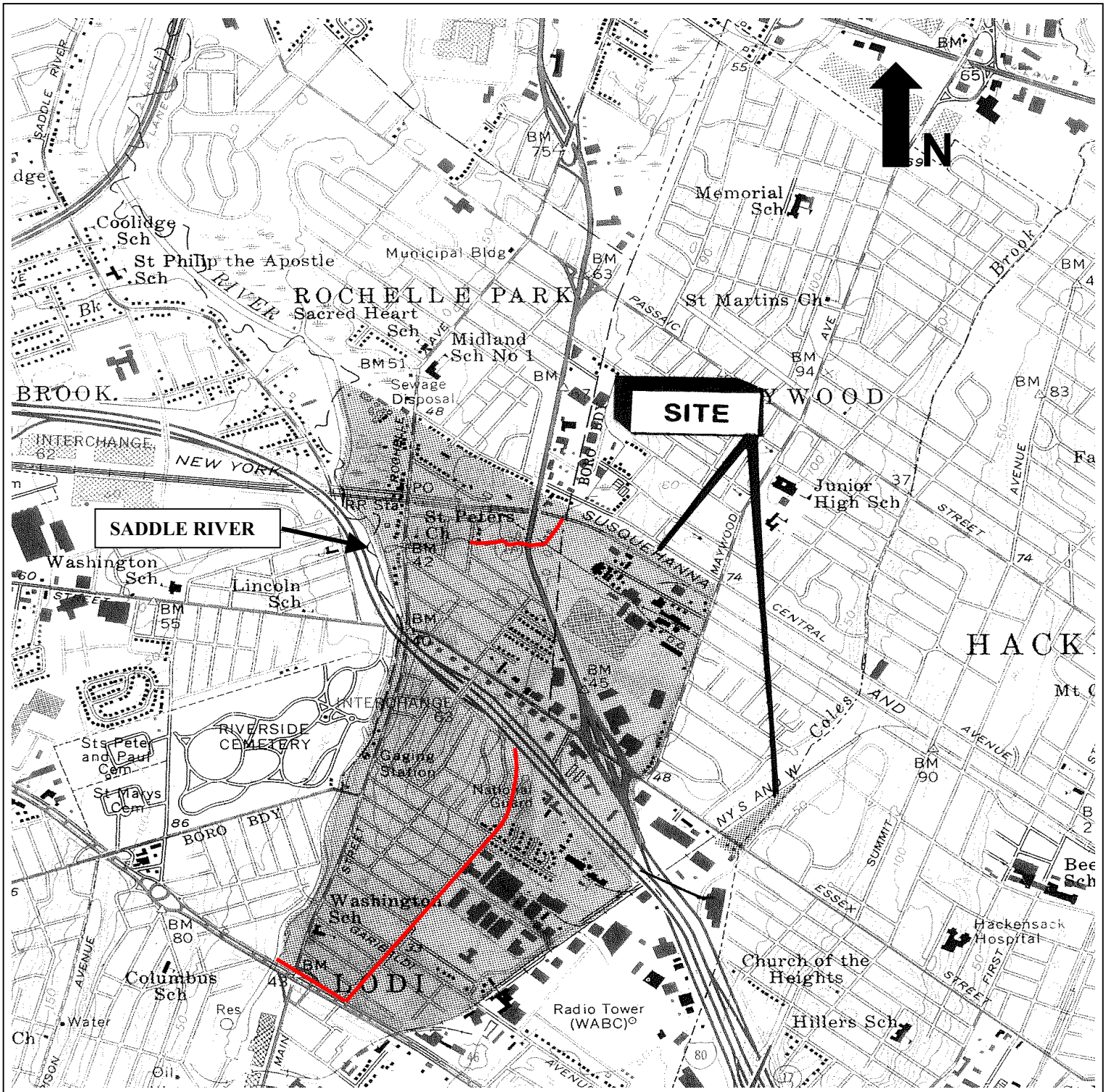
FIGURE 2-4
GEOPROBE LOCATIONS

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Wells.apr LAYOUT: Geoprobe-34x22 10 February 2003



Legend:

Portion of Brook Video Inspected

Reference:
Hackensack, NJ USGS Quadrangle. Dated 1955, Photorevized in 1981.

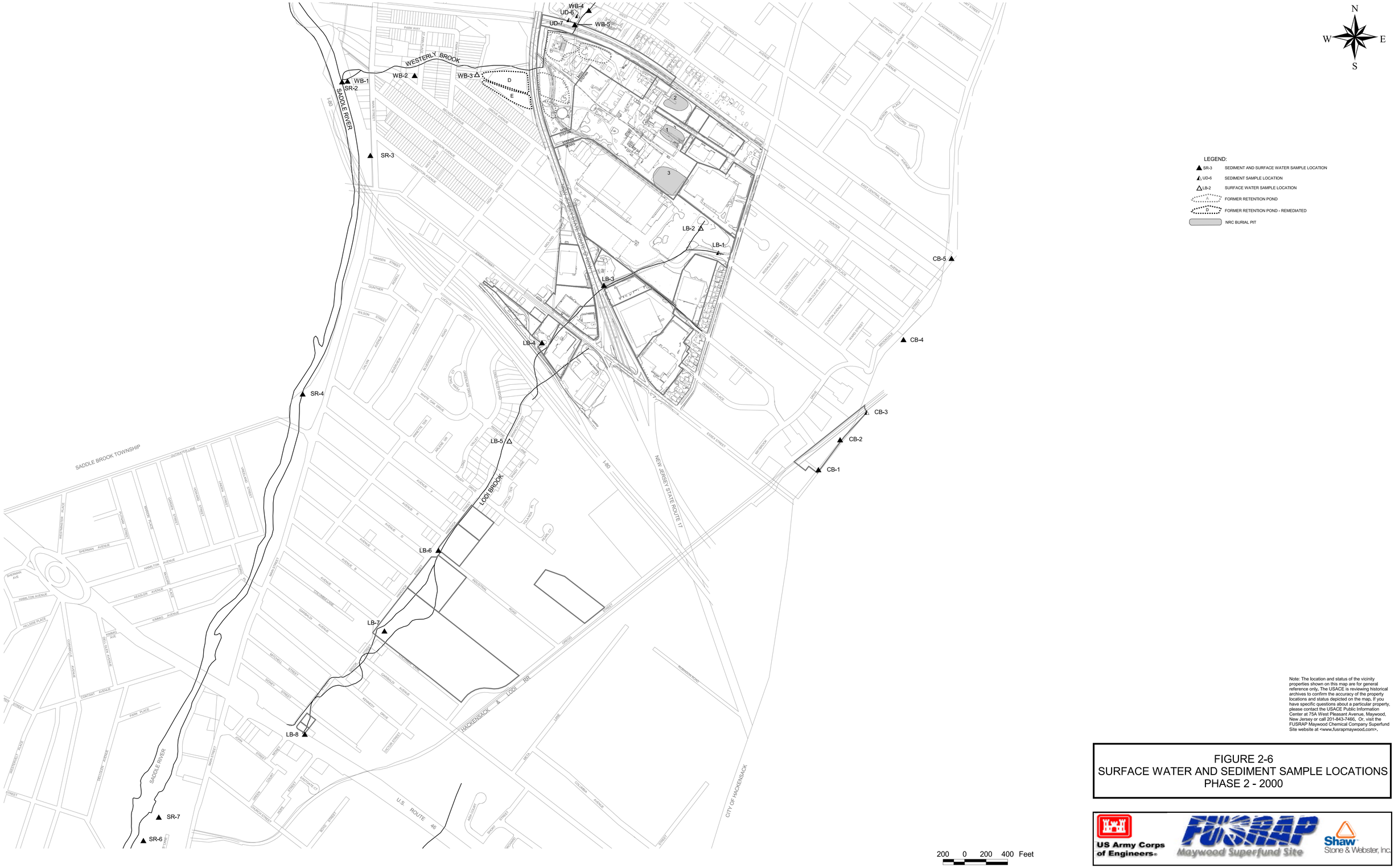
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7468. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Horizontal Scale in feet.

0 1000 2000

Figure 2- 5:
Video Inspection Survey

US Army Corps of Engineers® FUSRAP Maywood Superfund Site Shaw Stone & Webster, Inc.



Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 2-6
SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS
PHASE 2 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

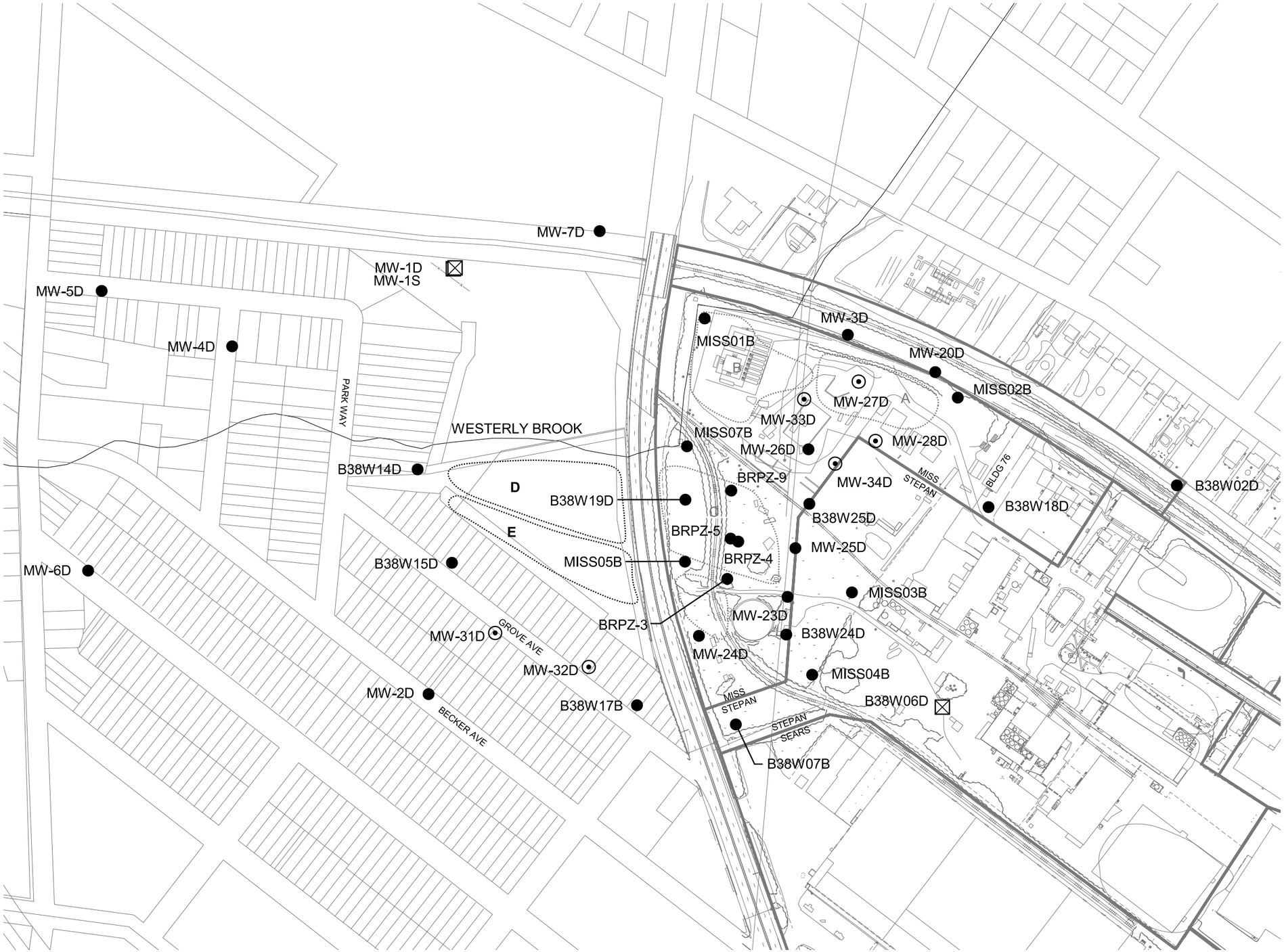


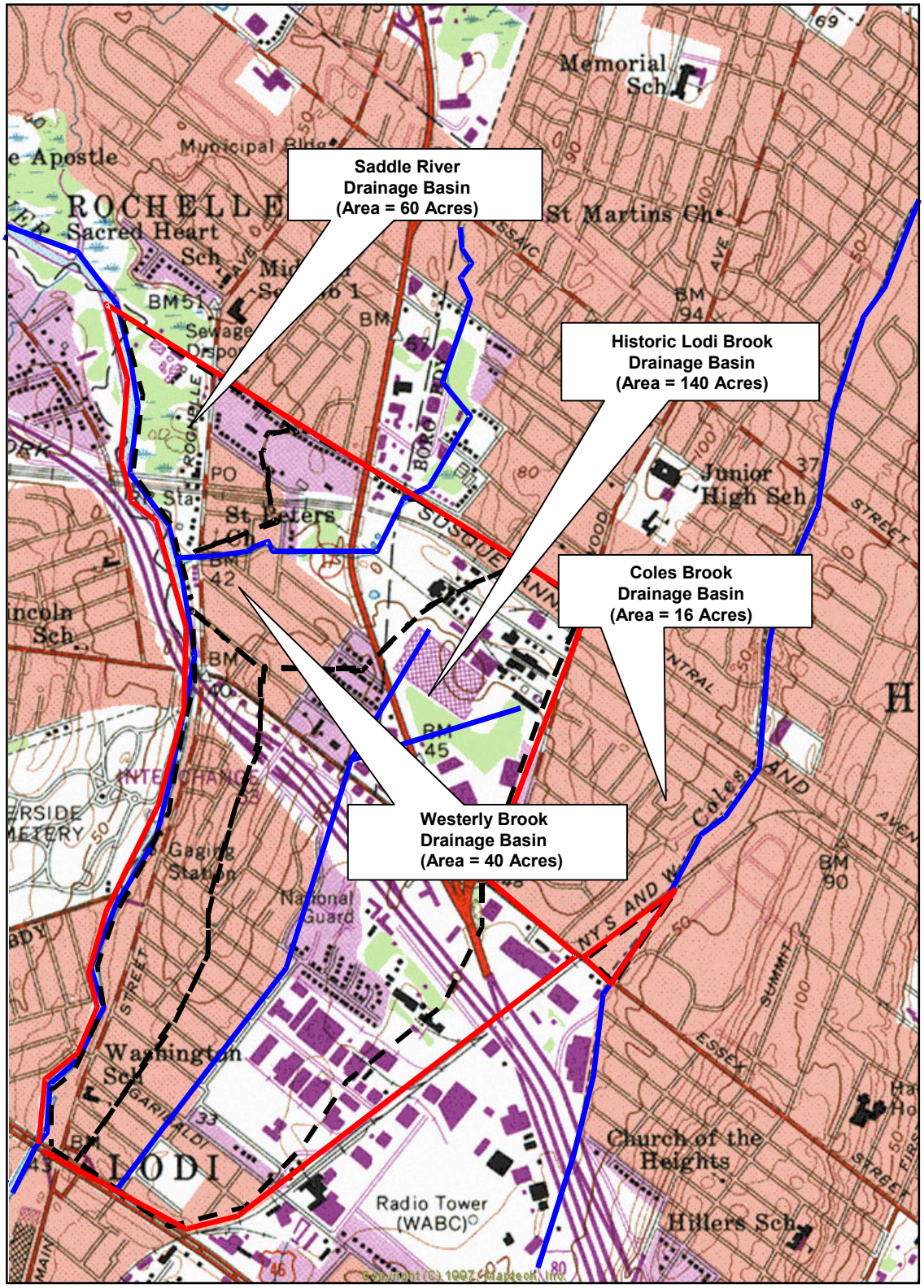
FIGURE 2-7
EXISTING AND NEWLY INSTALLED
BEDROCK WELLS SAMPLED AND ABANDONED WELLS
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers.

FUSRAP Maywood Superfund Site

Shaw

\\Bosfs01\Maywood\Maywood\Task0510\drawings\JULY 2004\Chem.apr LAYOUT: RI-Addendum-Bedrock-17X11 September 2, 2004



Legend:

- FMSS Boundary
- River / Brook
- Drainage Divide

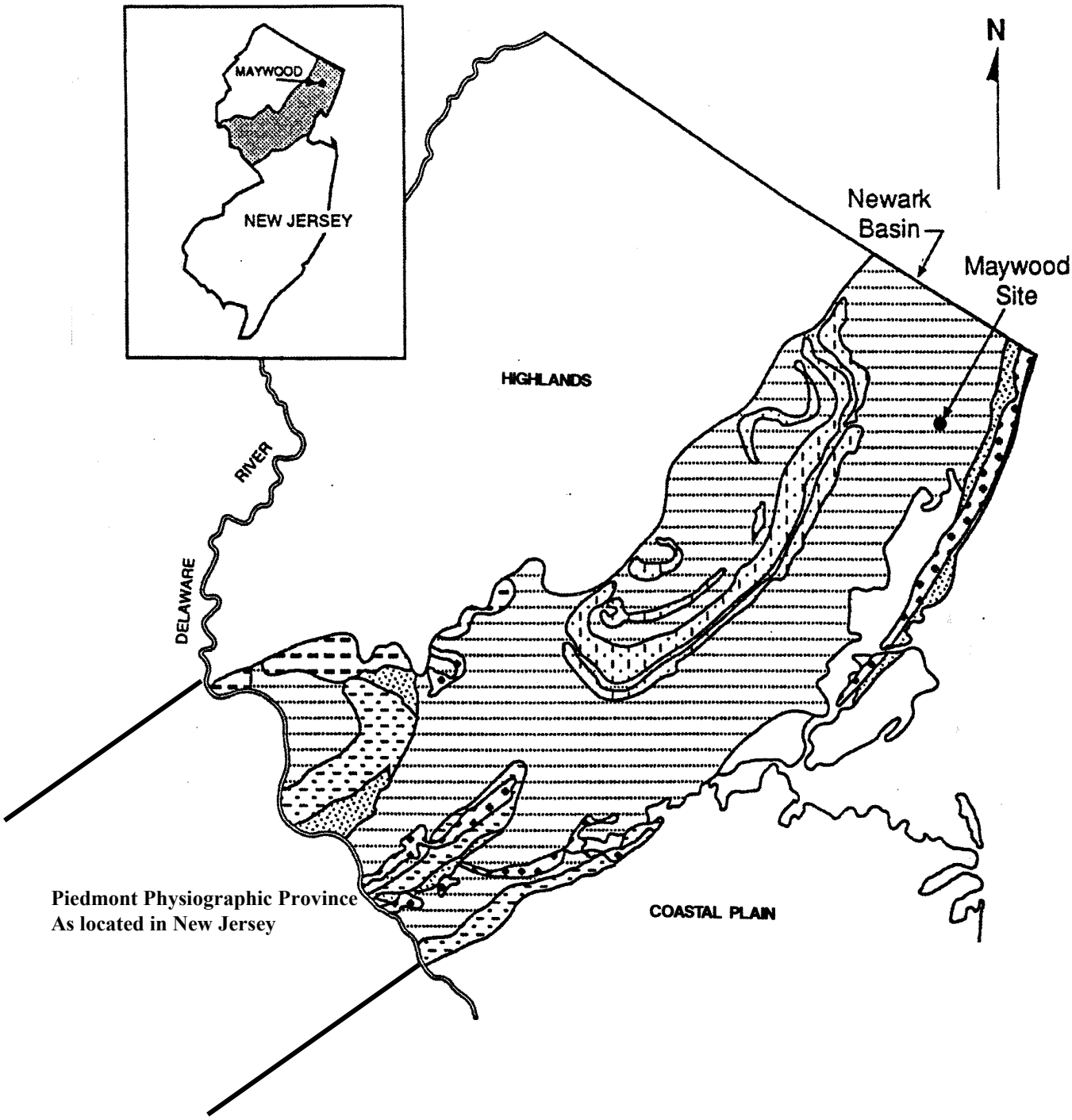
Reference:
USGS Quadrangle Map, Hackensack, NJ.
Photo Revised - 1981.

Horizontal Scale in feet.
0 500 1000

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-1:
General Watershed Delineation Map of FMSS

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Piedmont Physiographic Province
As located in New Jersey

Legend:

- Red Sandstone
- Red Sandstone Conglomerate
- Red and Gray Argillite
- Gray Sandstone
- Basalt
- Diabase

Horizontal Scale in miles.

0 5 10

Reference:
Tedrow, 1986

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-2:
Regional Geology

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

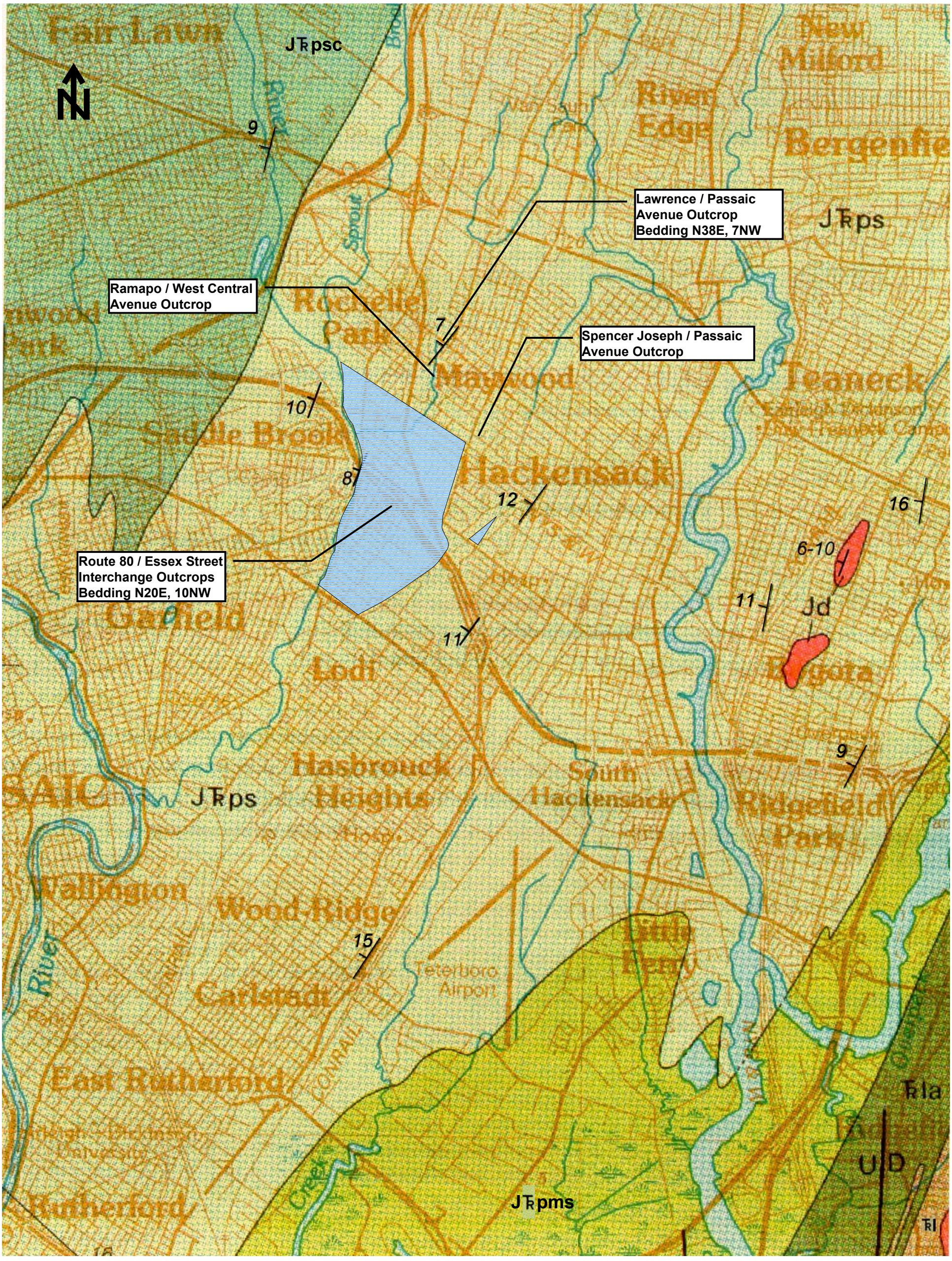
AGE	Stratigraphic Divisions		Symbol	Thickness (feet)
LOWER JURASSIC	Brunswick Group	Boonton Formation	Jb	1,500
		Hook Mountain Basalt	Jh	330
		Towaco Formation	Jt	1,020
		Preakness Basalt	Jp	750
		Feltville Formation	Jf	510
		Orange Mountain Basalt	Jo	450
		Passaic Formation	JTp Tp	10,000
UPPER TRIASSIC		Lockatong Formation	Tl	3,300
		Stockton Formation	Ts	5,400

Reference:
Olsen, 1980 and other sources.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-3:
Newark Basin Stratigraphy
(New Jersey Portion)

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Legend:

15 — Strike and dip of Geologic Structure

U / D — Normal fault – U, upthrown side; D, downthrown side

Federal Maywood Superfund Site

JTrpms — Passaic Formation, sand mudstone

JTrps — Passaic Formation, sandstone

JTrpsc — Passaic Formation, conglomeratic sandstone

Jd — Diabase

TrI — Lockatong Formation, silty limestone

TrIa — Lockatong Formation, arkosic sandstone

Horizontal Scale in Miles.

0 — 1

References:

Bedrock Geological Map of Northern New Jersey. Drake, et al., 1996. US Geological Survey Geological Quadrangle Map I-2540-A.

Draft Bedrock Geologic Overlay Map of Hackensack Quadrangle. Houton, et al., 1994.

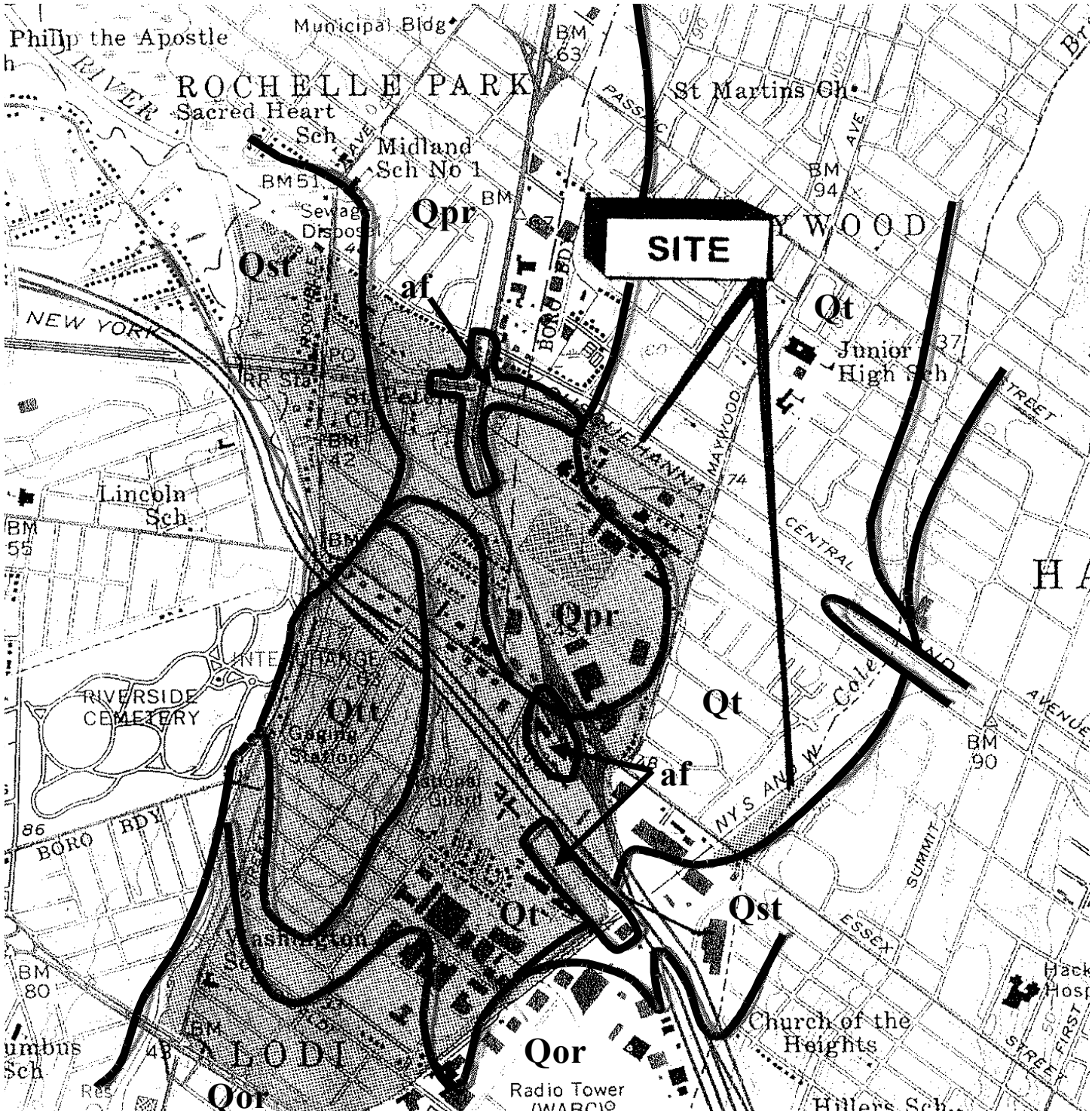
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3.4:
Bedrock Outcrop Locations near FMSS

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:
Qt - Glacial Till
af - Fill
Qpr - Glacial Lake Paramus Deposits
Qst - Stream Terrace Deposits
Qor - Oradell Terrace Deposits

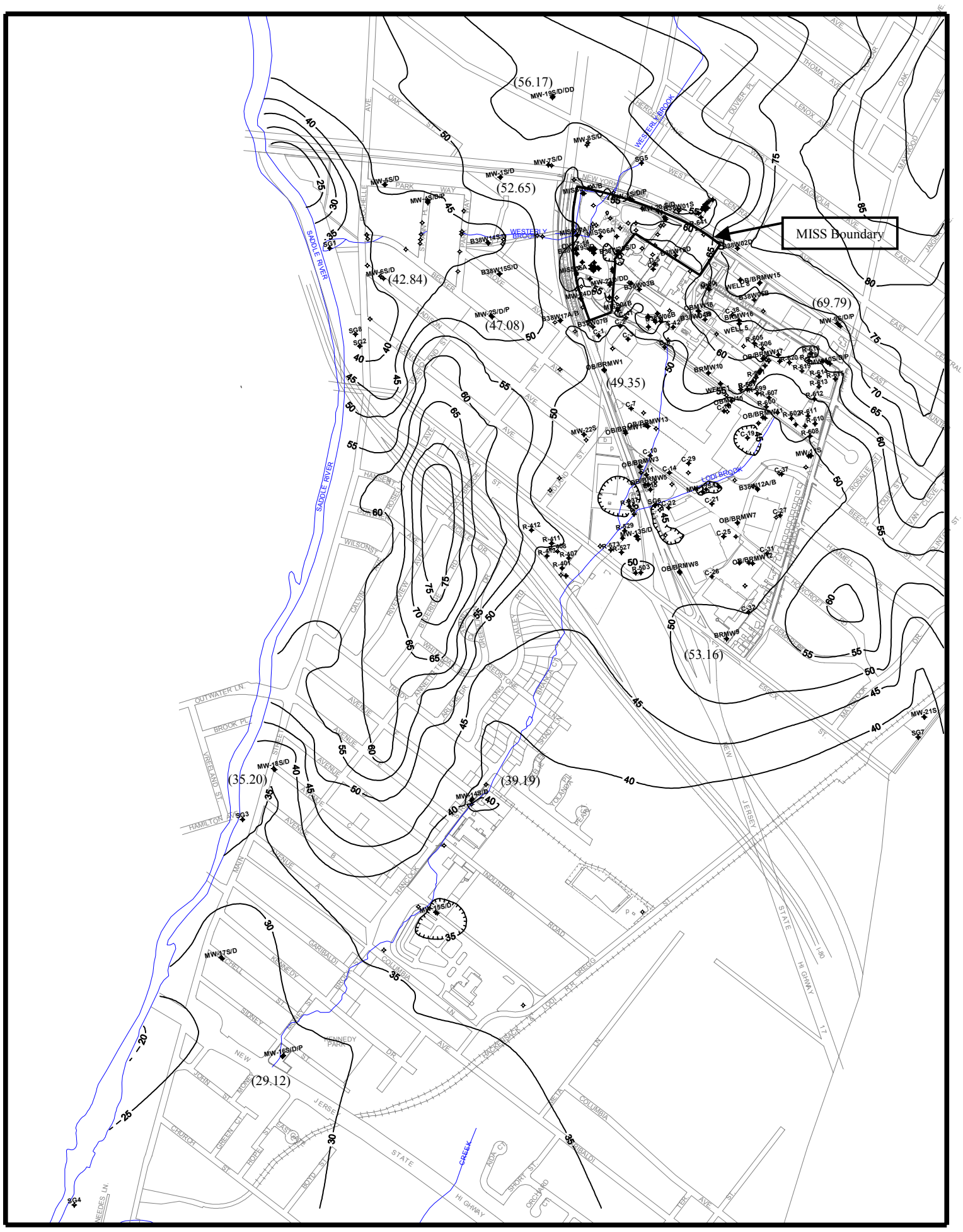
Reference:
Surficial Geology of the Hackensack Quadrangle, Bergen and Passaic Counties, New Jersey. S.D. Stanford, 1994.

Horizontal Scale in feet.
0 500 1000

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-5:
Surficial Geology Map

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Legend:

MW-15 S/D — Monitoring Well / Staff Gauge Location.

Geoprobe Location

35 — Topographic surface elevation contour in feet above Mean Sea Level (MSL). Contour interval = 5 feet.

Horizontal Scale in feet.

0 500 1000 1500

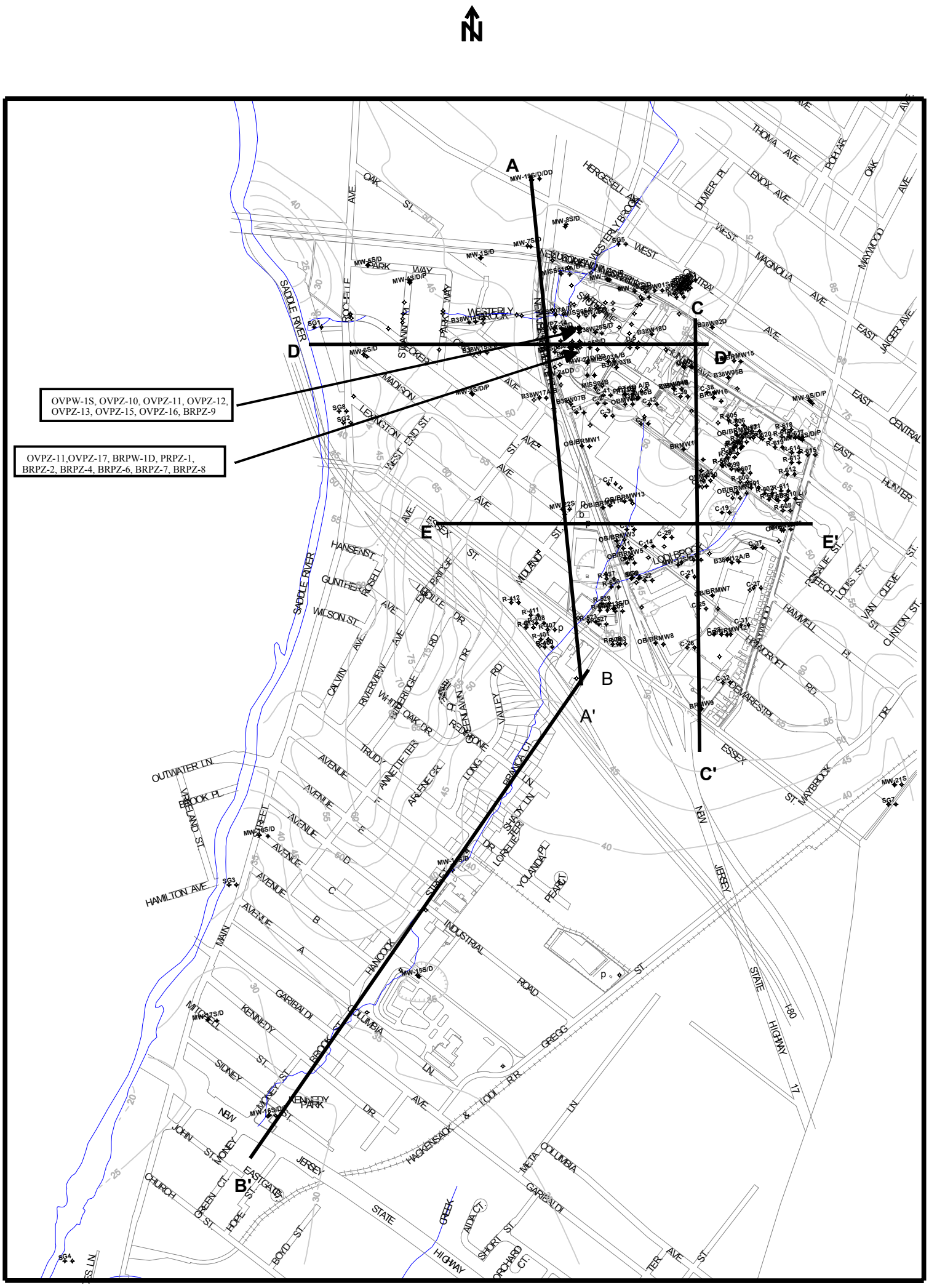
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-6
Topographic Surface Map

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.


N
A
A'
B
B'
C
C'
D
D'
E
E'
OVPW-1S, OVPZ-10, OVPZ-11, OVPZ-12, OVPZ-13, OVPZ-15, OVPZ-16, BRPZ-9
OVPZ-11,OVPZ-17, BRPW-1D, PRPZ-1, BRPZ-2, BRPZ-4, BRPZ-6, BRPZ-7, BRPZ-8
SADDLE RIVER
WESTERLY BROOK
OAK ST.
HERGESELL AV.
DOMER PL.
LENOX AVE.
THOMA AVE.
POPLAR AVE.
MAYWOOD AVE.
MAGNOLIA AVE
WEST
CENTRAL AVE
EAST JAEGER AVE
EAST CENTRAL AVE
EAST HUNTER AVE
ESSEX ST.
LODI BROOK
LOUIS ST.
VAN CLEVE ST.
CLINTON ST.
HAMMELL PL.
DEMAREST PL.
MAYBROOK ST.
ESSEX
JERSEY
MADISON
LEXINGTON
WEST END ST.
HANSEN ST.
GUNTHER AVE
WILSON ST.
CALVIN AVE
RIVERVIEW AVE
WATERSTONE RD.
VALLEY DR.
LONG BRANCH LN.
SHADY LN.
LORELEI DR.
YOLANDA PL.
PEARL ST.
OUTWATER LN.
BROOK PL.
VREELAND ST.
HAMILTON AVE.
MAIN ST.
HANCOCK ST.
INDUSTRIAL ROAD
COLUMBIA ST.
GREGG LN.
GARIBALDI AVE.
KENNEDY PARK
NEW ST.
JOHN ST.
MONEY ST.
EASTGATE DR.
HACKENSACK & LODI R.R.
META COLUMBIA LN.
CHURCH ST.
GREEN CT.
HOPE ST.
BOYD ST.
STATE HIGHWAY 17
GREEK AVE.
AIDA CT.
SHORT ST.
ORCHARD CT.
I-80
MW-19D/DD
MW-8S/D
MW-7S/D
MW-15/D
MW-6S/D
MW-4S/D/P
MW-5S/D
MW-1S/D
MW-2S/D/P
MW-3S/D/P
MW-21S
MW-22S
SG1
SG2
SG3
SG4
SG5
SG6
SG7
SG8
B38W14A/B
B38W15
B38W16
B38W17A/B
B38W18D
B38W19S/D
B38W20S/D
B38W21S/D
B38W02D
B38W03A/B
B38W03B
B38W05B
B38W07B
MW-24DD
MW-23I/D
MW-24S/D
MW-25S/D
MW-26S/D
MW-27S/D
MW-28S/D
MW-29S/D
MW-30S/D
MW-31S/D
MW-32S/D
MW-33S/D
MW-34S/D
MW-35S/D
MW-36S/D
MW-37S/D
MW-38S/D
MW-39S/D
MW-40S/D
MW-41S/D
MW-42S/D
MW-43S/D
MW-44S/D
MW-45S/D
MW-46S/D
MW-47S/D
MW-48S/D
MW-49S/D
MW-50S/D
MW-51S/D
MW-52S/D
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MW-55S/D
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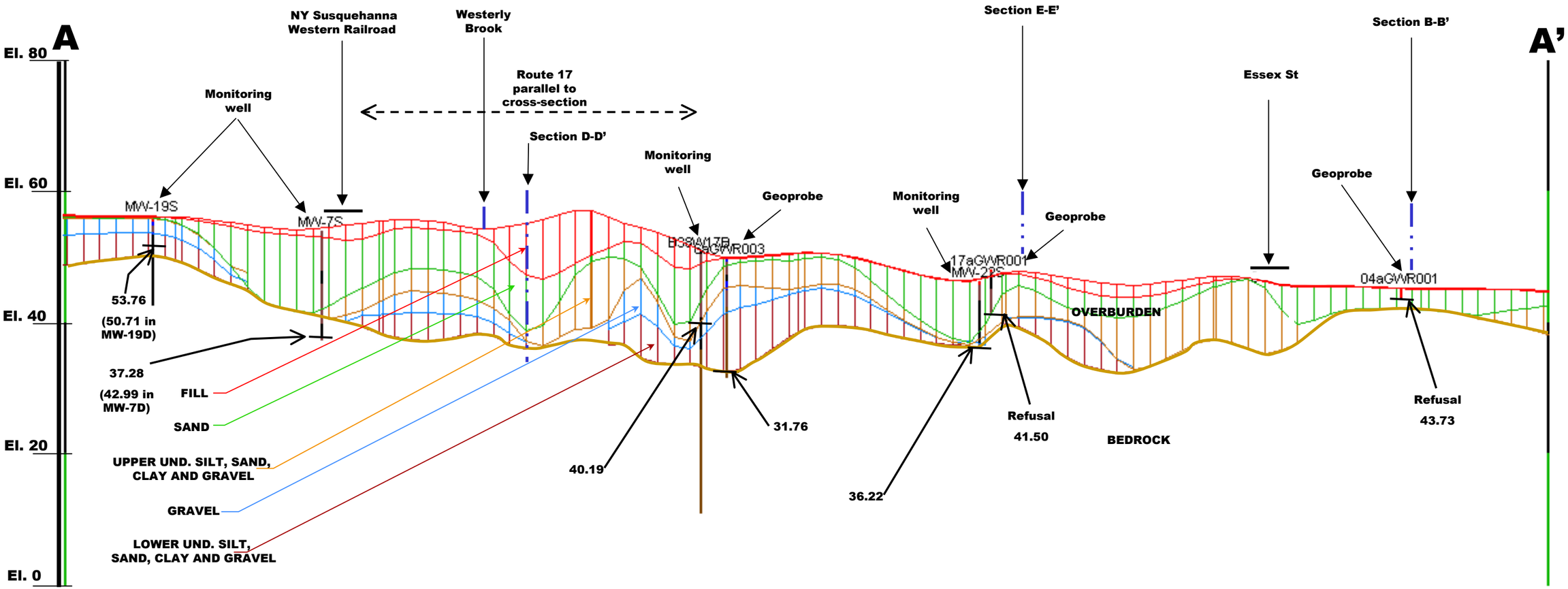
MW-63S/D



Legend:

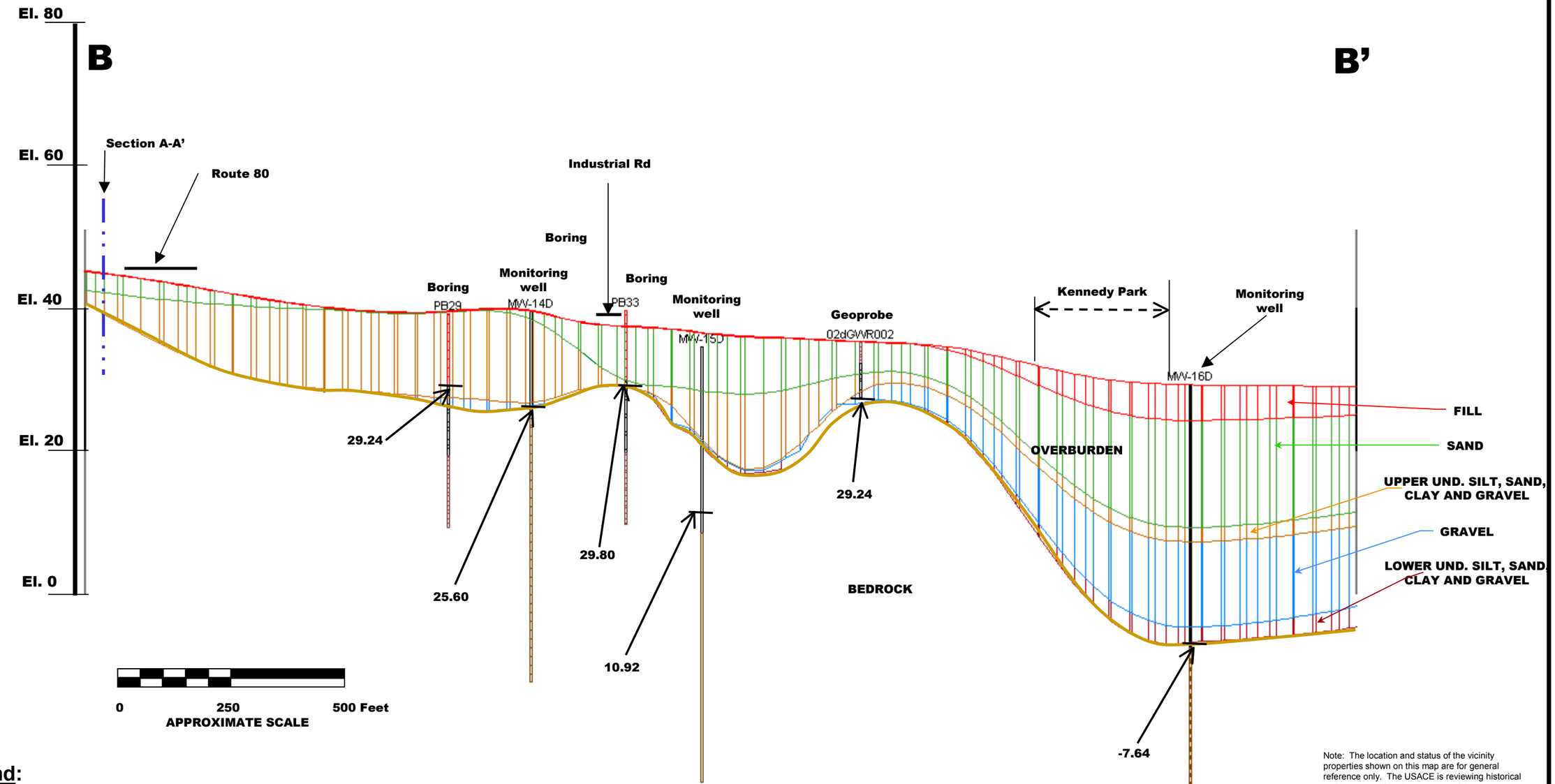
50.17 — Top of Bedrock Elevation at nearest boring to Cross Section

Note: This cross section is a straight line through surfaces interpolated from the nearest borings.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-8a: Cross Section A-A'

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Legend:

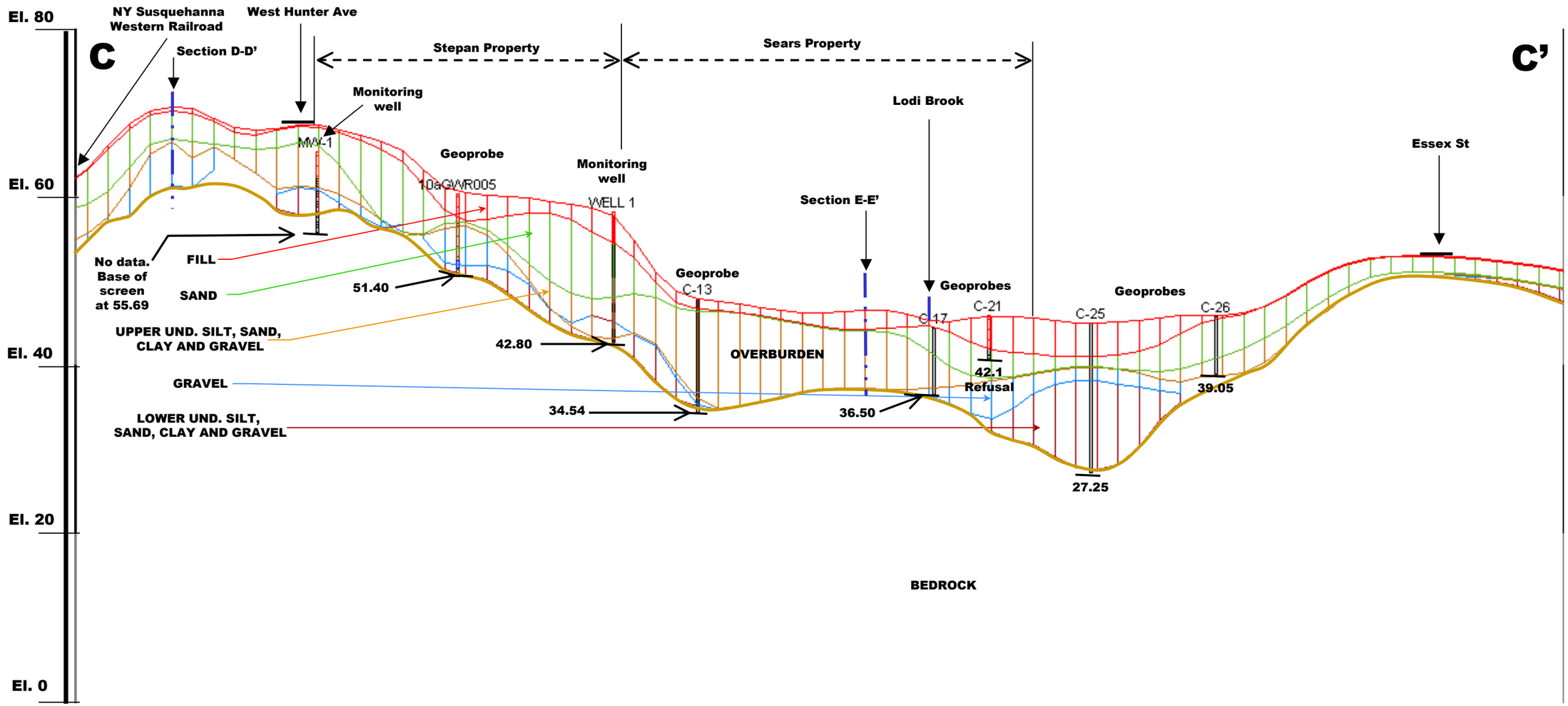
50.17 — Top of Bedrock Elevation at nearest boring to Cross Section

Note: This cross section is a straight line through surfaces interpolated from the nearest borings.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-8b: Cross Section B-B'

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



0 250 500 Feet

APPROXIMATE SCALE

Legend:

50.17 — Top of Bedrock Elevation at nearest boring to Cross Section

Note: This cross section is a straight line through surfaces interpolated from the nearest borings.

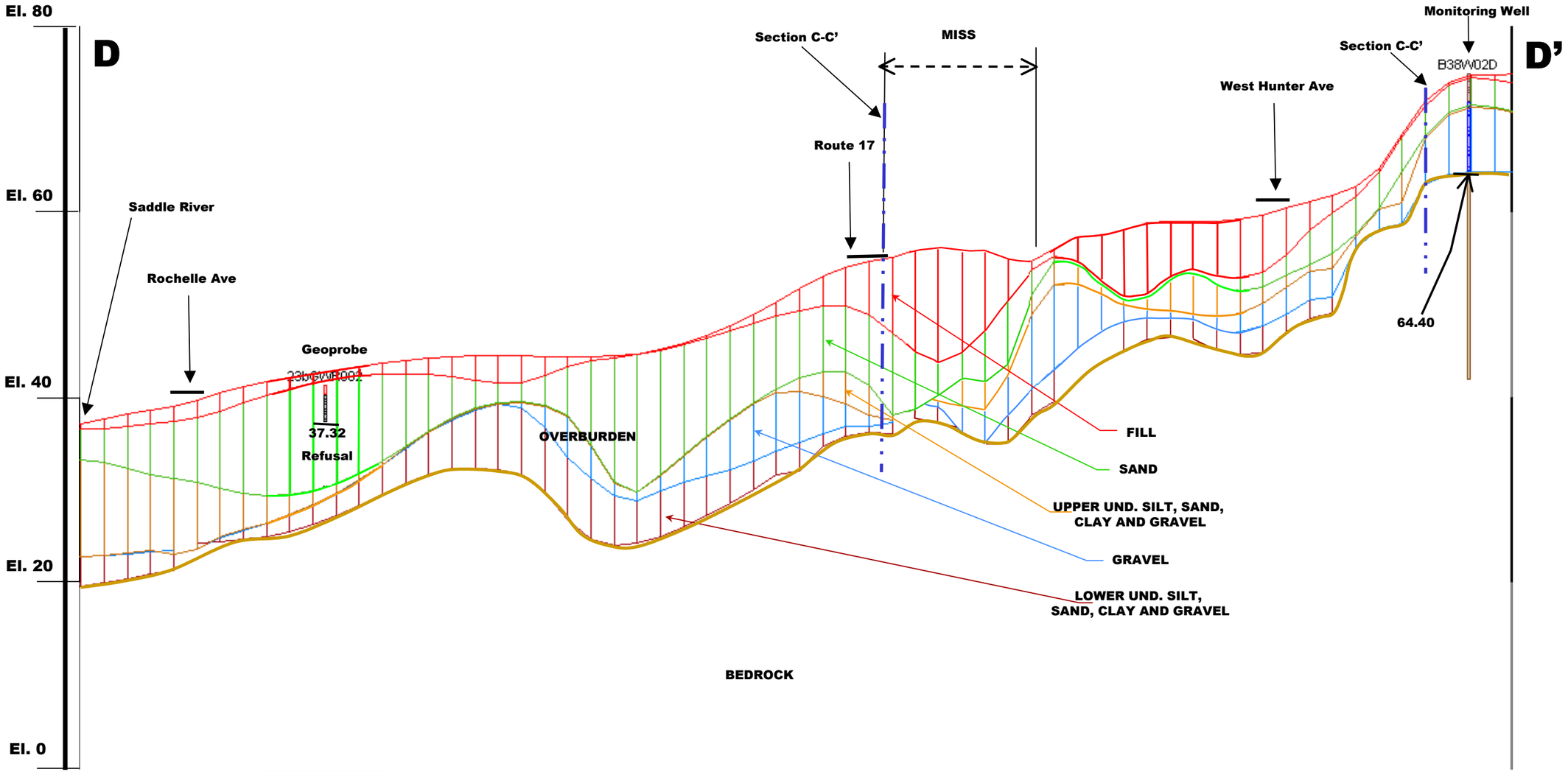
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-8c: Cross Section C-C'

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

50.17 — Top of Bedrock Elevation at nearest boring to Cross Section

Note: This cross section is a straight line through surfaces interpolated from the nearest borings.

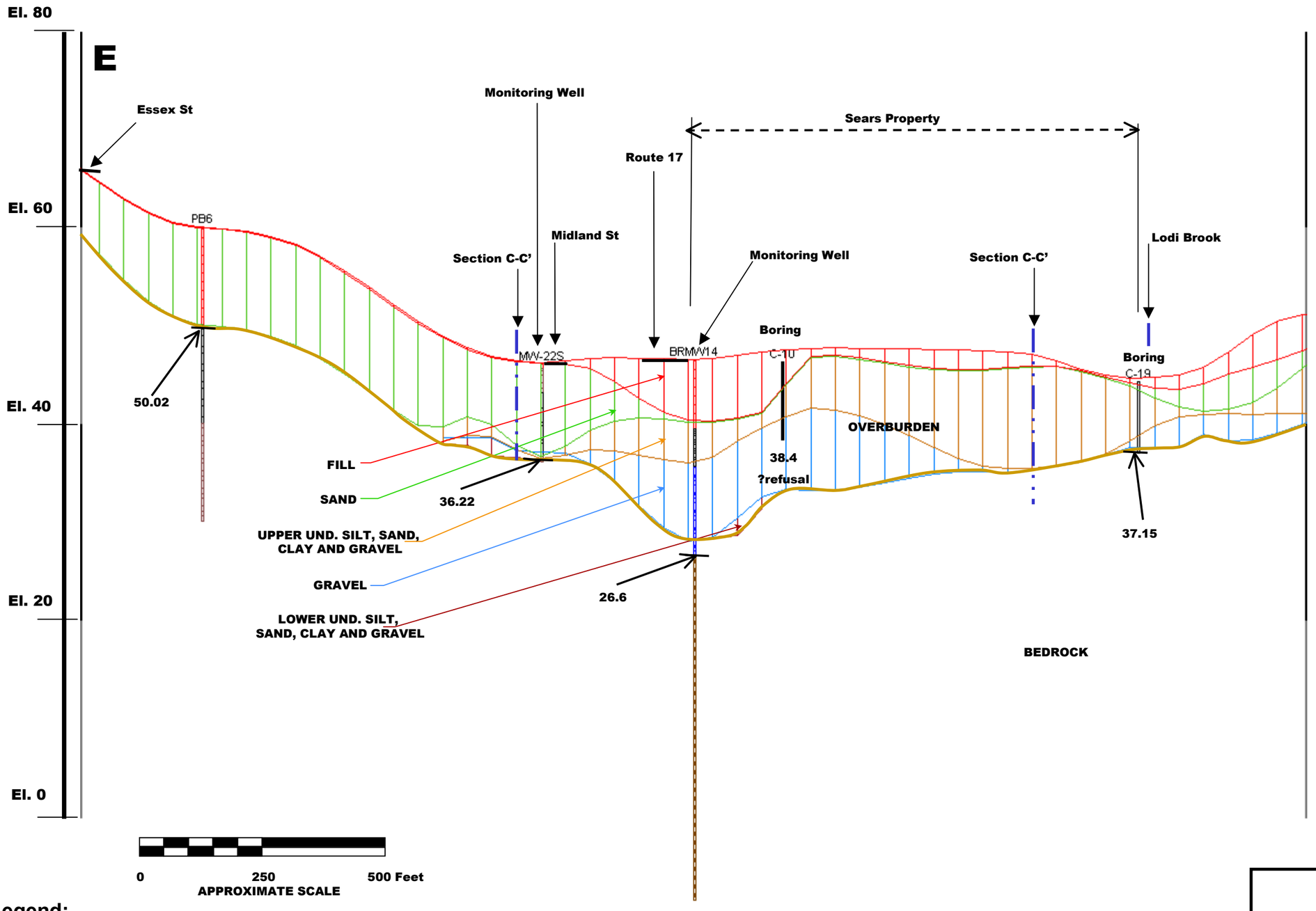
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-8d: Cross Section D-D'

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

50.17 — Top of Bedrock Elevation at nearest boring to Cross Section

Note: This cross section is a straight line through surfaces interpolated from the nearest borings.

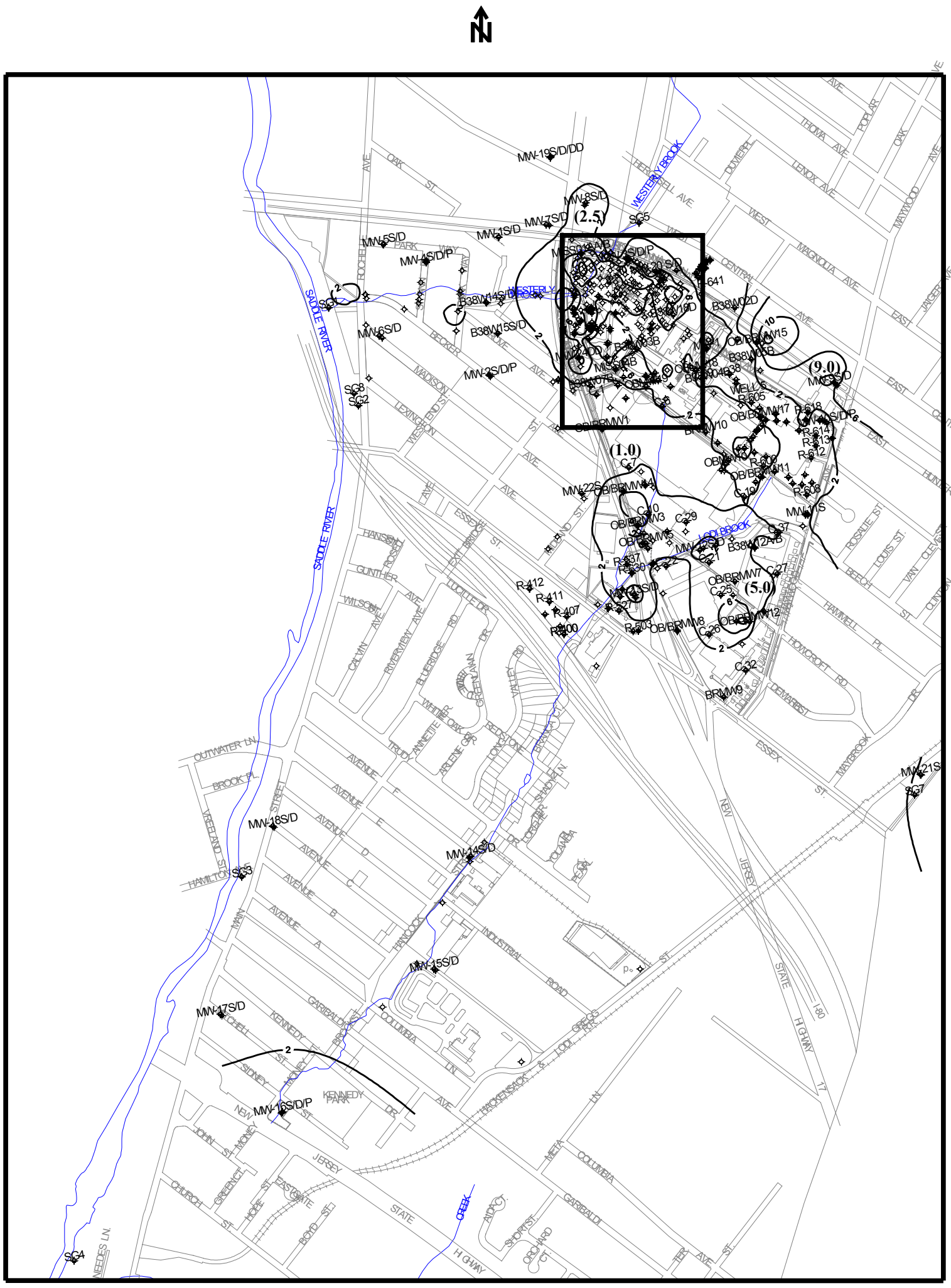
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-8e: Cross Section E-E'

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

MW-25 S/D — Monitoring Well / Pilot Boring / Staff Gauge Location.

Geoprobe Location

5 (5.0) — Thickness of fill material in feet. Contour interval = 4 feet.

Former Retention Basin / Lagoon

Detail Provided in Figure 3-9 b.

Horizontal Scale in feet.

0 500 1000 1500

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

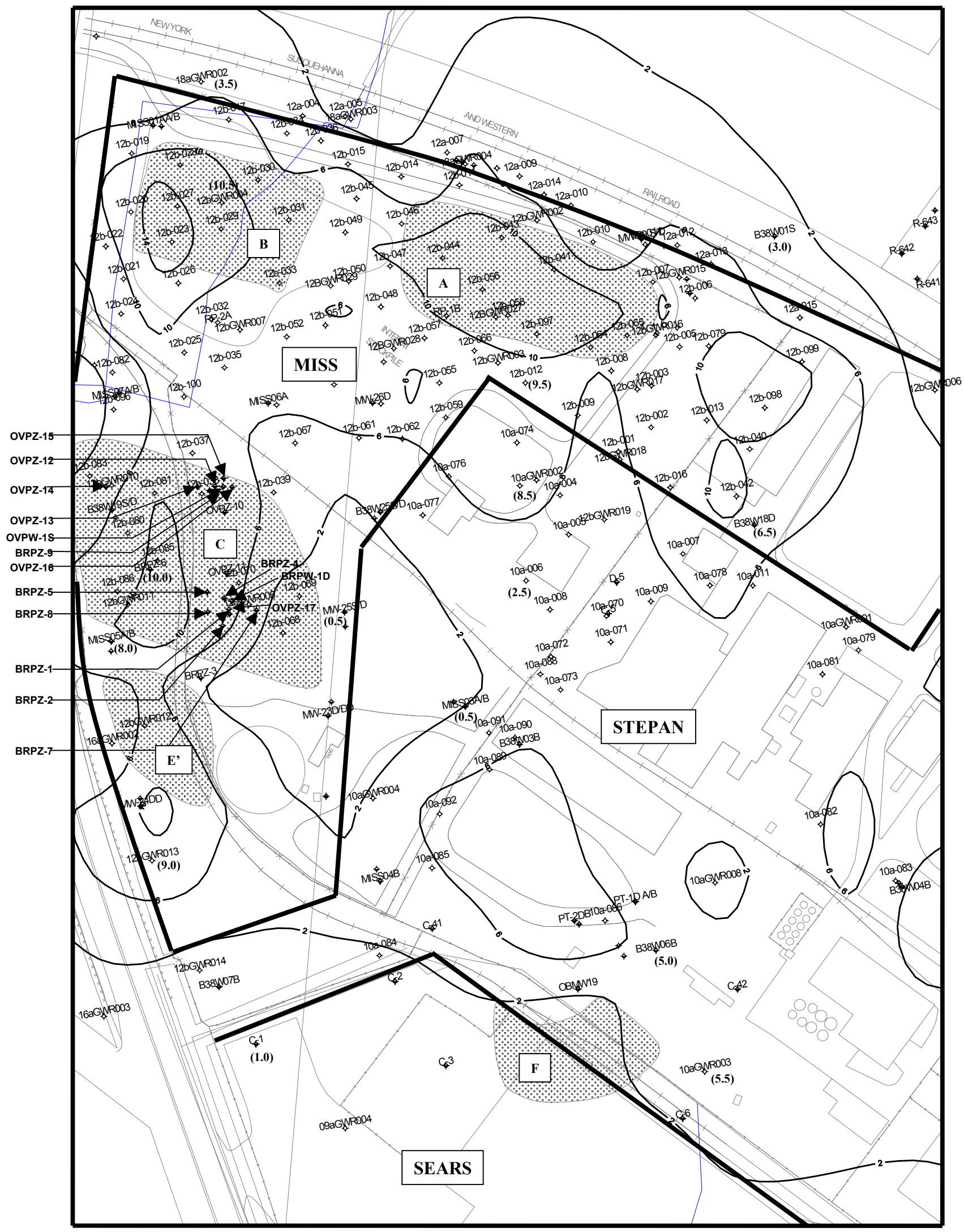
Figure 3-9 a
Distribution of Fill Materials within FMSS

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.

Note: Select Borings are shown.



Legend:

MW-25 S/D — Monitoring Well / Pilot Boring / Staff Gauge Location.

12bGWR013 — Geoprobe Location

5 (5.5) — Thickness of fill material in feet. Contour interval = 4 feet.

A — Former Retention Basin / Lagoon

Horizontal Scale in feet.

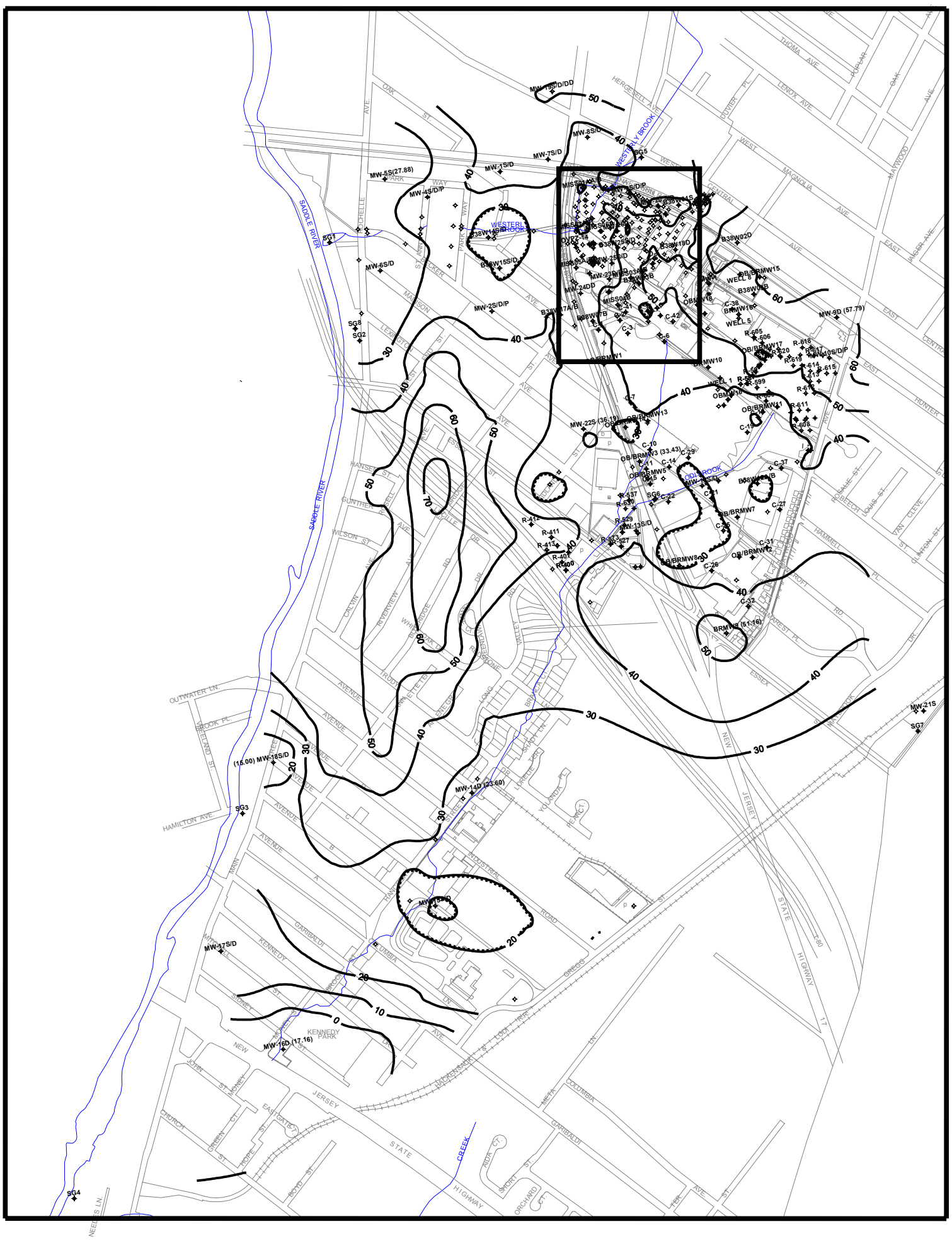
0 50 100 150 200

Note: Select Borings are shown.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-9 b
Distribution of Fill Materials within MISS

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



Legend:

MW-15 S/D — Monitoring Well / Pilot Boring / Staff Gauge Location.

Geoprobe Location

35 — Bedrock surface contour in feet above Mean Sea Level (MSL). Contour interval = 10 feet.

(15.00) — Bedrock surface elevation in feet above MSL.

Detail Provided in Figure 3-10 b.

Horizontal Scale in feet

0 500 1000 1500

Note: Select borings and data are shown.

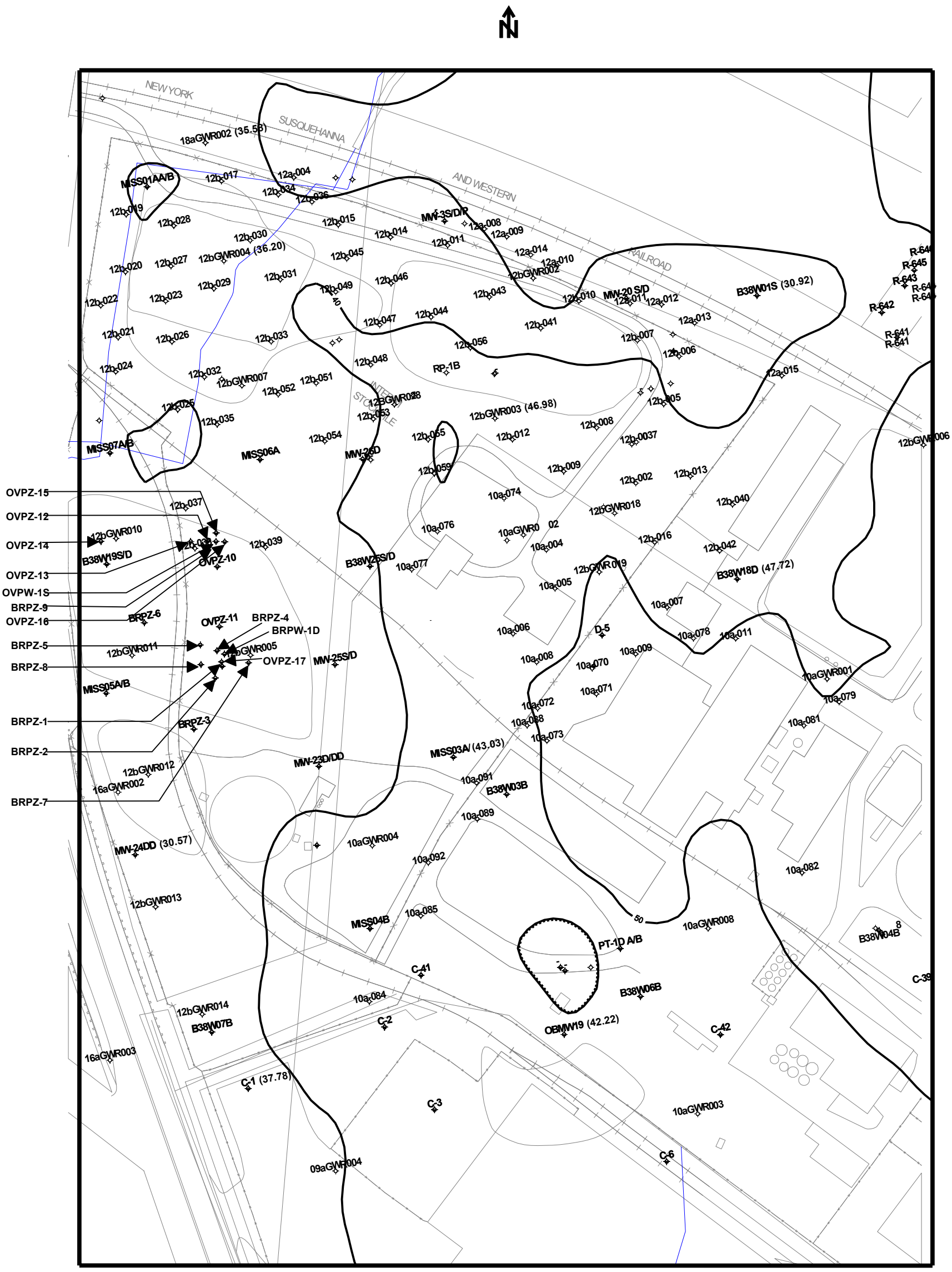
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-10 a
Bedrock Surface Map within FMSS

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.



Legend:

W25 S/D — Monitoring Well / Pilot Boring / Staff Gauge Location.

12bGWR013 — Geoprobe Location

35 — Bedrock Surface Contour in feet above Mean Sea Level (MSL). Contour interval = 10 feet.

(15.00) — Bedrock surface elevation in feet above MSL.

Horizontal Scale in feet

0 50 100 150 200

Note: Select borings and data are shown.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

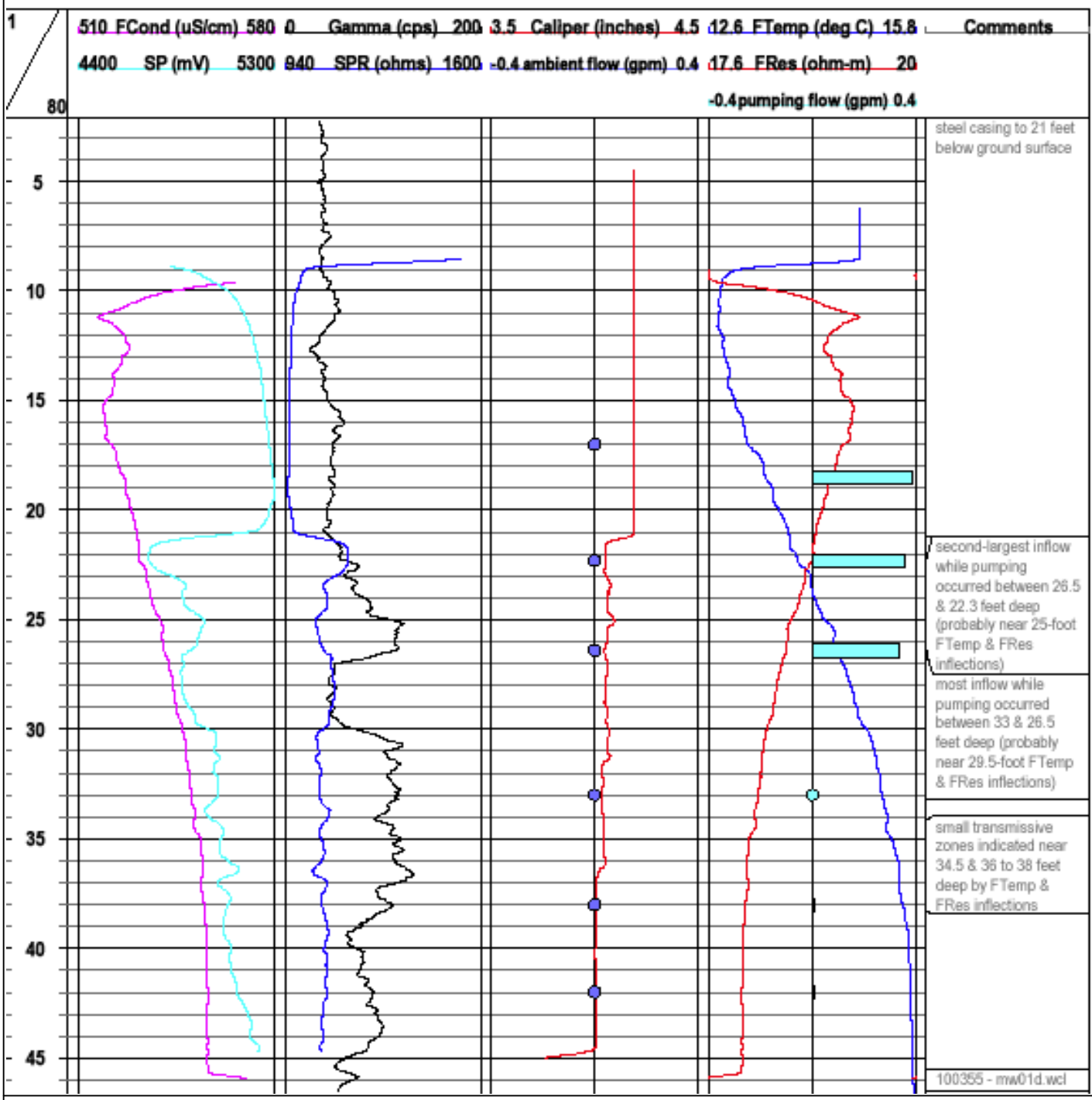
Figure 3-10 b
Bedrock Surface Map within MISS

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.

Project - Well: Stone & Webster/Maywood, NJ - MW-01D conventional logs

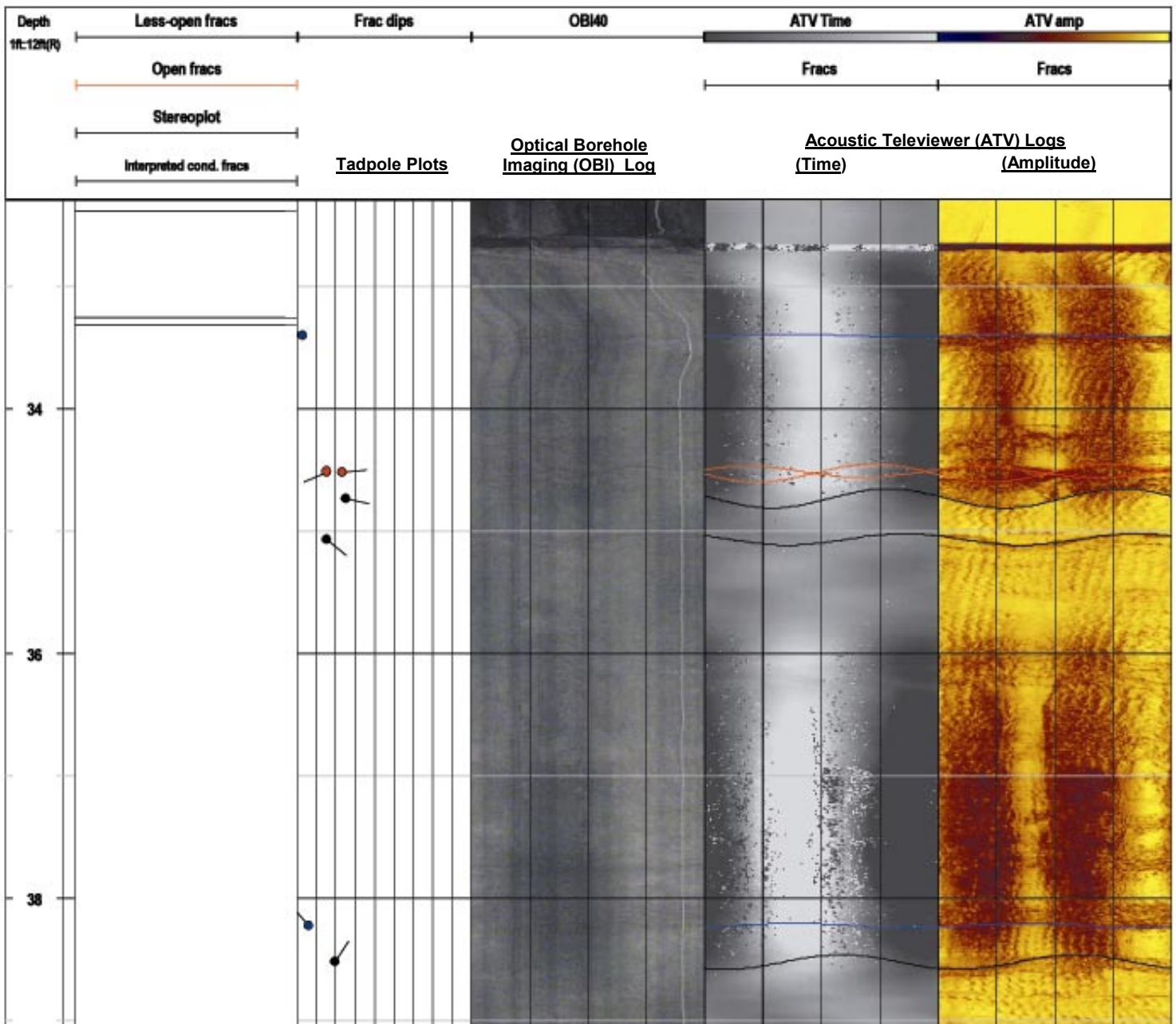


Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-11 a:
Example Conventional Geophysical Well Logs

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

Project - Well: Stone & Webster/Maywood, NJ - MW-05D image logs



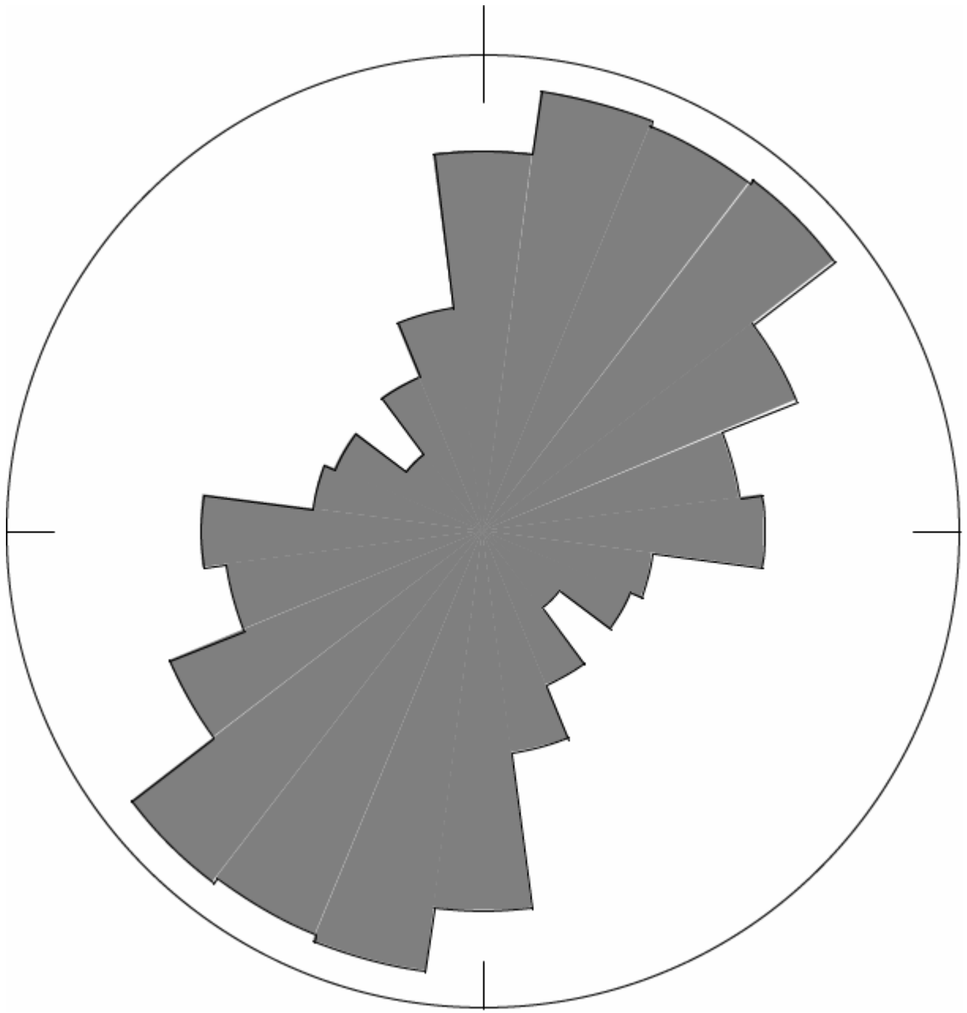
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-11 b
Example Optical Borehole Imaging and Acoustic Televiewer Geophysical Well Logs

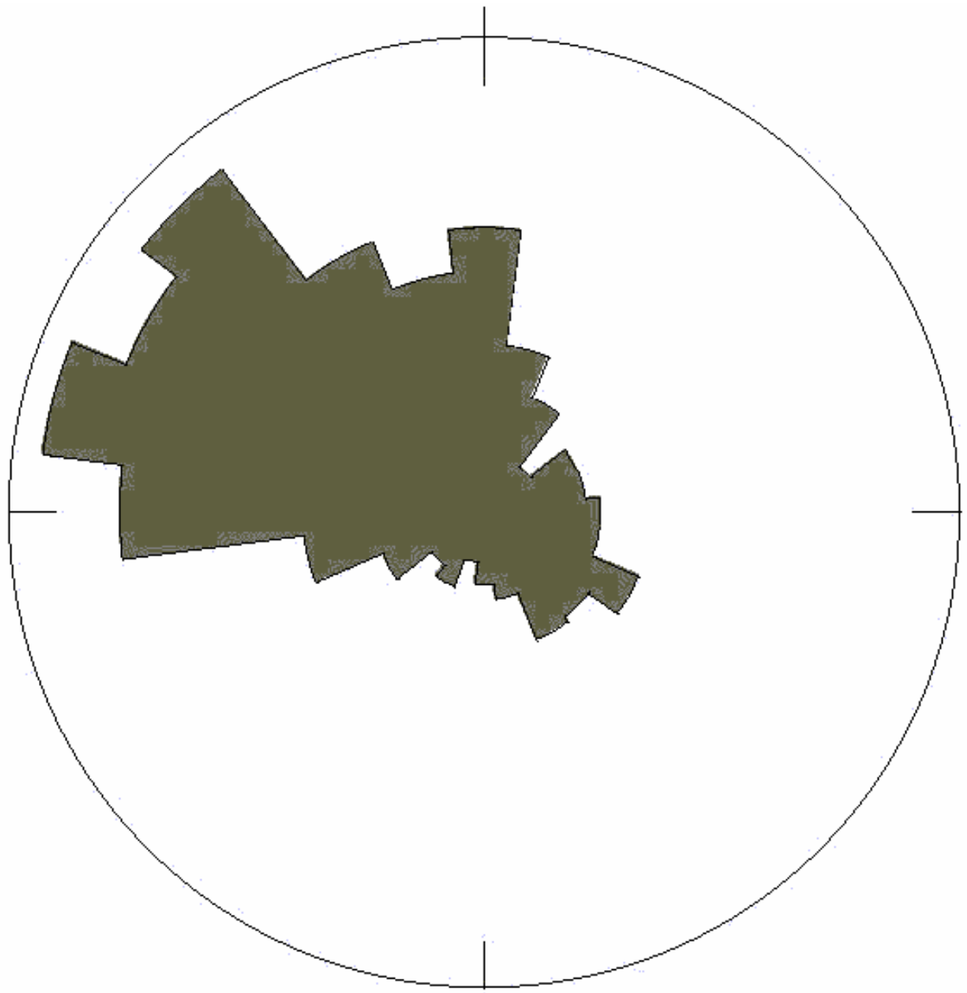
US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Summary Strike Orientation Rose Plot – Total Fractures



Summary Dip Direction Rose Plot – Total Fractures

Legend:

The Summary Fracture Strike and Dip Direction Rose Plot diagrams show the dominant strike orientation and down-dip fracture azimuth from borehole geophysical data.

Magnetic north is located to the top of each diagram.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Figure 3-12 a: Total Fracture Strike and Dip Rose Plots

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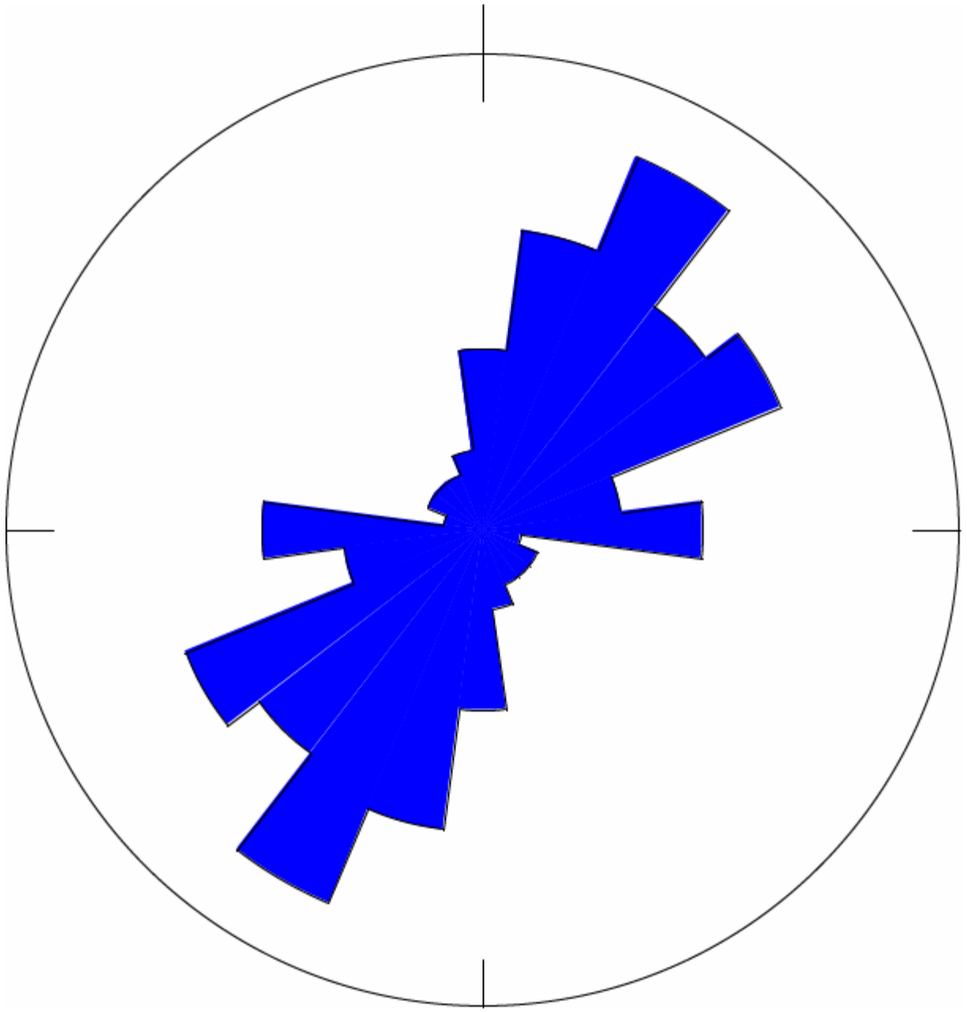
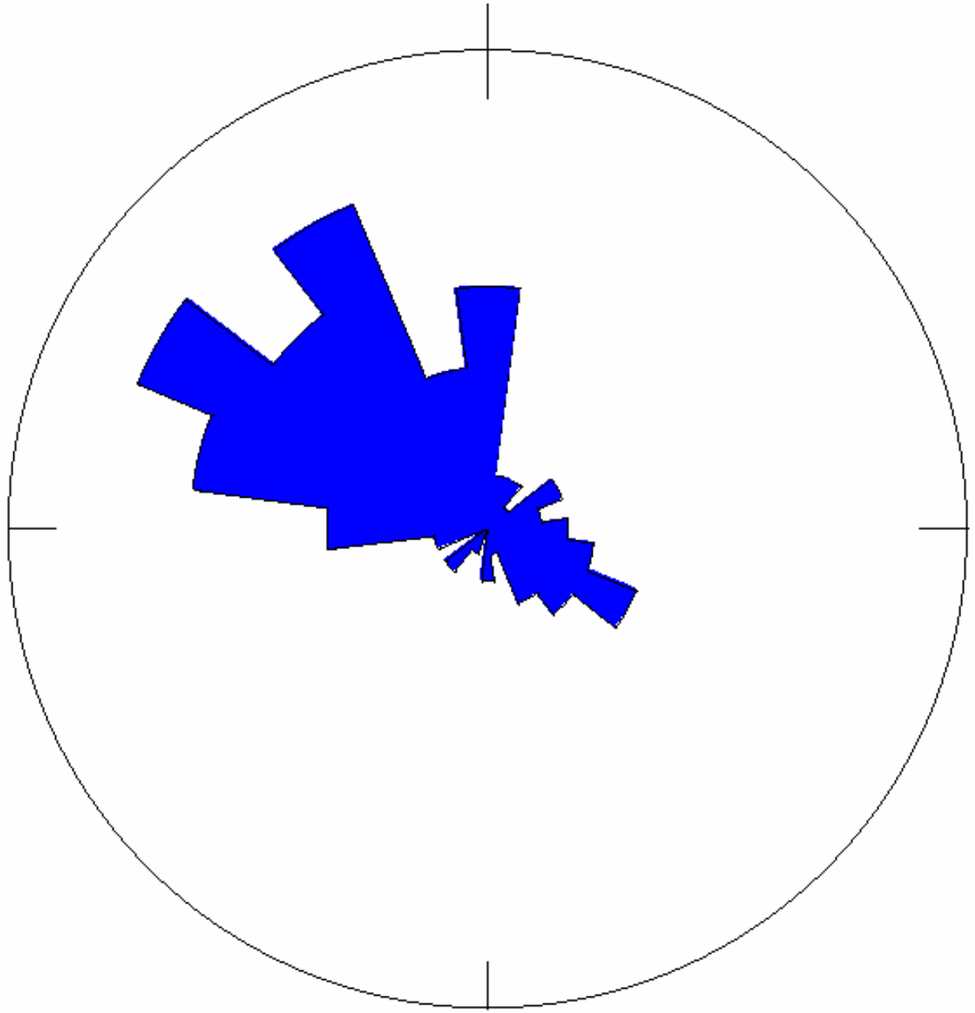
FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



**Summary Strike Orientation Rose Plot –
Total Conductive Fractures**



**Summary Dip Direction Rose Plot –
Total Conductive Fractures**

Legend:

The Summary Fracture Strike and Dip Direction Rose Plot diagrams show the dominant strike orientation and down-dip fracture azimuth from borehole geophysical data.

Magnetic north is located to the top of each diagram.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

**Figure 3-12 b:
Total Conductive Fracture
Strike and Dip Rose Plots**

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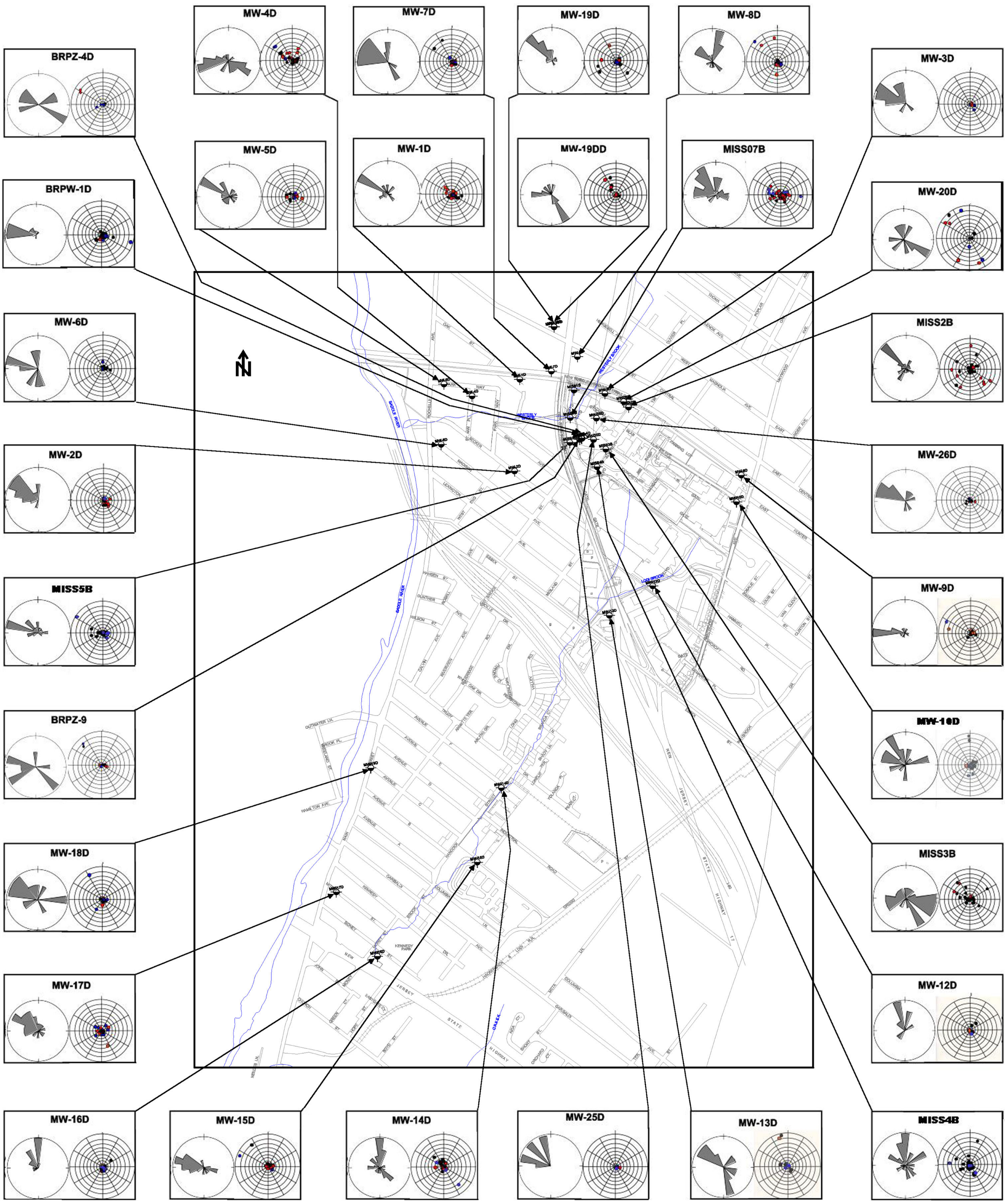
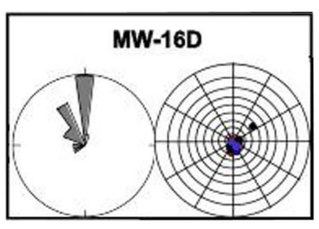
FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

Monitoring Well Location



Well-specific rose diagram summarizing the dominant down-dip fracture azimuths observed within borehole geophysical data. Black stereonet poles indicate less open fractures. Red stereonet poles indicate more open fractures. Blue stereonet poles indicate water filled fractures. Magnetic north is located at the top of each diagram.

Horizontal Scale in feet

0 500 1000 1500

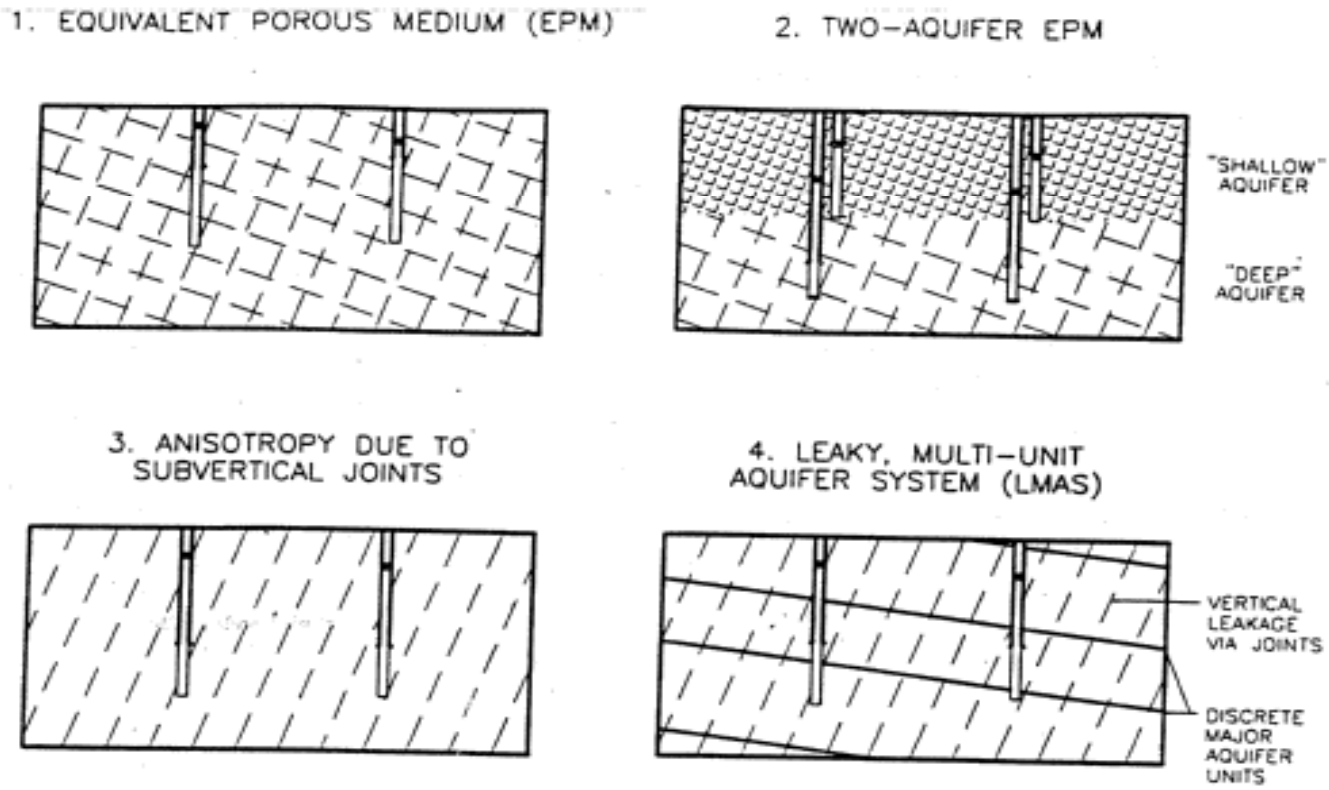
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-13: Bedrock Fracture Orientation within FMSS based on Borehole Geophysics

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Stone & Webster



Reference:
Michalski and Britton, 1997.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-14a
Newark Basin Conceptual Groundwater Flow Model

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FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

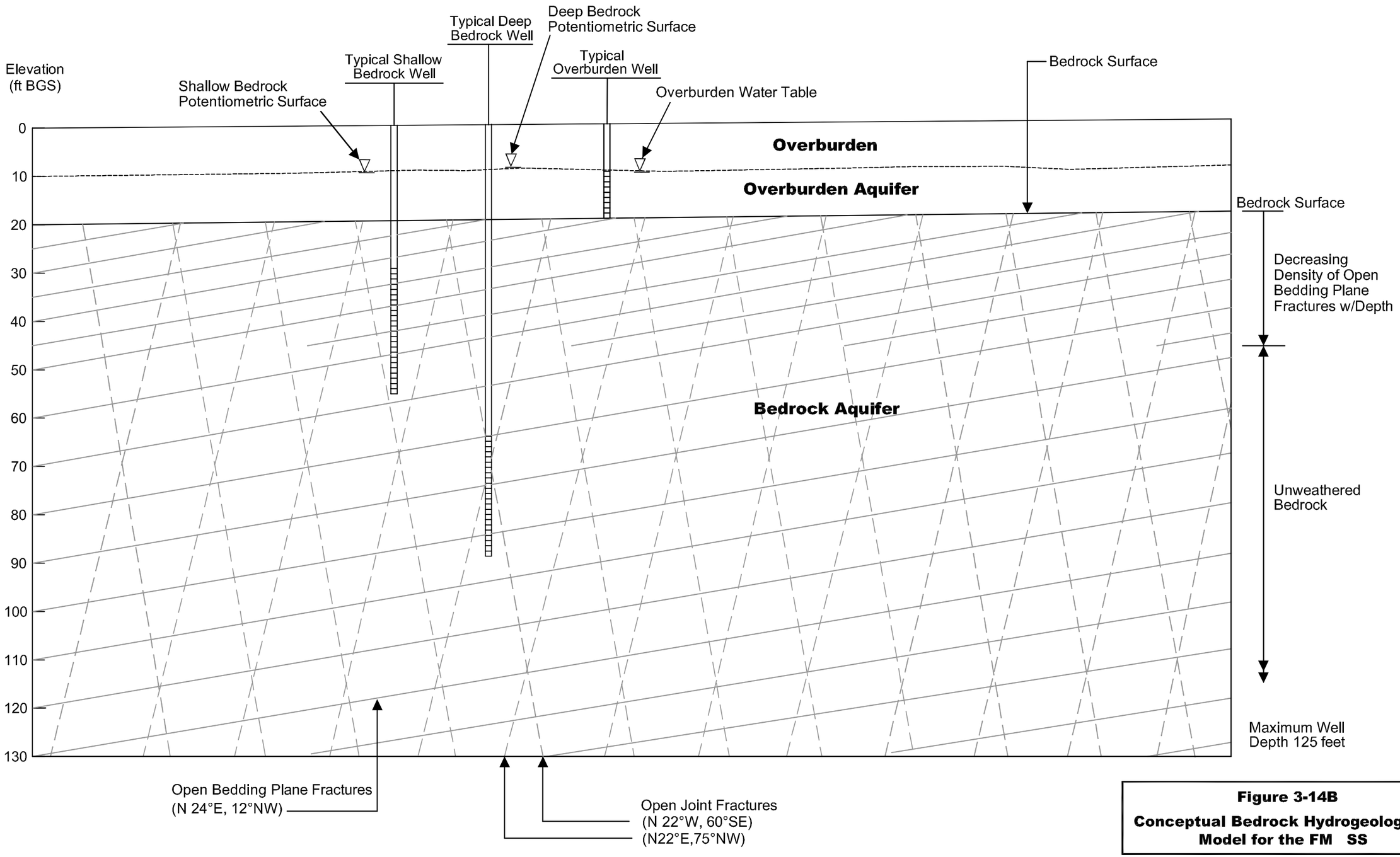


Figure 3-14B

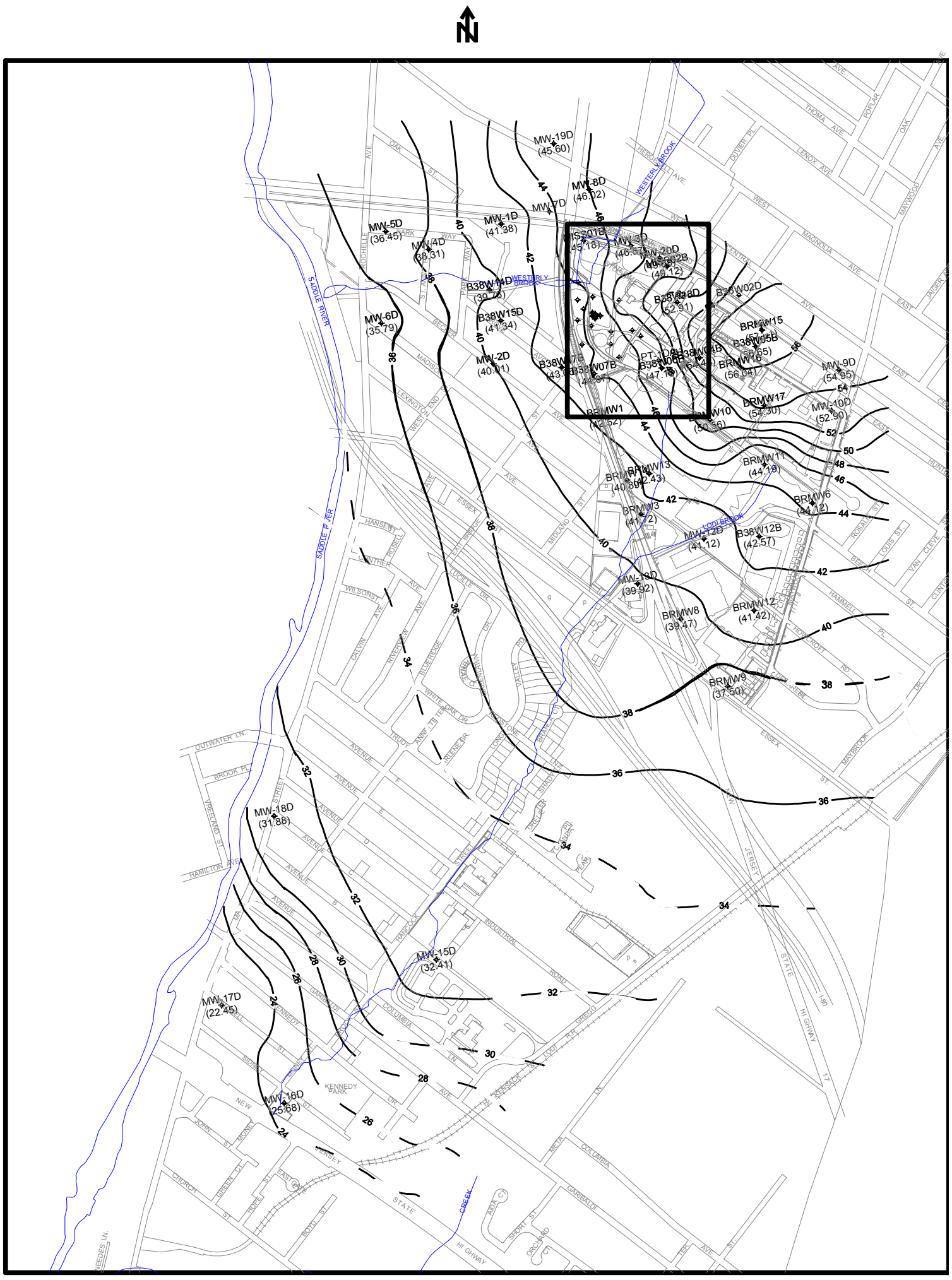
Conceptual Bedrock Hydrogeological Model for the FM SS

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

O:\Shaw Offices - CAD Files\Mt Arlington\108783\108783B4.dwg
Plot Date/Time: 09/08/04 01:23pm



Legend:

MW-15D (32.41) — Shallow Bedrock Monitoring Well (July, 2001 Head Measurement Displayed in Parentheses.)

32 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Detail Provided in Figure 3.15 b

Horizontal Scale in feet

0 500 1000 1500

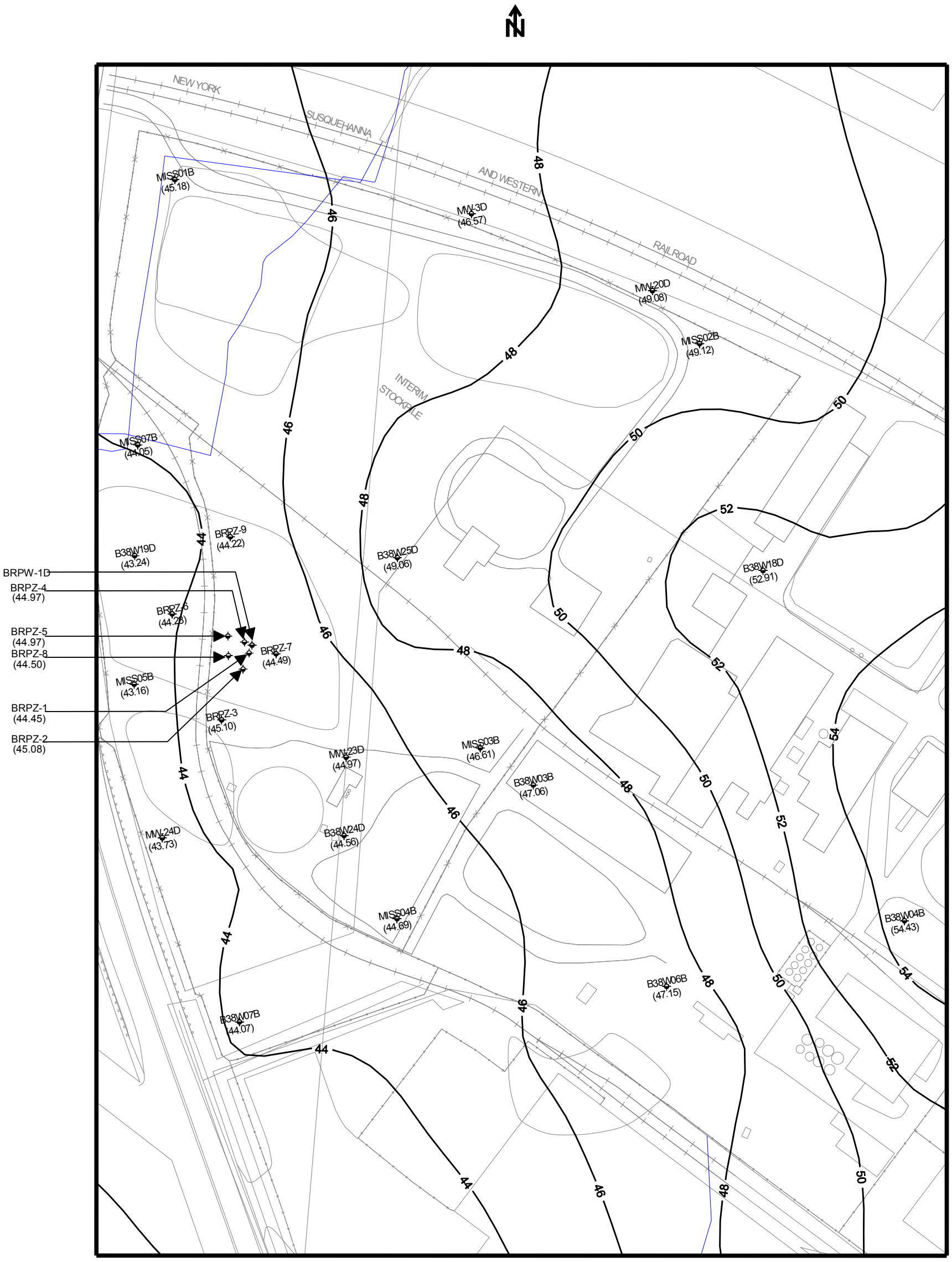
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-15 a
Shallow Bedrock Potentiometric Surface of FMSS (July 2001 Synoptic Event)

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.



Legend:

MW-24D (43.73) — Shallow Bedrock Monitoring Well (July, 2001 head Measurement Displayed in Parentheses.)

44 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Horizontal Scale in feet

0 50 100 150 200

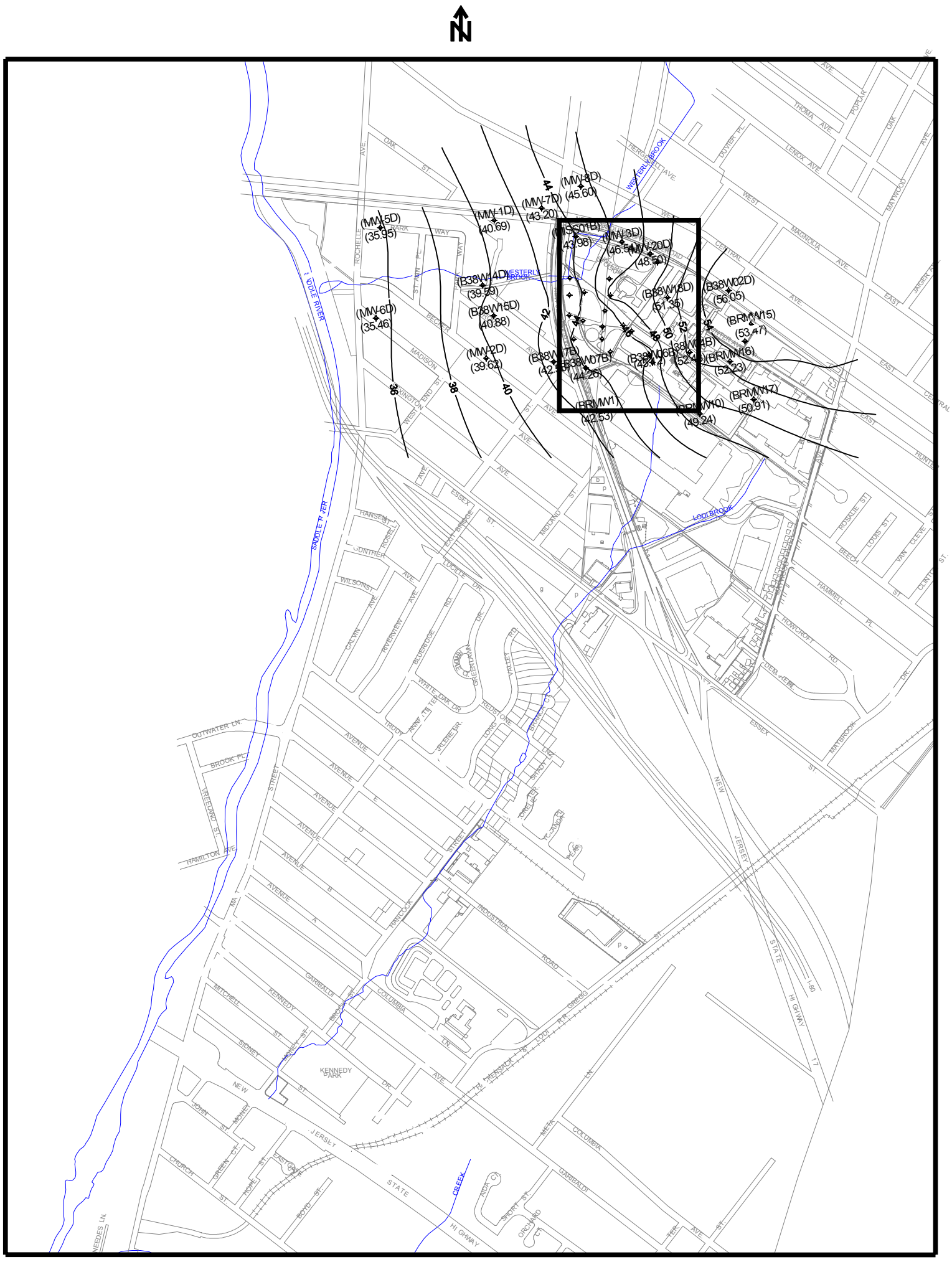
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-15 b
Shallow Bedrock Potentiometric Surface of MISS (July 2001 Synoptic Event)

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

MW-6D (35.46) — Shallow Bedrock Monitoring Well (December, 2001 Head Measurement Displayed in Parentheses.)

42 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Detail Provided in Figure 3-16b

Horizontal Scale in feet

0 500 1000 1500

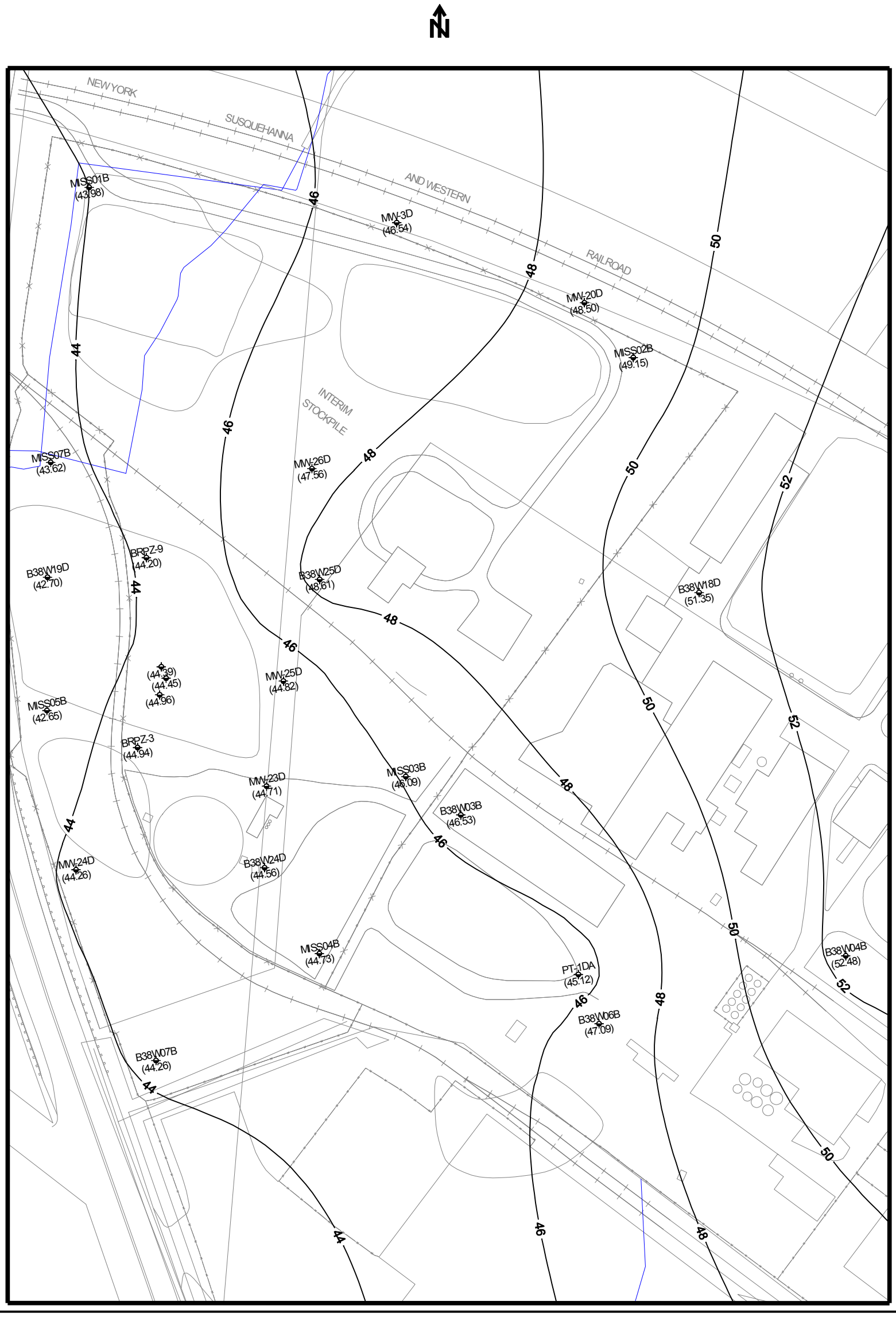
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-16a:
Shallow Bedrock Potentiometric Surface of FMSS (December 2001 Synoptic Event)

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.



Legend:

MW-24D (44.26) — Shallow Bedrock Monitoring Well (December, 2001 Head Measurement Displayed in Parentheses.)

42 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Horizontal Scale in feet

0 50 100 150 200

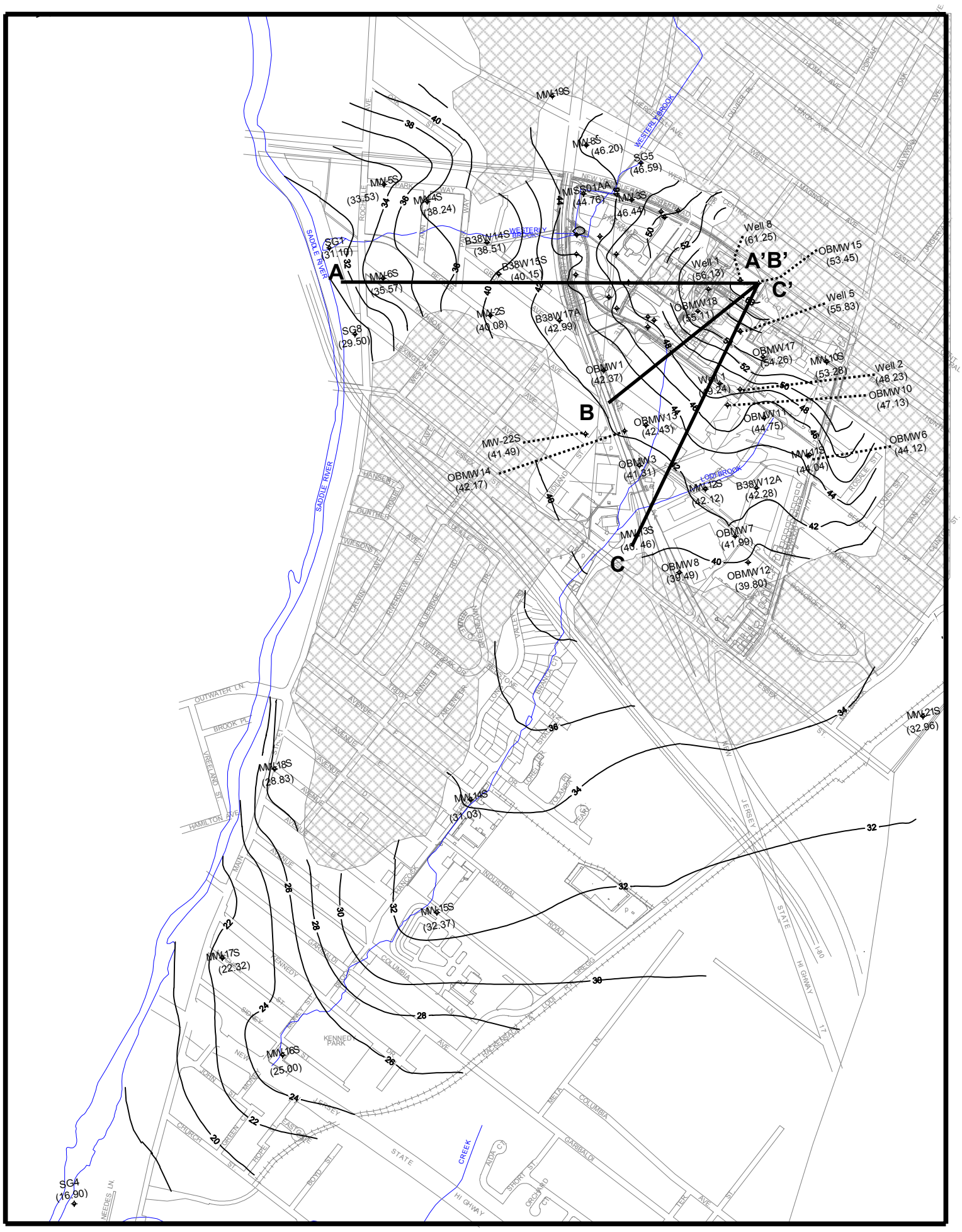
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-16 b
Shallow Bedrock Potentiometric Surface of MISS (December 2001 Synoptic Event)

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw™ Stone & Webster, Inc.



Legend:

MW-15S (32.37) — Overburden Monitoring Well

Zone of 0 ft. Saturated Thickness.

32 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Horizontal Scale in feet

0 500 1000 1500

A — A' Conceptual Hydrogeologic Cross Section Line

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-17
Location Map for Hydrogeologic Cross Sections

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

A

A’

Elevation (ft MSL)

80
70
60
50
40
30
20
10
0
-10
-20
-30

SADDLE RIVER

PARK WAY

ROUTE 17

MW6-D
MW-6S
B38W-15D
B38W15S
MISS-5B
MISS-5A
BRPZ-3
MW23-D
MW-23DD
MISS-3A
MISS3B
B38W-3B
MW-1
Well 8
OBMW-15
BRMW-15

35.57
35.79
40.15
41.34
44.26
43.16
45.1
44.97
44.96
48.46
46.61
47.06
56.13
61.25
56.93
57.01

OVERBURDEN

BEDROCK

35
40
50
55
60?
45

35.79
41.34
43.16
45.1
44.97
46.61
47.06
44.96
57.01

MW-23DD -25 to -45 ft MSL

0 250 500 Feet
APPROXIMATE SCALE

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LEGEND:

Well 8 — Well ID

61.25 — Water Table Elevation (ft MSL)

57.01 — Potentiometric Elevation (ft MSL) in bedrock well

36.45 — Potentiometric Elevation (ft MSL) of the bedrock at well screen midpoint

Well Screen

50 — Conceptual equipotential line. Elevation in ft MSL

Note:
Water levels measured on July 26, 2001

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Note: Potentiometric head in a bedrock well is assumed to ‘apply’ at the midpoint of the screen or open hole. No allowance for refraction across layer boundaries has been made in the sketching of the conceptual equipotential lines.

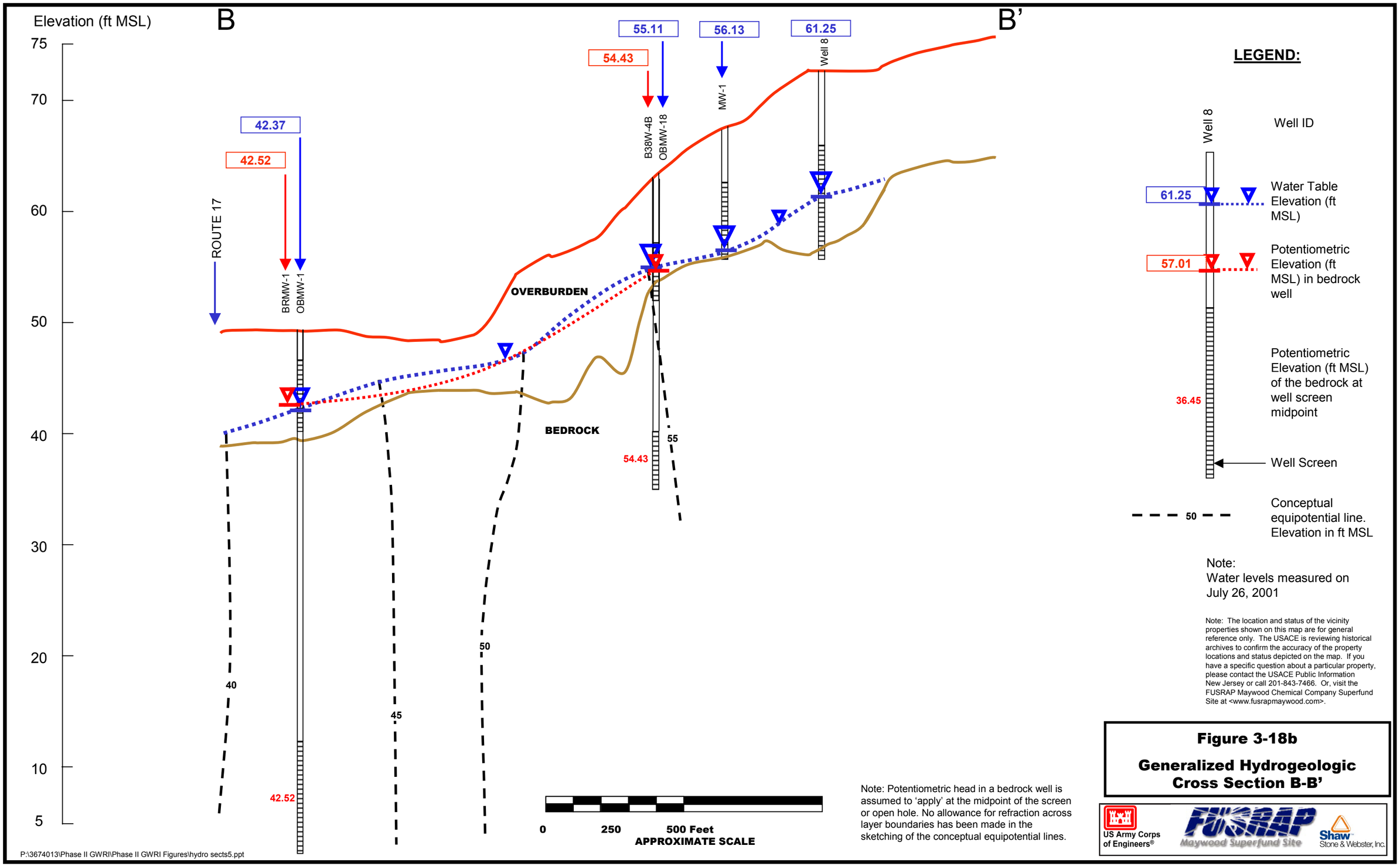
Figure 3-18a

Generalized Hydrogeologic Cross Section A-A’

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Note:
Water levels measured on July 26, 2001

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

Note: Potentiometric head in a bedrock well is assumed to 'apply' at the midpoint of the screen or open hole. No allowance for refraction across layer boundaries has been made in the sketching of the conceptual equipotential lines.

Figure 3-18b

Generalized Hydrogeologic Cross Section B-B'

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

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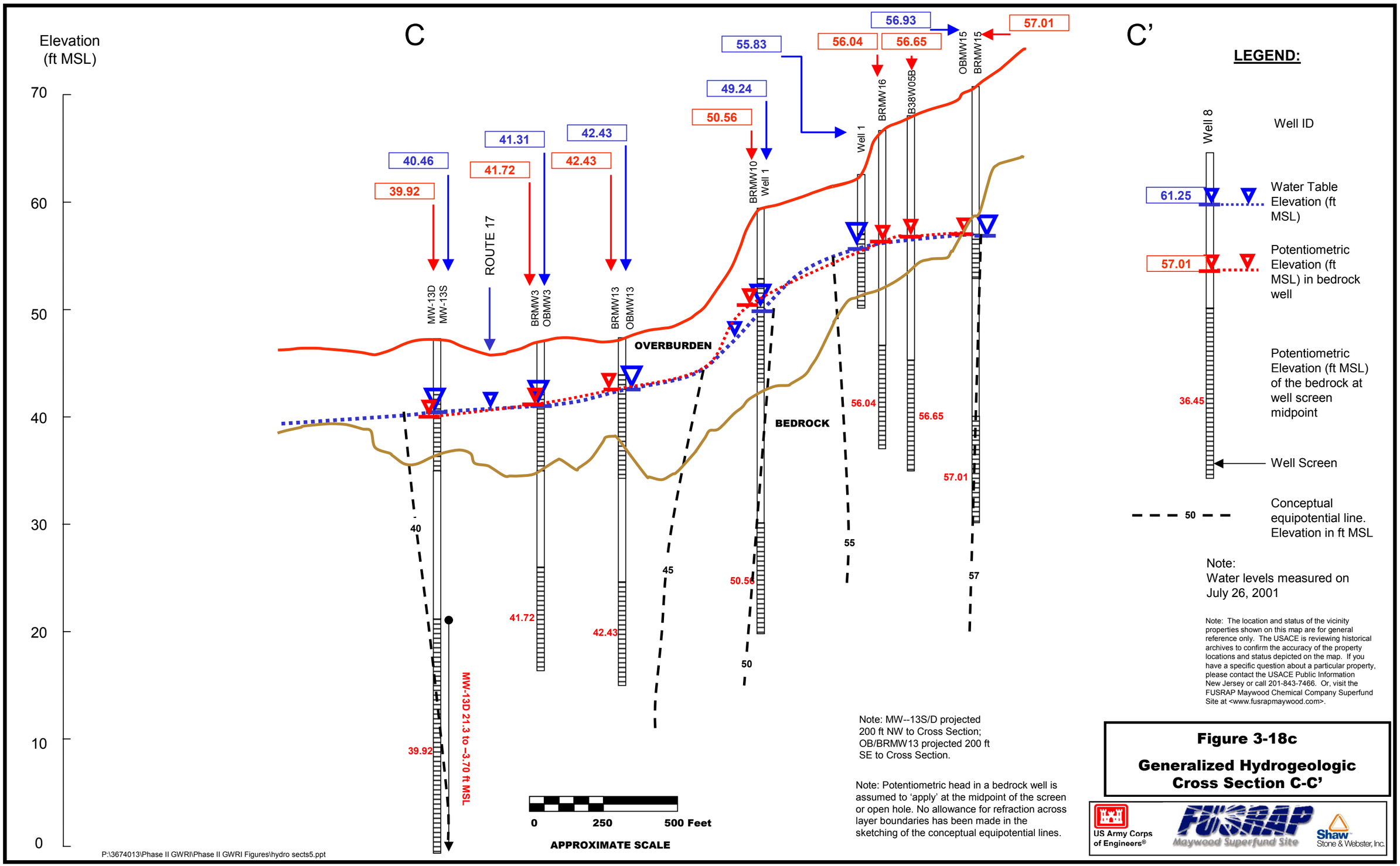


Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have a specific question about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>.

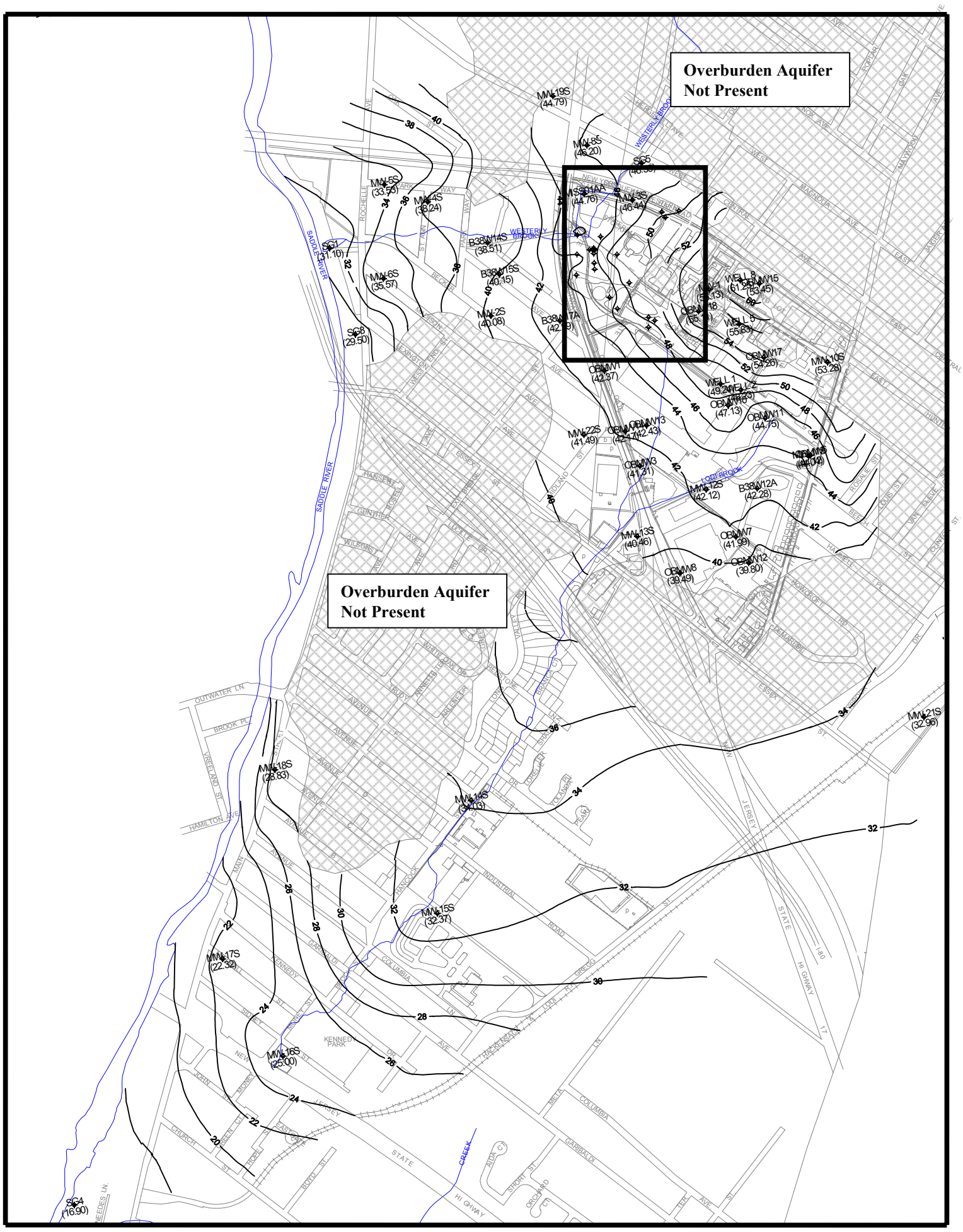
Figure 3-18c

Generalized Hydrogeologic Cross Section C-C'

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

MW-15S (32.37) — Overburden Monitoring Well

Zone of 0 ft. Saturated Thickness (I.e., overburden aquifer not present.

32 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Detail Provided in Figure 3-19 b.

Horizontal Scale in feet

0 500 1000 1500

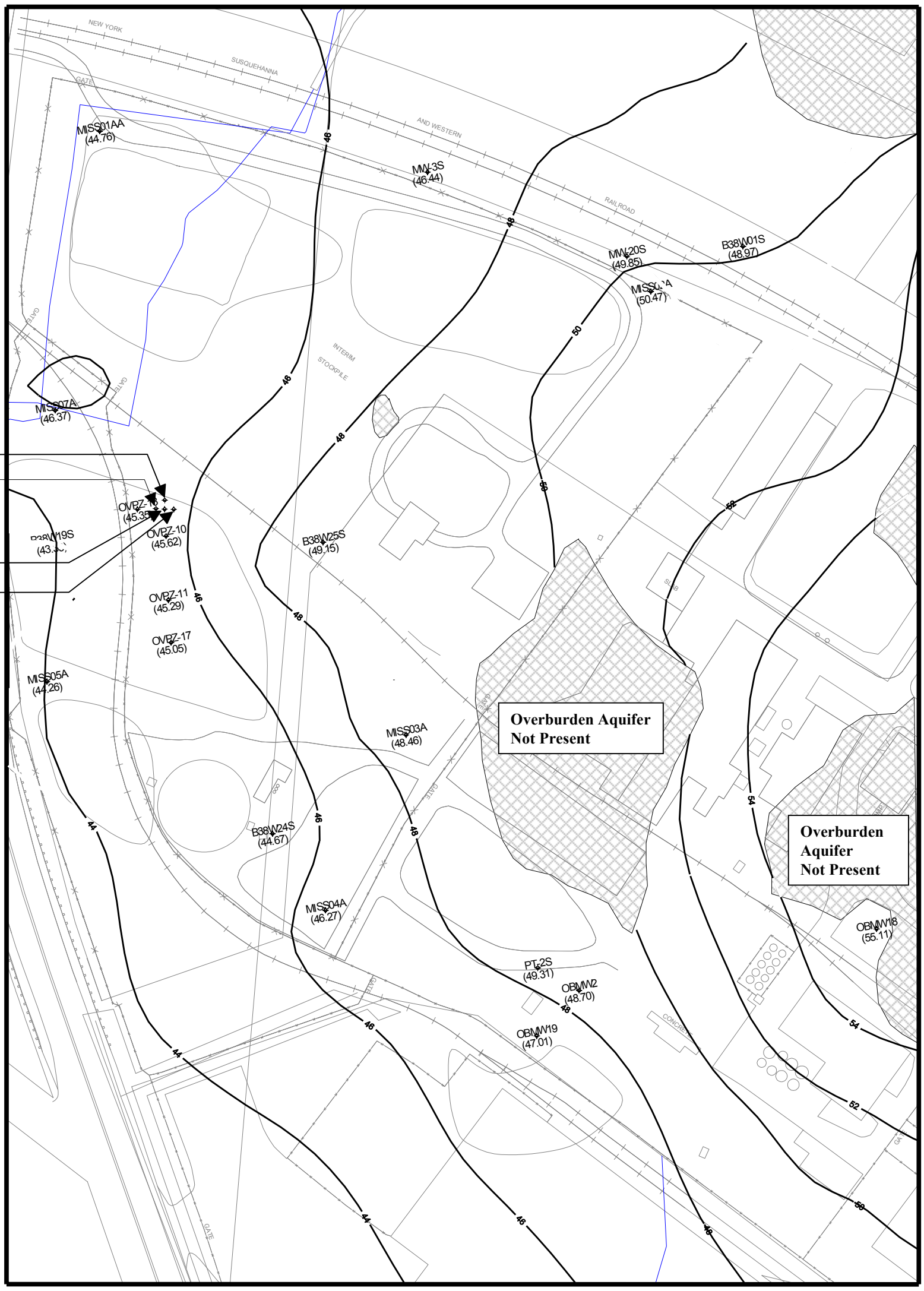
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-19a: Overburden Groundwater Surface Elevation Map of FMSS based on July 2001 Synoptic Event

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.



Legend:

MISS-04A (46.27) — Overburden Monitoring Well

Zone of 0 ft. Saturated Thickness (i.e., Overburden Aquifer not Present).

32 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Horizontal Scale in feet

0 50 100 150 200

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-19b: Overburden Groundwater Surface Elevation Map of MISS based on July 2001 Synoptic Event

US Army Corps of Engineers®

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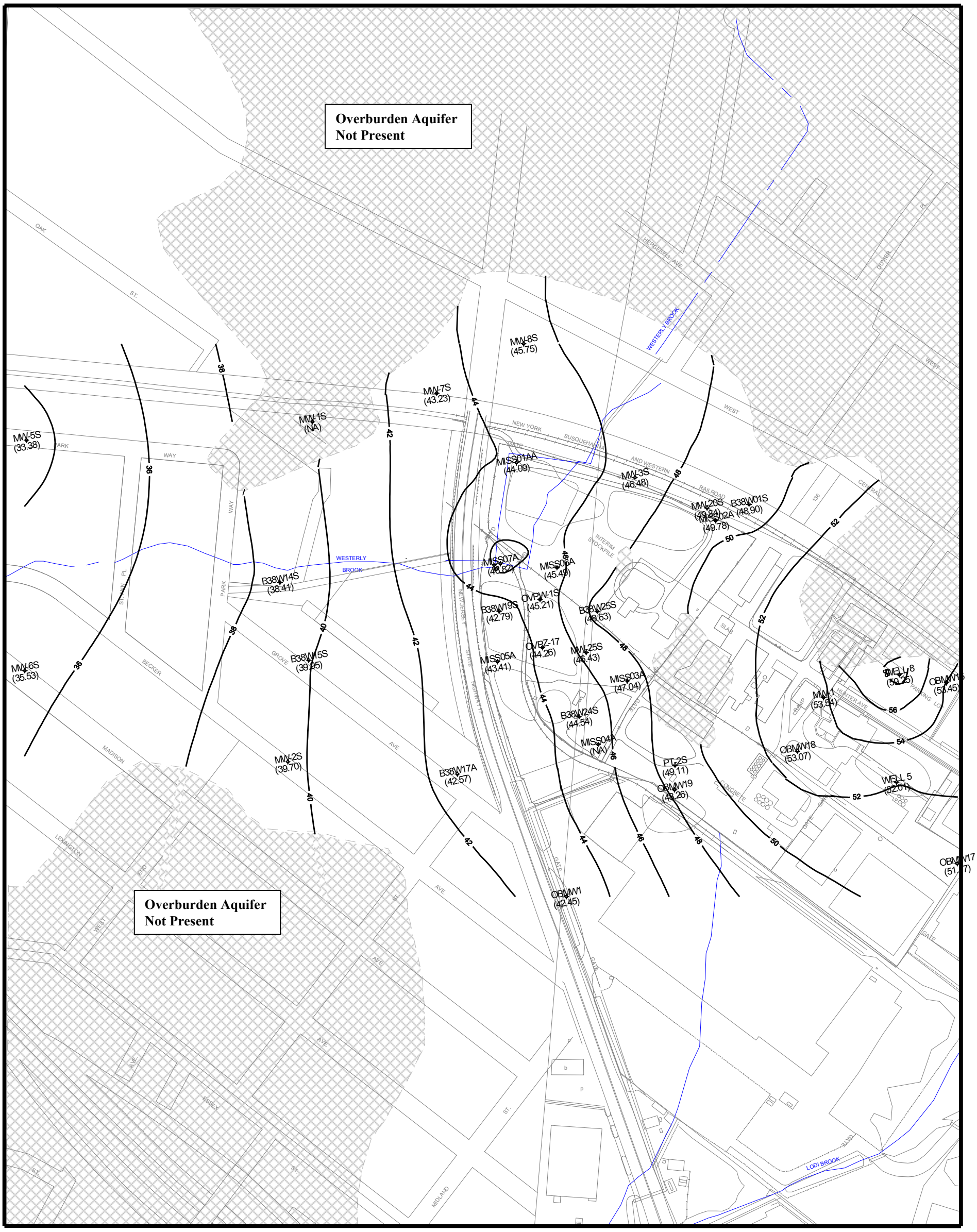
Shaw™ Stone & Webster, Inc.



Legend:

MISS-05A (43.41) — Overburden Monitoring Well

Zone of 0 ft. Saturated Thickness (i.e., Overburden Aquifer not Present).

32 — Equipotential Contour in feet above Mean Sea Level (MSL). Contour Interval = 2 feet.

Horizontal Scale in feet

0 100 200 300 400

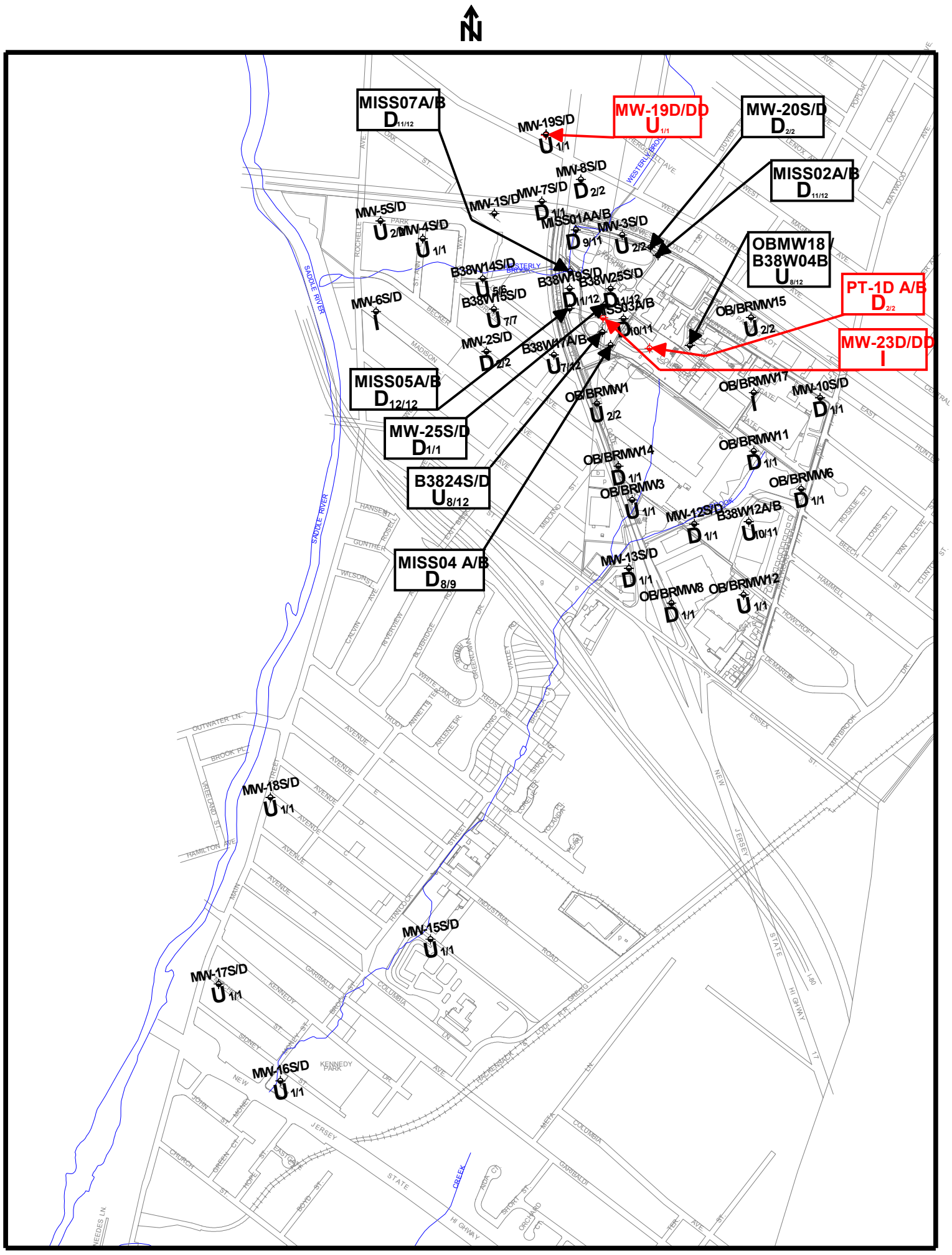
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

Figure 3-20: Overburden Groundwater Surface Elevation Map of MISS based on December 2001 Synoptic Event

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.


N
MISS07A/B
D11/12
MW-19S/D
U1/1
MW-19D/DD
U1/1
MW-20S/D
D2/2
MW-8S/D
D2/2
MW-7S/D
D1/1
MW-1S/D
MISS02A/B
D11/12
MW-5S/D
U2/2
MW-4S/D
U1/1
MISS01AA/B
D9/11
MW-3S/D
U2/2
OBMW18 / B38W04B
U8/12
PT-1D A/B
D2/2
MW-23D/DD
I
B38W14S/D
U5/6
B38W19S/D
D11/12
B38W25S/D
D11/12
MW-6S/D
I
B38W15S/D
U7/7
MISS03A/B
U10/11
OB/BRMW15
U2/2
MW-2S/D
D2/2
B38W17A/B
U7/12
MISS05A/B
D12/12
OB/BRMW1
U2/2
OB/BRMW17
I
MW-10S/D
D1/1
MW-25S/D
D1/1
OB/BRMW11
D1/1
OB/BRMW14
D1/1
OB/BRMW6
D1/1
B3824S/D
U8/12
OB/BRMW3
U1/1
MW-12S/D
D1/1
B38W12A/B
U10/11
MISS04 A/B
D8/9
MW-13S/D
D1/1
OB/BRMW8
D1/1
OB/BRMW12
U1/1
MW-18S/D
U1/1
MW-15S/D
U1/1
MW-17S/D
U1/1
MW-16S/D
U1/1
SADDLE RIVER
SADDLE RIVER
SADDLE RIVER
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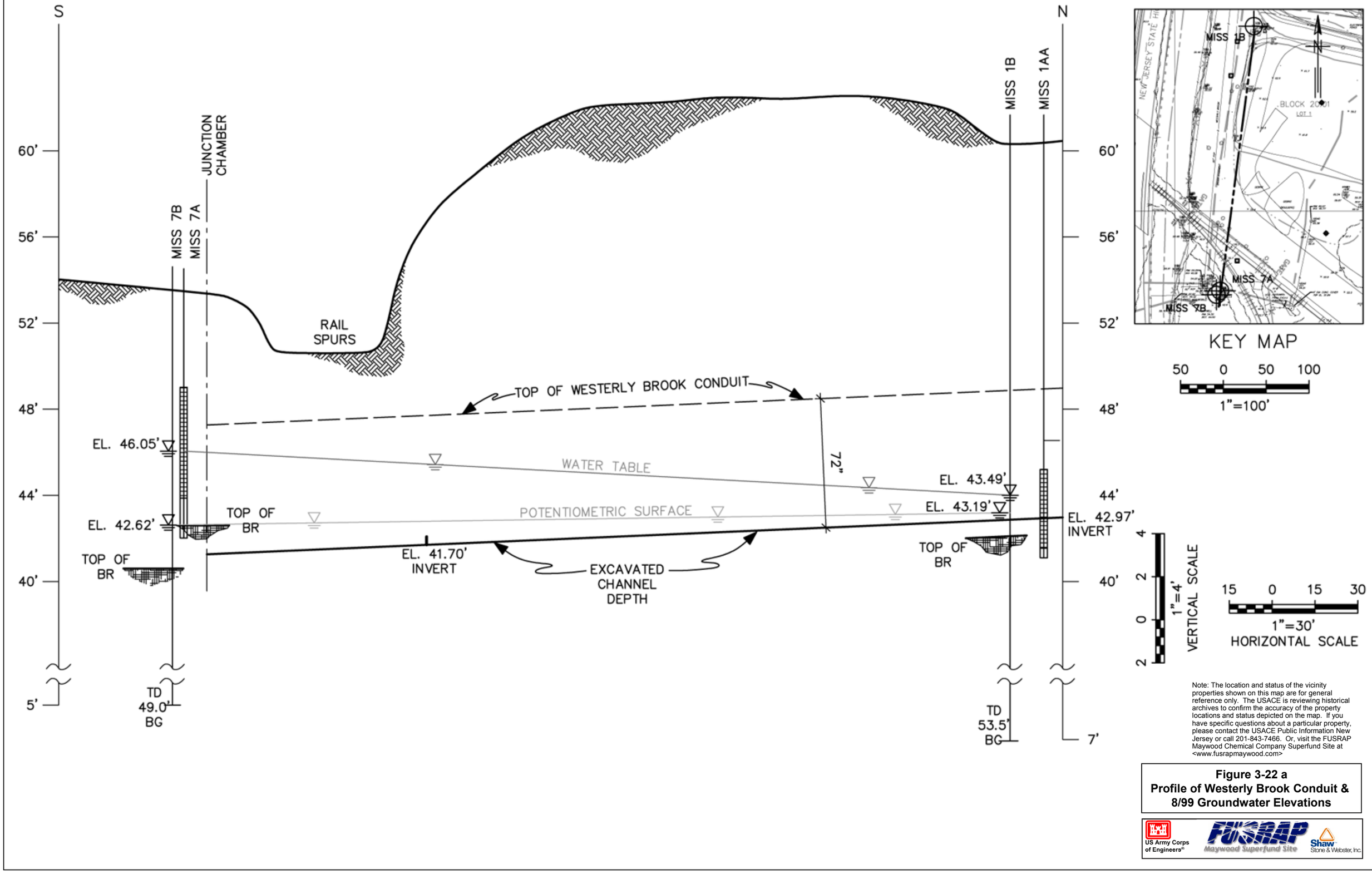
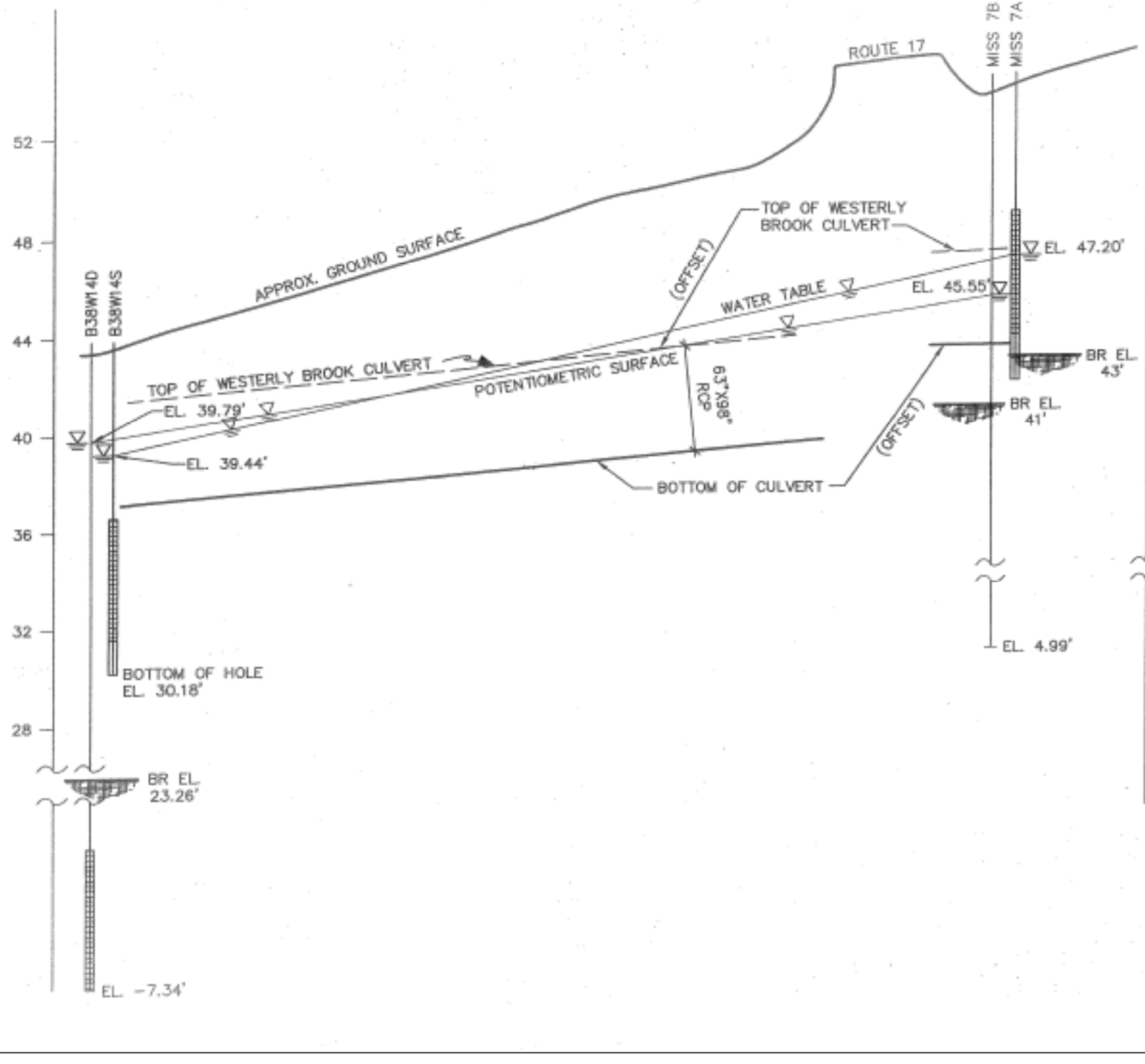
WESTERLY BROOK
WESTERLY BROOK
WESTERLY BROOK
WESTERLY BROOK
MAYBROOK
MAYBROOK
MAYB

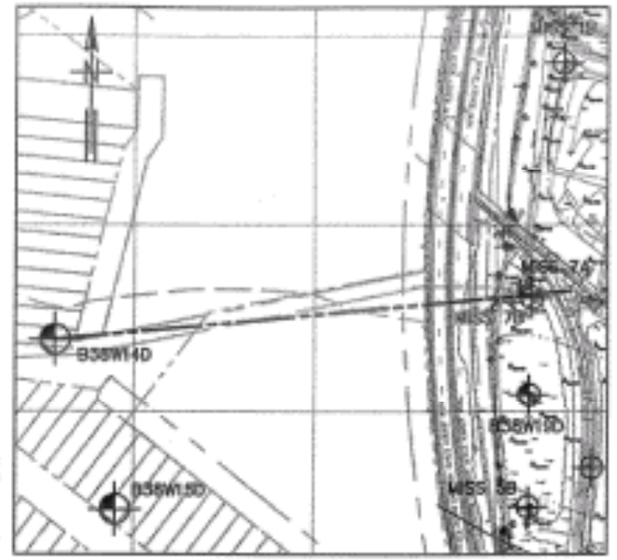


Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>

Figure 3-22 a
Profile of Westerly Brook Conduit & 8/99 Groundwater Elevations

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.





KEY MAP

100 0 100 200

1"=200'

4 2 0 2

1"=4' VERTICAL SCALE

15 0 15 30

1"=30' HORIZONTAL SCALE

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>

Figure 3-22 b
Profile of Westerly Brook Conduit & 6/00 Groundwater Elevations

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FUSRAP Maywood Superfund Site

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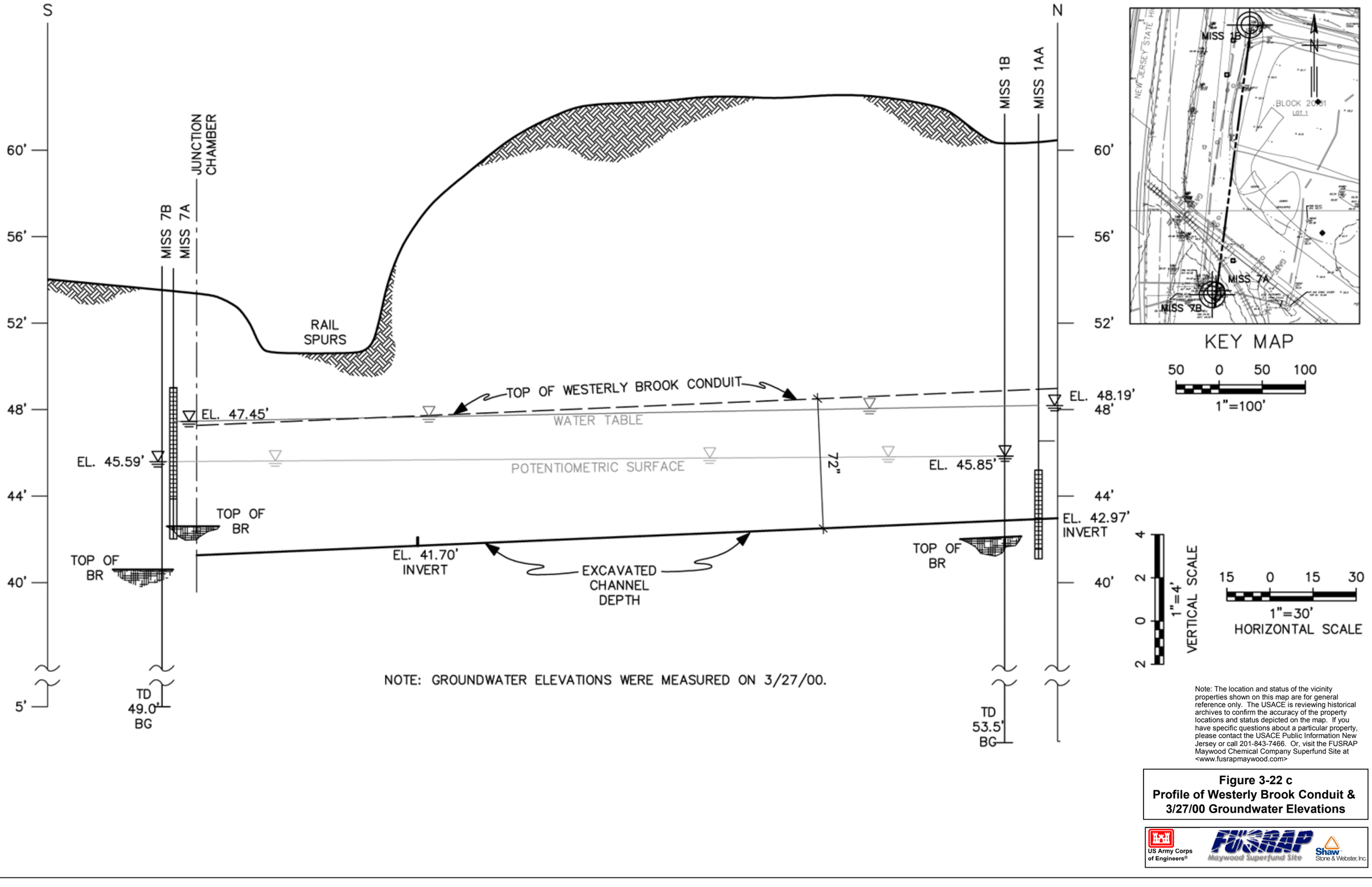

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site at <www.fusrapmaywood.com>

Figure 3-22 c
Profile of Westerly Brook Conduit & 3/27/00 Groundwater Elevations

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
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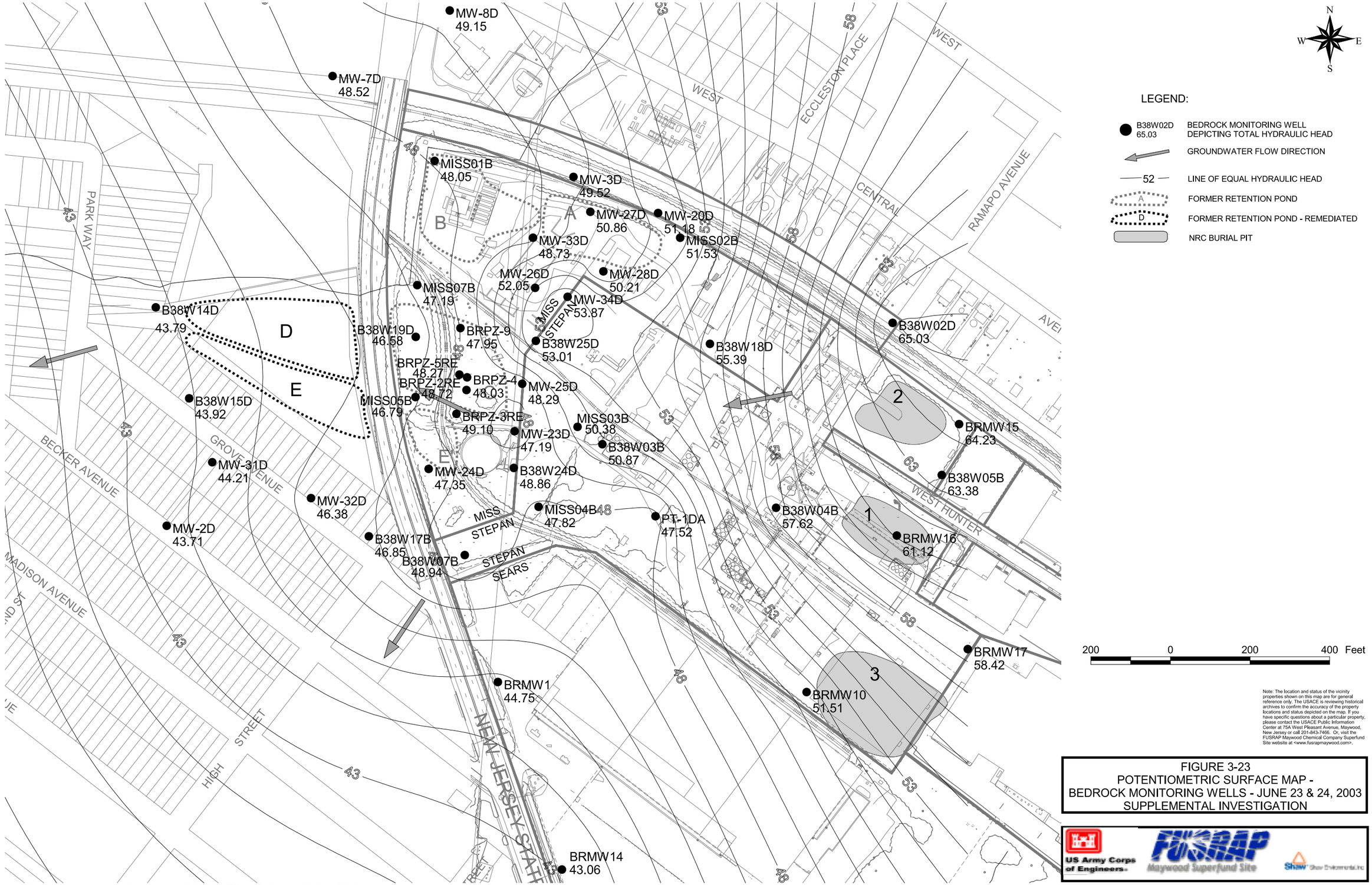

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FIGURE 3-23
POTENTIOMETRIC SURFACE MAP -
BEDROCK MONITORING WELLS - JUNE 23 & 24, 2003
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\july2004\june2003_rw.apr LAYOUT: june2003_rw 17x11 September 2, 2004

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W E

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PARK WAY

WESTERLY BROOK

D

E

MW-31D

GROVE AVE

MW-32D

BECKER AVE

B

MW-27D

A

MW-28D

MW-34D

MISS STEPAN

BLDG 76

LEGEND:

MW-27D — RI ADDENDUM BEDROCK MONITORING WELL IDENTIFICATION

A — FORMER RETENTION POND

D — FORMER RETENTION POND - REMEDIATED

ND — NON-DETECT

Summary stereonet is a lower hemisphere, equal angle, polar projection. Summary stereonet diagram displays the dominant down-dip fracture azimuth and angle of fracture dip observed within borehole geophysical data in all FMSS boreholes logged. Black stereonet pole plots indicate less open fractures. Red stereonet pole plots indicate more open fractures. Blue stereonet pole plots indicate water filled fractures.

Summary rose plot diagram displays the dominant down-dip fracture azimuth observed within borehole geophysical data in all FMSS boreholes logged.

Magnetic north is located to the top of each diagram.

100 0 100 200 Feet

FIGURE 3-24
SUMMARY OF BEDROCK FRACTURE ORIENTATION
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

\\Bosfs01\Maywood\Maywood\Task0510\drawings\july 2004\Chem.apr

LAYOUT: RI-Addendum-Summary-Bedrock-17X11 September 2, 2003

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-1
TOTAL RADIUM AND TOTAL URANIUM RESULTS FOR GEOPROBE GROUNDWATER SAMPLES PHASE 1 - 2000

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

LEGEND:

- 12b011 / 26.68 — GEOPROBE WELL IDENTIFICATION WITH TOTAL THORIUM CONCENTRATION
- FORMER RETENTION POND
- FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

RESULTS IN PICOCURIES PER LITER (pCi/L)

GROUNDWATER STANDARDS FOR TOTAL THORIUM DO NOT EXIST

THORIUM ISOTOPES ARE ALPHA EMITTERS FOR WHICH THERE IS A STATE/FEDERAL MCL OF 15 pCi/L

BOLD CONCENTRATION DENOTE EXCEEDANCE OF TOTAL THORIUM GREATER THAN 15 pCi/L

SAMPLE DEPTH (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-2
TOTAL THORIUM RESULTS FOR GEOPROBE GROUNDWATER SAMPLES PHASE 1 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

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LEGEND:

10a006 ND 70.5 ND ND ND	GEOPROBE SAMPLE IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
10a005 82.1 405 ND ND 253	GEOPROBE SAMPLE IDENTIFICATION WITH ARSENIC EXCEEDANCE WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
12b006 ND 33.3 602 3.4 130	GEOPROBE SAMPLE IDENTIFICATION WITH CHROMIUM EXCEEDANCE WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
09a009 3.9 ND 1.6 25.6 58.1	GEOPROBE SAMPLE IDENTIFICATION WITH LEAD EXCEEDANCE WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
06c002 5.7 404 2.8 ND 744	GEOPROBE SAMPLE IDENTIFICATION WITH LITHIUM EXCEEDANCE WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
09a007 12.8 4040 1.1 ND 43	GEOPROBE SAMPLE IDENTIFICATION WITH ARSENIC AND BARIUM EXCEEDANCES WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
18a003 585 293 2.2 ND 4620	GEOPROBE SAMPLE IDENTIFICATION WITH ARSENIC & LITHIUM EXCEEDANCES WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
12b001 89.6 20.6 114 ND 5240	GEOPROBE SAMPLE IDENTIFICATION WITH ARSENIC, CHROMIUM & LITHIUM EXCEEDANCES WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
12b016 746 12.1 25.4 13.1 6320	GEOPROBE SAMPLE IDENTIFICATION WITH ARSENIC, LEAD & LITHIUM EXCEEDANCES WITH ARSENIC CONCENTRATION WITH BARIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION
	FORMER RETENTION POND
	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)
GROUNDWATER STANDARD (MCL) FOR:
ARSENIC = 8 NJPOL
BARIUM = 2000 NJGWQC
CHROMIUM = 100 NJGWQC/STATE & FEDERAL MCL
LEAD = 10 NJPOL
LITHIUM = 730 (REGION IX PRG)

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-3
ARSENIC, BARIUM, CHROMIUM, LEAD AND LITHIUM RESULTS FOR GEOPROBE GROUNDWATER SAMPLES PHASE 1 - 2000

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Geoprobe-Phase1.apr LAYOUT: Metals-Geoprobe-Phase1-34x22 5 February 2003

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LEGEND:

- 12b011 — GEOPROBE SAMPLE IDENTIFICATION
- 79.6 — WITH CERIUM CONCENTRATION
- 6.2 — WITH DYSPROSIUM CONCENTRATION
- ND — WITH LANTHANUM CONCENTRATION
- 53.9 — WITH NEODYMIUM CONCENTRATION
- ND — WITH YTTRIUM CONCENTRATION

FORMER RETENTION POND

FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

ND NON-DETECT

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARDS (FEDERAL / STATE MCLS OR NJ GWQC) FOR RARE EARTH ELEMENTS DO NOT EXIST

REGION IX PRG FOR DYSPROSIUM = 7300ug/L

SAMPLE DEPTH (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

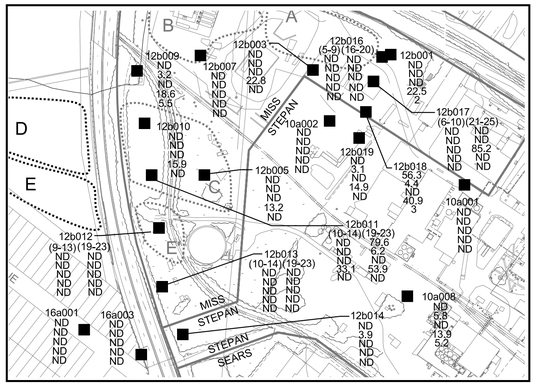

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FIGURE 4-4
RARE EARTH ELEMENT (REE) RESULTS FOR GEOPROBE GROUNDWATER SAMPLES PHASE 1 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc.

200 0 200 400 Feet

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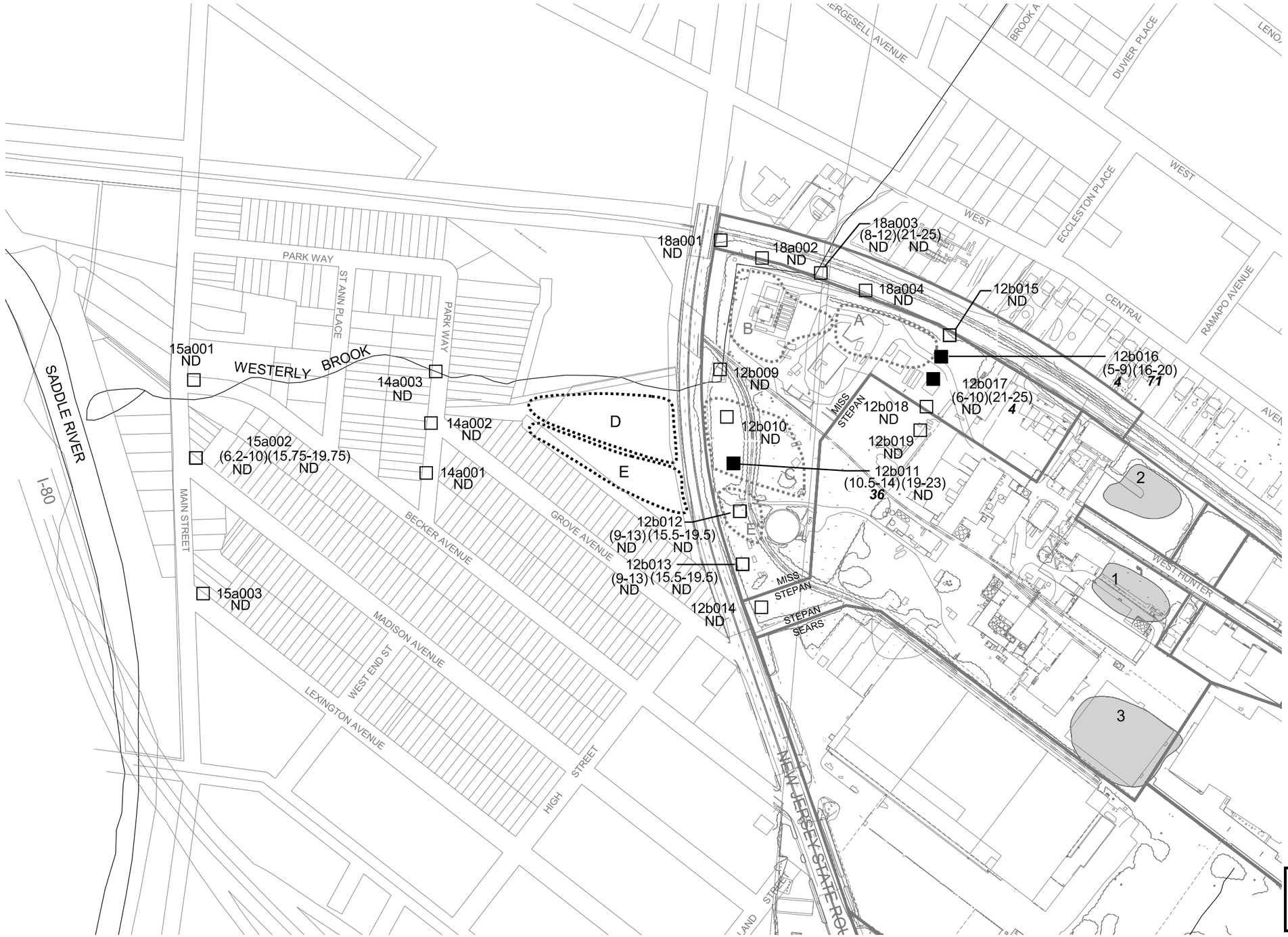

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LEGEND:

- 12b012 / ND — GEOPROBE WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCE WITH BENZENE CONCENTRATION
- 12b011 / *36* — GEOPROBE WELL IDENTIFICATION WITH BENZENE EXCEEDANCE WITH BENZENE CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
BENZENE = 1 NJPQL/STATE MCL

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

150 0 150 300 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-5A
BENZENE RESULTS FOR
GEOPROBE GROUNDWATER SAMPLES
PHASE 1 - 2000

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FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

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LEGEND:

12b010		GEOPROBE SAMPLE IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES
□	ND	WITH TETRACHLOROETHENE CONCENTRATION
	ND	WITH TRICHLOROETHENE CONCENTRATION
	ND	WITH 1,2-DICHLOROETHENE CONCENTRATION
	ND	WITH 1,1-DICHLOROETHENE CONCENTRATION
14a003		GEOPROBE SAMPLE IDENTIFICATION WITH TETRACHLOROETHENE EXCEEDANCE
◧	***3***	WITH TETRACHLOROETHENE CONCENTRATION
	ND	WITH TRICHLOROETHENE CONCENTRATION
	ND	WITH 1,2-DICHLOROETHENE CONCENTRATION
	ND	WITH 1,1-DICHLOROETHENE CONCENTRATION
14a001		GEOPROBE SAMPLE IDENTIFICATION WITH TETRACHLOROETHENE & TRICHLOROETHENE EXCEEDANCES
◪	***22***	WITH TETRACHLOROETHENE CONCENTRATION
	6	WITH TRICHLOROETHENE CONCENTRATION
	6	WITH 1,2-DICHLOROETHENE CONCENTRATION
	ND	WITH 1,1-DICHLOROETHENE CONCENTRATION
14a002		GEOPROBE SAMPLE IDENTIFICATION WITH ALL PARAMETERS EXCEEDING STANDARDS
■	***55***	WITH TETRACHLOROETHENE CONCENTRATION
	21	WITH TRICHLOROETHENE CONCENTRATION
	28	WITH 1,2-DICHLOROETHENE CONCENTRATION
	2	WITH 1,1-DICHLOROETHENE CONCENTRATION
A		FORMER RETENTION POND
D		FORMER RETENTION POND - REMEDIATED
		NRC BURIAL PIT
ND		NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
TETRACHLOROETHENE = 1 NJPQL/STATE MCL
TRICHLOROETHENE = 1 NJGWQC/STATE MCL
1,2-DICHLOROETHENE = 10 NJGWQC
1,1-DICHLOROETHENE = 2 NJPQL/STATE MCL

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

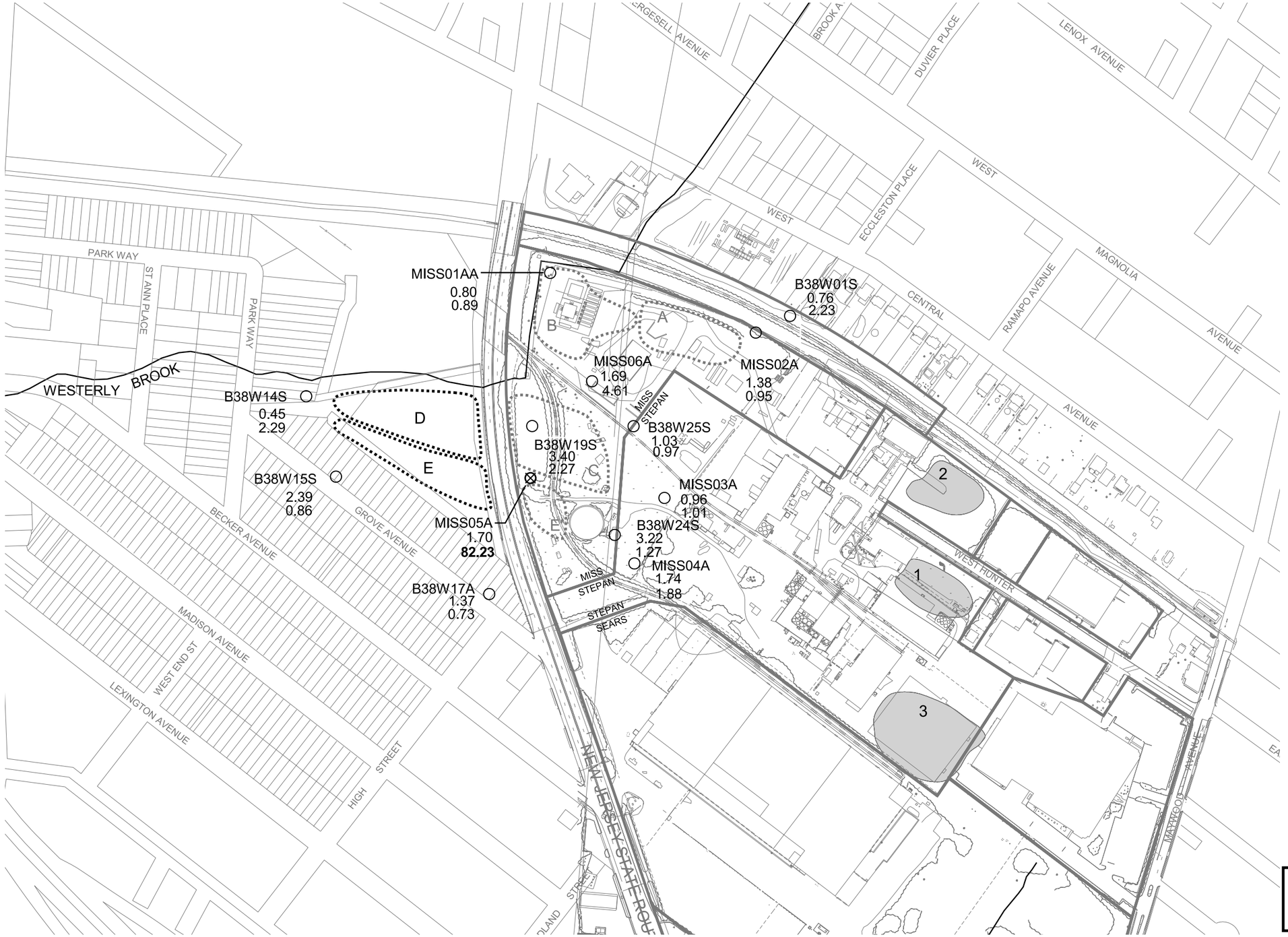
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-5B
VOCs RESULTS FOR GEOPROBE GROUNDWATER SAMPLES PHASE 1 - 2000

150 0 150 300 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Geoprobe-Phase1.apr LAYOUT: VOCs-Geoprobe-Phase1-17x11 5 February 2003



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LEGEND:

- B38W15S / 2.39 / 0.86 — OVERBURDEN WELL IDENTIFICATION WITH NO RADIUM OR URANIUM EXCEEDANCES; WITH TOTAL RADIUM CONCENTRATION; WITH TOTAL URANIUM CONCENTRATION
- MISS05A / 1.70 / **82.23** — OVERBURDEN WELL IDENTIFICATION WITH URANIUM EXCEEDANCE; WITH TOTAL RADIUM CONCENTRATION; WITH TOTAL URANIUM CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (pCi/L)

GROUNDWATER STANDARD (MCL) FOR:
RADIUM = 5
URANIUM = 30ug/l

REFER TO TABLE 4-12 FOR ACTIVITY AND ISOTOPIC MASS RESULTS FOR URANIUM.

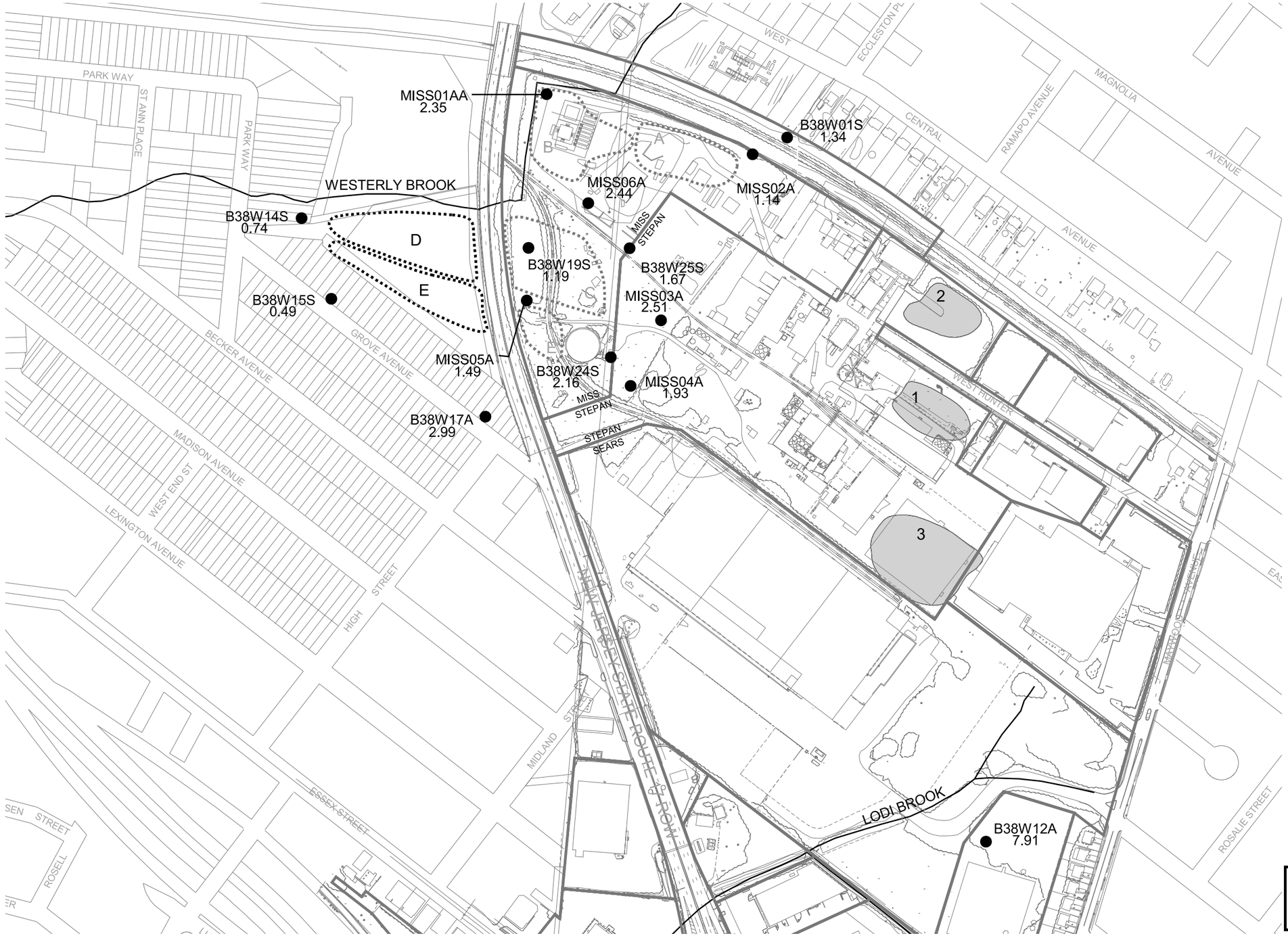
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-6
TOTAL RADIUM AND TOTAL URANIUM RESULTS FOR OVERBURDEN WELL GROUNDWATER SAMPLES PHASE 1 - 2000

150 0 150 300 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Overburden-Phase1.apr LAYOUT: Radium&Uranium-Overburden-Phase1-17x11 25 April 2003



LEGEND:

- B38W17A 2.99 — OVERBURDEN WELL IDENTIFICATION WITH TOTAL THORIUM CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

RESULTS IN PICOCURIES PER LITER (pCi/L)

GROUNDWATER STANDARD FOR TOTAL THORIUM DOES NOT EXIST

THORIUM ISOTOPES ARE INCLUDED IN GROSS ALPHA STANDARD OF 15 pCi/L

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-7
TOTAL THORIUM RESULTS IN OVERBURDEN WELL GROUNDWATER SAMPLES PHASE 1 - 2000

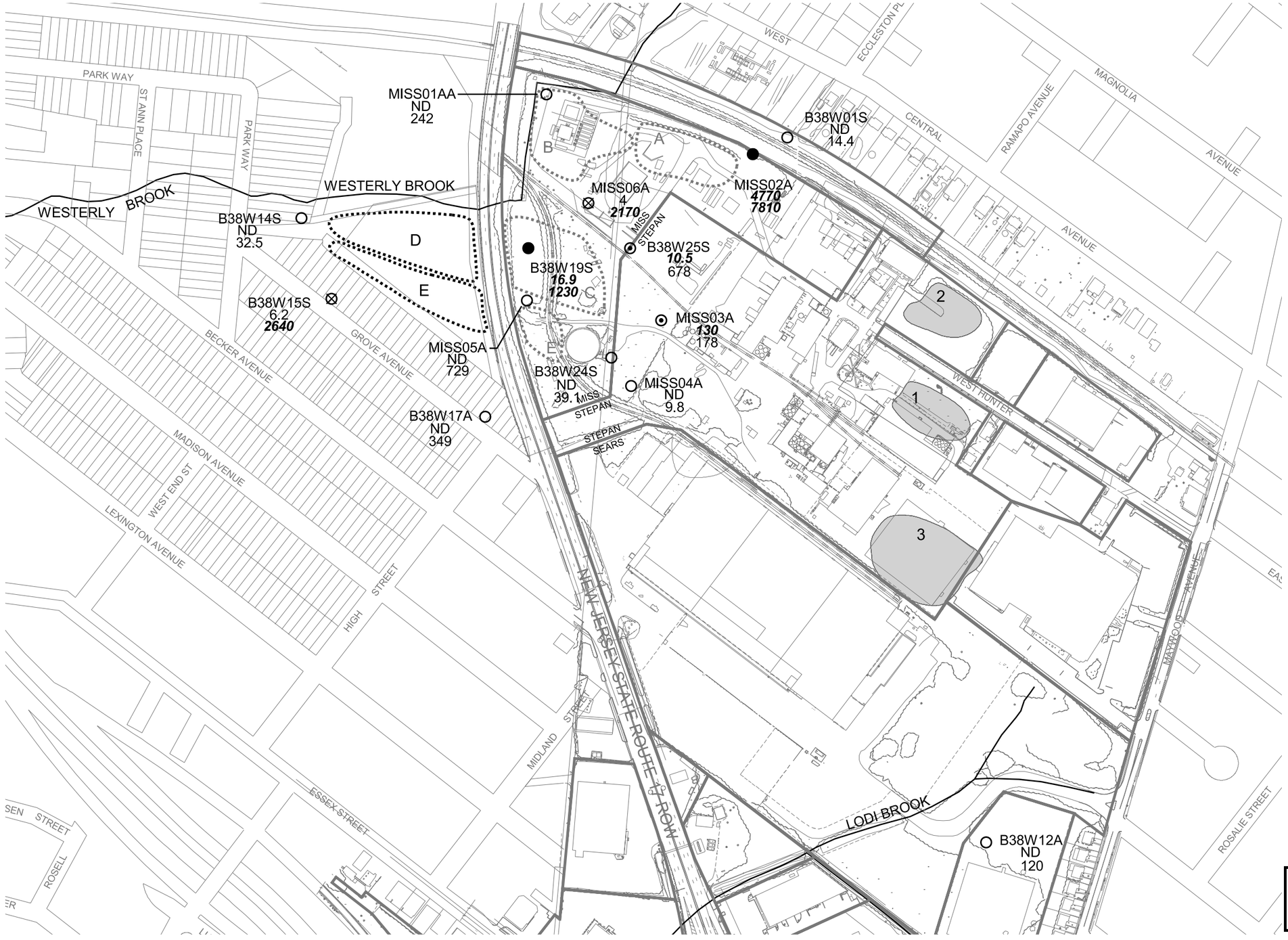
150 0 150 300 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Overburden-Phase1.apr LAYOUT: Thorium-Overburden-Phase1-17x11 5 February 2003



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LEGEND:

- B38W01S / ND / 14.4 — OVERBURDEN WELL IDENTIFICATION WITH ARSENIC AND LITHIUM BELOW STANDARDS; WITH ARSENIC CONCENTRATION; WITH LITHIUM CONCENTRATION
- MISS03A / ***130*** / 178 — OVERBURDEN WELL IDENTIFICATION WITH ARSENIC EXCEEDANCE; WITH ARSENIC CONCENTRATION; WITH LITHIUM CONCENTRATION
- B38W15S / 6.2 / ***2640*** — OVERBURDEN WELL IDENTIFICATION WITH LITHIUM EXCEEDANCE; WITH ARSENIC CONCENTRATION; WITH LITHIUM CONCENTRATION
- B38W19S / ***16.9*** / ***1230*** — OVERBURDEN WELL IDENTIFICATION WITH ARSENIC AND LITHIUM EXCEEDANCES; WITH ARSENIC CONCENTRATION; WITH LITHIUM CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- \- —

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
ARSENIC = 8 NJPQL
LITHIUM = 730 REGION IX TAPWATER PRG

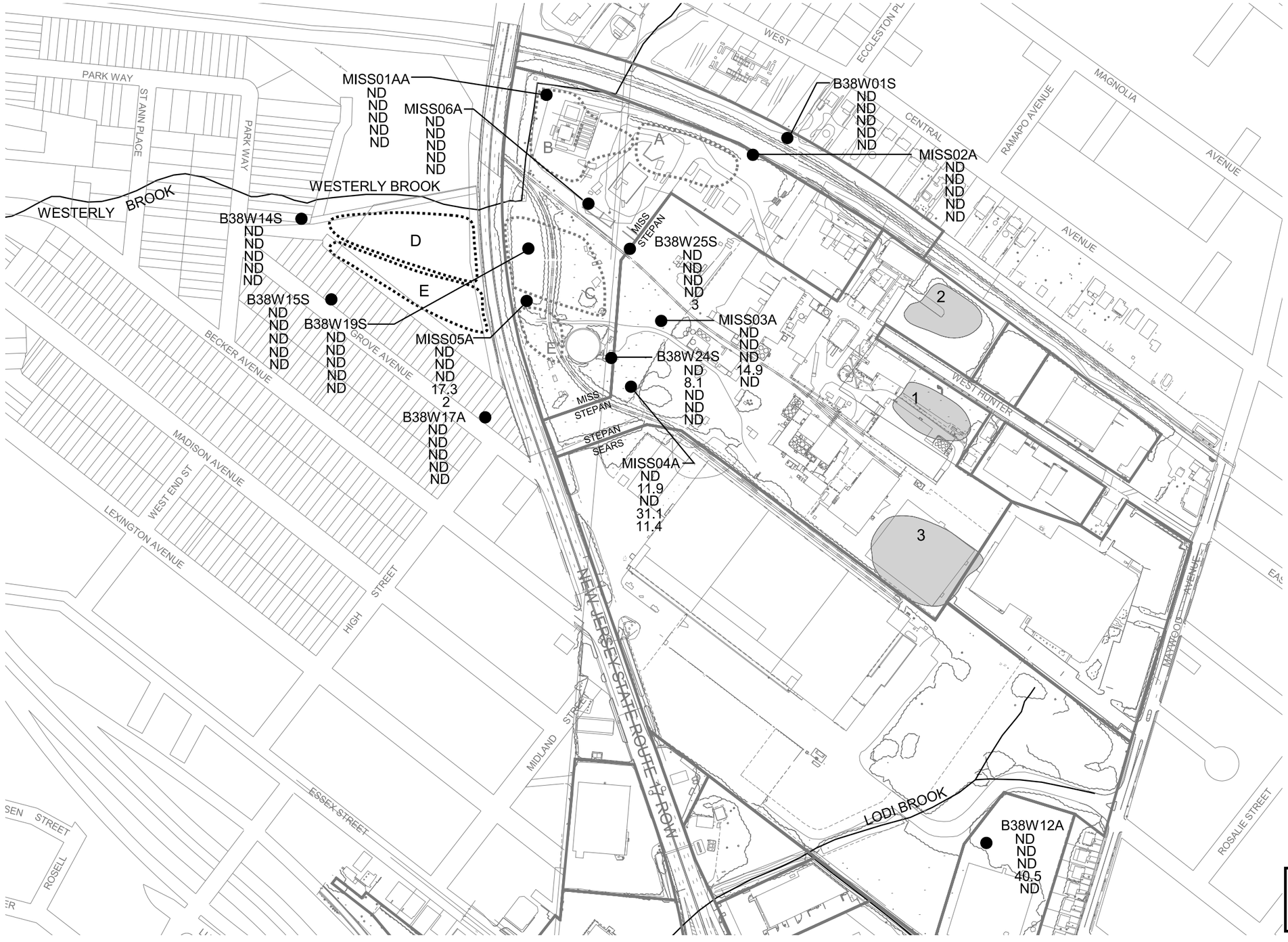
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-8
ARSENIC AND LITHIUM RESULTS IN OVERBURDEN MONITORING WELL GROUNDWATER SAMPLES
PHASE 1 - 2000

150 0 150 300 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Overburden-Phase1.apr LAYOUT: Arsenic&Lithium-Overburden-Phase1-17x11 5 February 2003



LEGEND:

B38W14S	OVERBURDEN WELL IDENTIFICATION
ND	WITH CERIUM CONCENTRATION
ND	WITH DYSPROSIUM CONCENTRATION
ND	WITH LANTHANUM CONCENTRATION
ND	WITH NEODYMIUM CONCENTRATION
ND	WITH YTTRIUM CONCENTRATION
A	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARDS (FEDERAL / STATE MCLS OR NJ GWQC) FOR RARE EARTH ELEMENTS DO NOT EXIST

REGION IX PRG FOR DYSPROSIUM = 7300 ug/L

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-9
RARE EARTH ELEMENT (REE) RESULTS FOR OVERBURDEN MONITORING WELL GROUNDWATER SAMPLES
PHASE 1 - 2000

150 0 150 300 Feet

US Army Corps of Engineers.

FUSRAP Maywood Superfund Site

Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004 \GWRI-Overburden-Phase1.apr LAYOUT: REE-Overburden-Phase1-17x11 August 3, 2004

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-10
TOTAL RADIUM AND TOTAL URANIUM RESULTS FOR BEDROCK MONITORING WELL GROUNDWATER SAMPLES PHASE 1 - 2000

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Bedrock-Phase1.apr LAYOUT: Radium&Uranium-Bedrock-Phase1-17x11 25 April 2003

LEGEND:

- B38W15D 1.26 — BEDROCK WELL IDENTIFICATION WITH NO RADIOLOGICAL EXCEEDANCE WITH TOTAL THORIUM CONCENTRATION
- B38W18D **61.18** — BEDROCK WELL IDENTIFICATION WITH RADIOLOGICAL EXCEEDANCE WITH TOTAL THORIUM CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

RESULTS IN PICOCURIES PER LITER (pCi/L)

GROUNDWATER STANDARD FOR TOTAL THORIUM DOES NOT EXIST

TOTAL THORIUM IS INCLUDED IN THE GROSS ALPHA STANDARD OF 15pCi\L

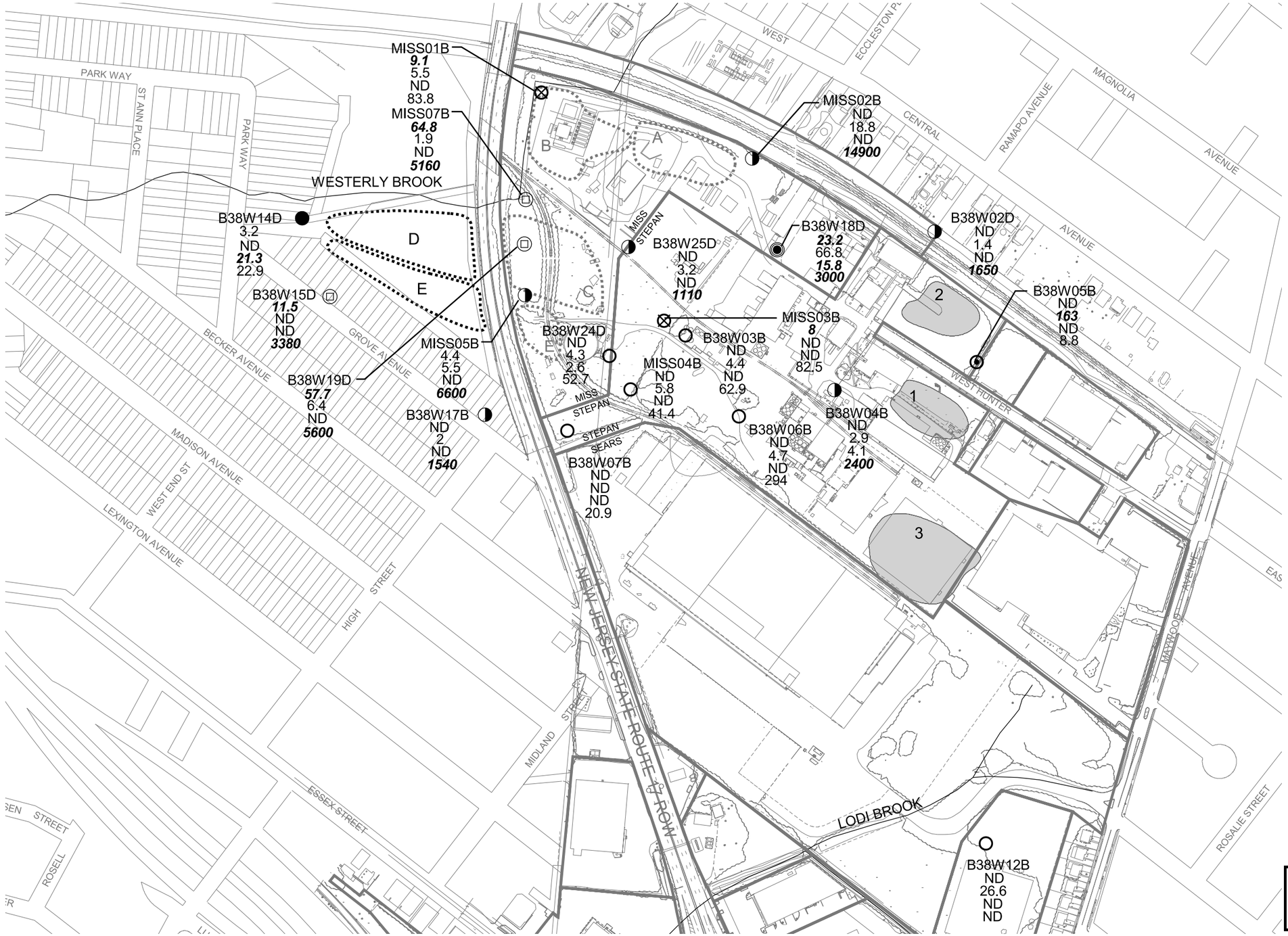
BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROSS ALPHA STANDARD

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-11
TOTAL THORIUM RESULTS IN BEDROCK
MONITORING WELL GROUNDWATER SAMPLES
PHASE 1 - 2000

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawubgs\GWRI-Bedrock-Phase1apr LAYOUT: Total-Thorium-Bedrock-Phase1-17x11 04 February 2003



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LEGEND:

B38W03B — BEDROCK WELL IDENTIFICATION WITH NO METAL EXCEEDANCES
ND — WITH ARSENIC CONCENTRATION
4.4 — WITH CHROMIUM CONCENTRATION
ND — WITH LEAD CONCENTRATION
62.9 — WITH LITHIUM CONCENTRATION

MISS03B — BEDROCK WELL IDENTIFICATION WITH ARSENIC EXCEEDANCE
8 — WITH ARSENIC CONCENTRATION
ND — WITH CHROMIUM CONCENTRATION
ND — WITH LEAD CONCENTRATION
82.5 — WITH LITHIUM CONCENTRATION

B38W05B — BEDROCK WELL IDENTIFICATION WITH CHROMIUM EXCEEDANCE
ND — WITH ARSENIC CONCENTRATION
163 — WITH CHROMIUM CONCENTRATION
ND — WITH LEAD CONCENTRATION
8.8 — WITH LITHIUM CONCENTRATION

B38W14D — BEDROCK WELL IDENTIFICATION WITH LEAD EXCEEDANCE
3.2 — WITH ARSENIC CONCENTRATION
ND — WITH CHROMIUM CONCENTRATION
21.3 — WITH LEAD CONCENTRATION
22.9 — WITH LITHIUM CONCENTRATION

B38W04B — BEDROCK WELL IDENTIFICATION WITH LITHIUM EXCEEDANCE
ND — WITH ARSENIC CONCENTRATION
2.9 — WITH CHROMIUM CONCENTRATION
4.1 — WITH LEAD CONCENTRATION
2400 — WITH LITHIUM CONCENTRATION

MISS07B — BEDROCK WELL IDENTIFICATION WITH ARSENIC AND LITHIUM EXCEEDANCES
64.8 — WITH ARSENIC CONCENTRATION
1.9 — WITH CHROMIUM CONCENTRATION
ND — WITH LEAD CONCENTRATION
5160 — WITH LITHIUM CONCENTRATION

B38W18D — BEDROCK WELL IDENTIFICATION WITH ARSENIC, LEAD AND LITHIUM EXCEEDANCES
23.2 — WITH ARSENIC CONCENTRATION
66.8 — WITH CHROMIUM CONCENTRATION
15.8 — WITH LEAD CONCENTRATION
3000 — WITH LITHIUM CONCENTRATION

A — FORMER RETENTION POND

D — FORMER RETENTION POND - REMEDIATED

ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
ARSENIC = 8 NJPQL
CHROMIUM = 100 NJGWQC/STATE AND FEDERAL MCL
LEAD = 10 NJPQL
LITHIUM = 730 REGION IX TAPWATER PRG

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-12
ARSENIC, CHROMIUM, LEAD AND LITHIUM RESULTS FOR BEDROCK WELL GROUNDWATER SAMPLES PHASE 1 - 2000

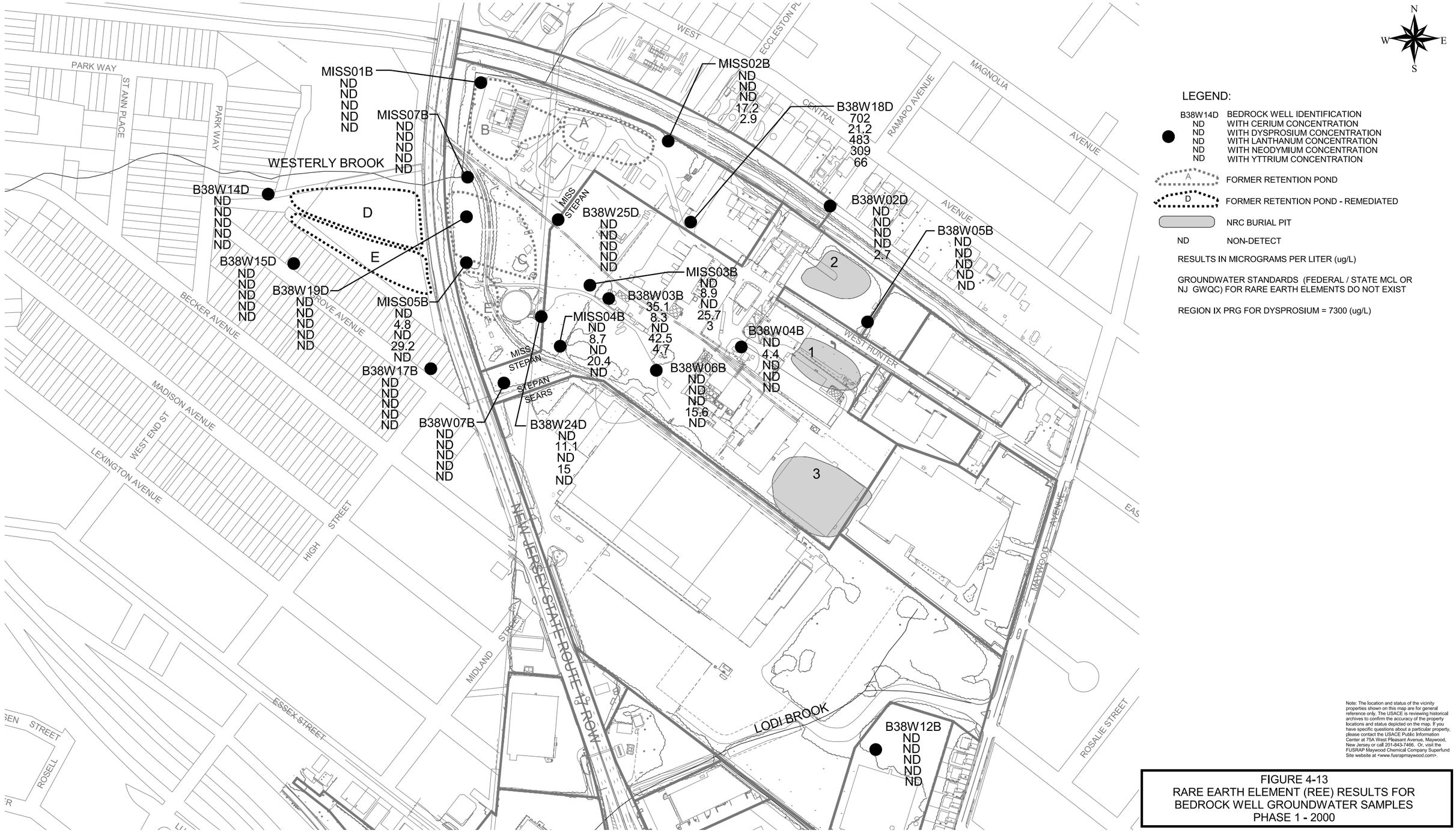
150 0 150 300 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Bedrock-Phase1.apr LAYOUT: Arsenic&Chromium&Lead&lithium-Bedrock-Phase1-17x11 5 February 2003



LEGEND:

- B38W14D BEDROCK WELL IDENTIFICATION
- ND WITH CERIUM CONCENTRATION
- ND WITH DYSPROSIUM CONCENTRATION
- ND WITH LANTHANUM CONCENTRATION
- ND WITH NEODYMIUM CONCENTRATION
- ND WITH YTTRIUM CONCENTRATION
- A FORMER RETENTION POND
- D FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND NON-DETECT

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARDS (FEDERAL / STATE MCL OR NJ GWQC) FOR RARE EARTH ELEMENTS DO NOT EXIST

REGION IX PRG FOR DYSPROSIUM = 7300 (ug/L)

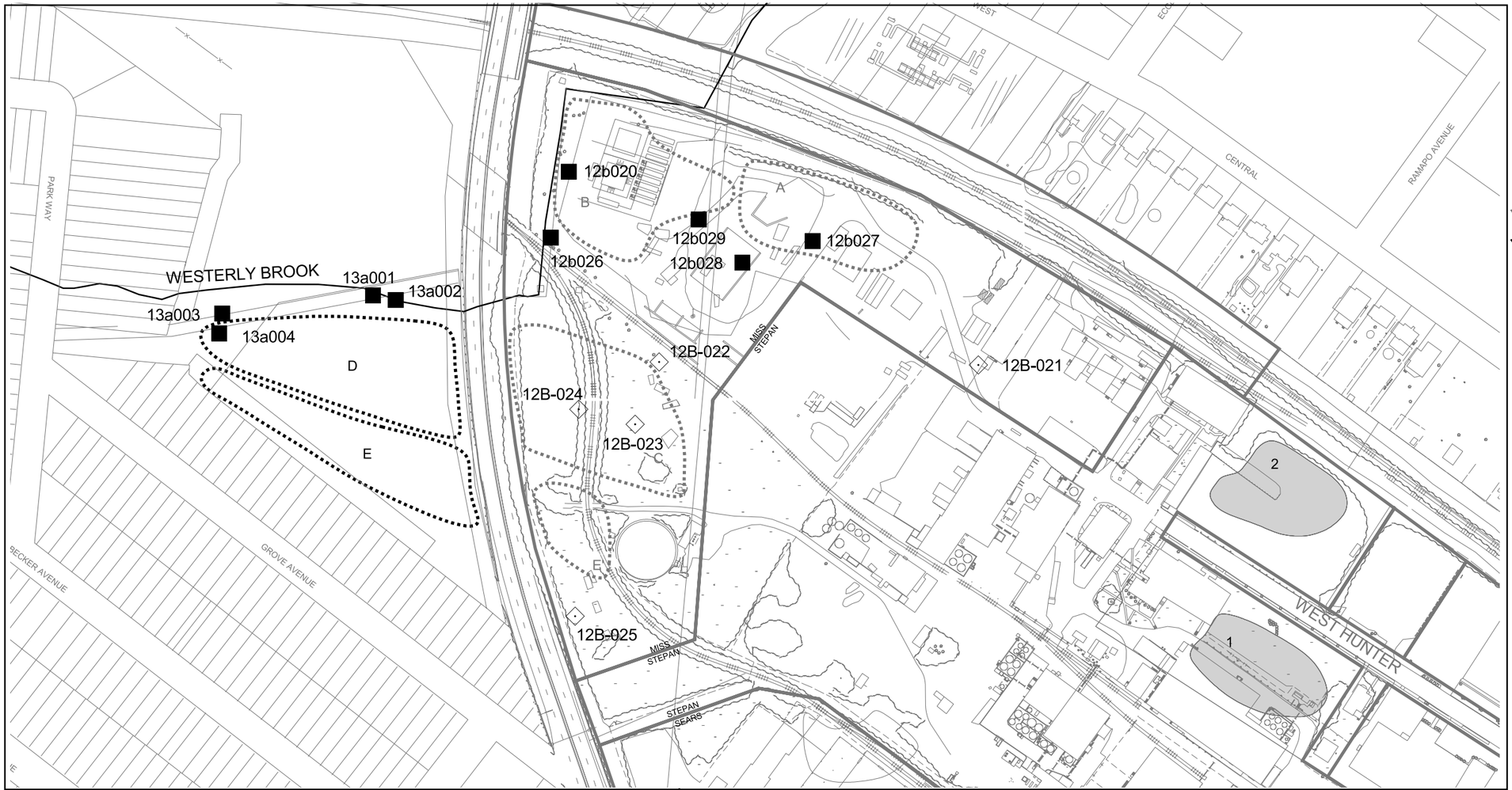
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

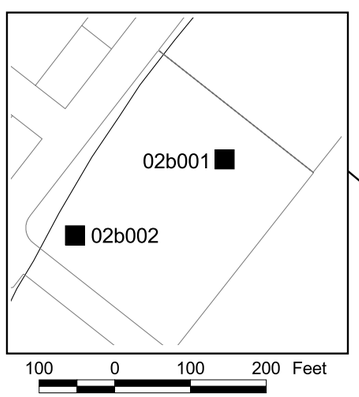
FIGURE 4-13
RARE EARTH ELEMENT (REE) RESULTS FOR BEDROCK WELL GROUNDWATER SAMPLES PHASE 1 - 2000

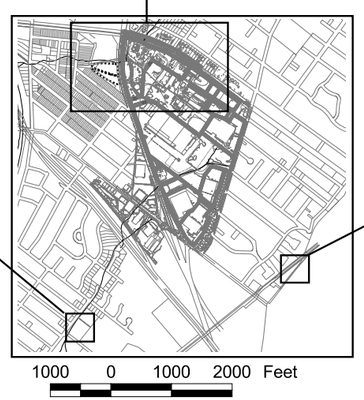
150 0 150 300 Feet

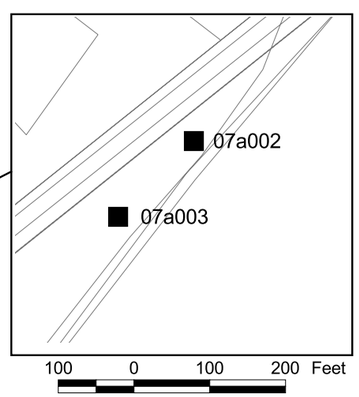
US Army Corps of Engineers. FUSRAP Maywood Superfund Site Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\GWRI-Bedrock-Phase1.apr LAYOUT: REE-Bedrock-Phase1-17x11 August 3, 2004









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LEGEND:

- 12b020 GEOPROBE WELL IDENTIFICATION
- 12b021 BATCH SORPTION BORING IDENTIFICATION
- A FORMER RETENTION POND
- D FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-14
GEOPROBE LOCATIONS
PHASE 2 - 2000 - 2002

US Army Corps of Engineers. FUSRAP Maywood Superfund Site Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Geoprobe-Phase2.apr LAYOUT: Geoprobe-Locations-Phase2-17x11 05 February 2003

LEGEND:

OBMW8 1.23 1.33	OVERBURDEN WELL IDENTIFICATION WITH NO RADIOLOGICAL EXCEEDANCES WITH TOTAL RADIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
OBMW10 **17.50** 3.92	OVERBURDEN WELL IDENTIFICATION WITH RADIUM EXCEEDANCE WITH TOTAL RADIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
WELL 5 1.02 **30.02**	OVERBURDEN WELL IDENTIFICATION WITH URANIUM EXCEEDANCE WITH TOTAL RADIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT
R	REJECTED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (pCi/L)
GROUNDWATER STANDARD (MCL) FOR:
TOTAL RADIUM = 5
TOTAL URANIUM = 30ug/l

REFER TO TABLE 4-31 FOR ACTIVITY AND ISOTOPIC MASS RESULTS FOR URANIUM.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-15
RADIUM AND URANIUM RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

200 0 200 400 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-16A
TOTAL THORIUM AND GROSS ALPHA RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES
PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Overburden.apr LAYOUT: 2_Gross-Beta-Overburden-34x22-Fig4-16B July 27 2004

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-17
ARSENIC, CHROMIUM, LEAD AND LITHIUM RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Overburden-Phase2.apr LAYOUT: Arsen&Chrom&Lead&Lithium-Overburden-Phase2-34x22 24 April 2003

LEGEND:

MW-7S 78.1 0.69 ND	OVERBURDEN WELL IDENTIFICATION WITH NO METAL EXCEEDANCES WITH BARIUM CONCENTRATION WITH CADMIUM CONCENTRATION WITH THALLIUM CONCENTRATION
MW-13S ***2310*** ND	OVERBURDEN WELL IDENTIFICATION WITH BARIUM EXCEEDANCE WITH BARIUM CONCENTRATION WITH CADMIUM CONCENTRATION WITH THALLIUM CONCENTRATION
OBMW13 446 ***16*** ND	OVERBURDEN WELL IDENTIFICATION WITH CADMIUM EXCEEDANCE WITH BARIUM CONCENTRATION WITH CADMIUM CONCENTRATION WITH THALLIUM CONCENTRATION
MW-3S 24.9 0.41 ***3.9***	OVERBURDEN WELL IDENTIFICATION WITH THALLIUM EXCEEDANCE WITH BARIUM CONCENTRATION WITH CADMIUM CONCENTRATION WITH THALLIUM CONCENTRATION
A	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)
GROUNDWATER STANDARD (MCL) FOR:
BARIUM = 2000 NJGWQC/STATE AND FEDERAL MCL
CADMIUM = 4 NJGWQC
THALLIUM = 2 STATE AND FEDERAL MCL

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-18
BARIUM, CADMIUM AND THALLIUM RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

200 0 200 400 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-19
RARE EARTH ELEMENTS (REE) RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental Inc.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-20
BENZENE AND TOTAL XYLENE RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc.

FIGURE 4-21
TETRACHLOROETHENE AND TRICHLOROETHENE RESULTS FOR OVERBURDEN GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

LEGEND:

- MW-4S — OVERBURDEN WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES
  - ND WITH 1,1-DCE CONCENTRATION
  - ND WITH 1,2-DCE CONCENTRATION
  - ND WITH VINYL CHLORIDE CONCENTRATION
- B38W14S — OVERBURDEN WELL IDENTIFICATION WITH 1,2-DCE EXCEEDANCE
  - ND WITH 1,1-DCE CONCENTRATION
  - **10** WITH 1,2-DCE CONCENTRATION
  - 0.1 WITH VINYL CHLORIDE CONCENTRATION
- PT-2S — OVERBURDEN WELL IDENTIFICATION WITH VINYL CHLORIDE EXCEEDANCE
  - ND WITH 1,1-DCE CONCENTRATION
  - 6 WITH 1,2-DCE CONCENTRATION
  - ***2*** WITH VINYL CHLORIDE CONCENTRATION
- A — FORMER RETENTION POND
- B — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
1,1-DICHLOROETHENE (1,1-DCE) = 2 NJPQL/STATE MCL
1,2-DICHLOROETHENE (1,2-DCE) = 10 NJGWQC
VINYL CHLORIDE = 2 STATE/FEDERAL MCL

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466, Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-22
1,1-DCE, 1,2-DCE AND VINYL CHLORIDE RESULTS FOR OVERBURDEN WELL GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

150 0 150 300 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Overburden-Phase2.apr LAYOUT: 1,1-DCE&1,2-DCE&VC-Overburden-Phase2-34x22 5 February 2003

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-23
TOTAL RADIUM AND TOTAL URANIUM RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

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FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

LEGEND:

- BRMW1 7.10 1.57 — BEDROCK WELL IDENTIFICATION WITH GROSS ALPHA BELOW STANDARDS WITH GROSS ALPHA CONCENTRATION WITH TOTAL THORIUM CONCENTRATION
- BRPZ-2RE 27.08 0.95 — BEDROCK WELL IDENTIFICATION WITH GROSS ALPHA EXCEEDING STANDARDS WITH GROSS ALPHA CONCENTRATION WITH TOTAL THORIUM CONCENTRATION
- B38W02D NA 3.55 — BEDROCK WELL IDENTIFICATION WITH GROSS ALPHA NOT ANALYZED AND TOTAL THORIUM RESULTS BELOW 15 pCi/L WITH GROSS ALPHA NOT ANALYZED WITH TOTAL THORIUM CONCENTRATION
- B38W18D NA 16.14 — BEDROCK WELL IDENTIFICATION WITH GROSS ALPHA NOT ANALYZED AND TOTAL THORIUM RESULTS GREATER THAN 15 pCi/L WITH GROSS ALPHA NOT ANALYZED WITH TOTAL THORIUM CONCENTRATION
- FORMER RETENTION POND
- FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

ND NON-DETECT
NA NOT ANALYZED
R REJECTED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (pCi/L)

GROUNDWATER STANDARD (MCL) FOR:
GROSS ALPHA = 15 STATE/FEDERAL MCL
NO MCL FOR TOTAL THORIUM AND/OR INDIVIDUAL ISOTOPES

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466, Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-24A
TOTAL THORIUM AND GROSS ALPHA RESULTS FOR BEDROCK GROUNDWATER SAMPLES
PHASE 2 - 2000 - 2001

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

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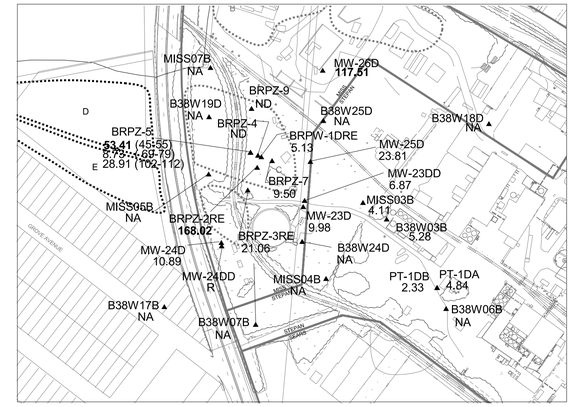
LEGEND:

- PT-1DB 1.39 — BEDROCK WELL IDENTIFICATION WITH ADJUSTED GROSS BETA BELOW 50 pCi/L WITH ADJUSTED GROSS BETA CONCENTRATION
- 1 — FORMER RETENTION POND
- 2 — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

RESULTS FOR GROSS BETA CONCENTRATION IN PICOCURIES PER LITER (pCi/L)

BOLD CONCENTRATION DENOTES EXCEEDANCE OF ADJUSTED GROSS BETA STANDARD OF 50 pCi/L.

MW-19DD 15.08
MW-19D 1.62
MW-8D 1.06
MW-7D 1.62
MW-1D 2.62
MW-5D 1.47
MW-4D 0.81
MISS01B NA
MW-3D ND
MW-20D 9.07
MISS02B NA
B38W14D NA
B38W02D NA
MW-6D 1.76
B38W15D NA
BRMW15 4.03
B38W04B 0.81
B38W05B NA
MW-2D 3.14
BRMW16 3.20
MW-9D 3.34
BRMW17 1.60
MW-10D 2.47
BRMW1 4.07
BRMW10 2.29
BRMW13 ND
BRMW11 2.80
BRMW14 3.65
BRMW6 2.34
BRMW3 1.43
MW-12D 5.52
B38W12B NA
MW-13D **68.98**
BRMW8 2.01
BRMW12 1.26
BRMW9 1.10
MW-18D 4.30
MW-14D 2.46
MW-15D 13.77
MW-17D 0.97
MW-16D 5.91



150 0 150 300 Feet

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466, Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-24B
GROSS BETA RESULTS FOR BEDROCK GROUNDWATER SAMPLES
PHASE 2 (2000 - 2001)

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

LEGEND:

MW-6D 4.1 3 18.5 — BEDROCK WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES
WITH ARSENIC CONCENTRATION
WITH CHROMIUM CONCENTRATION
WITH LITHIUM CONCENTRATION

B38W05B ND 173 9.7 — BEDROCK WELL IDENTIFICATION WITH CHROMIUM EXCEEDANCE
WITH ARSENIC CONCENTRATION
WITH CHROMIUM CONCENTRATION
WITH LITHIUM CONCENTRATION

BRPZ-9 ND 9.6 4130 — BEDROCK WELL IDENTIFICATION WITH LITHIUM EXCEEDANCE
WITH DETECTED ARSENIC CONCENTRATION
WITH DETECTED CHROMIUM CONCENTRATION
WITH DETECTED LITHIUM CONCENTRATION

B38W19D 89.1 4.1 6920 — BEDROCK WELL IDENTIFICATION WITH ARSENIC AND LITHIUM EXCEEDANCES
WITH ARSENIC CONCENTRATION
WITH CHROMIUM CONCENTRATION
WITH LITHIUM CONCENTRATION

FORMER RETENTION POND

FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

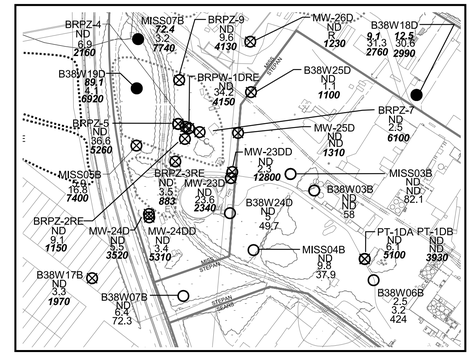
ND NON-DETECT

R REJECTED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
ARSENIC = 8 NJPQL
CHROMIUM = 100 NJGWQC/STATE AND FEDERAL MCL
LITHIUM = 730 REGION IX PRG



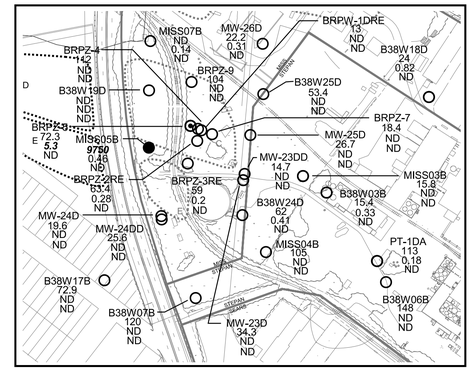
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-25
ARSENIC, BORON, CHROMIUM AND LITHIUM RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc.



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LEGEND:

MW-1D		BEDROCK WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES
242		WITH BARIUM CONCENTRATION
ND		WITH BERYLLIUM CONCENTRATION
ND		WITH THALLIUM CONCENTRATION
MISS05B		BEDROCK WELL IDENTIFICATION WITH BARIUM EXCEEDANCE
9750		WITH BARIUM CONCENTRATION
0.46		WITH BERYLLIUM CONCENTRATION
ND		WITH THALLIUM CONCENTRATION
BRPZ-5		BEDROCK WELL IDENTIFICATION WITH BERYLLIUM EXCEEDANCE
72.3		WITH BARIUM CONCENTRATION
5.3		WITH BERYLLIUM CONCENTRATION
ND		WITH THALLIUM CONCENTRATION
BRMW13		BEDROCK WELL IDENTIFICATION WITH THALLIM EXCEEDANCE
85		WITH BARIUM CONCENTRATION
ND		WITH BERYLLIUM CONCENTRATION
4.4		WITH THALLIUM CONCENTRATION

FORMER RETENTION POND

FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

ND NON-DETECT

ITALICIZED CONCENTRATIONS DENOTE EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
BARIUM = 2000 NJGWQC/STATE & FEDERAL MCL
BERYLLIUM = 4 STATE/FEDERAL MCL
THALLIUM = 2 STATE/FEDERAL MCL

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-26
BARIUM, BERYLLIUM AND THALLIUM RESULTS FOR BEDROCK GROUNDWATER SAMPLES
PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

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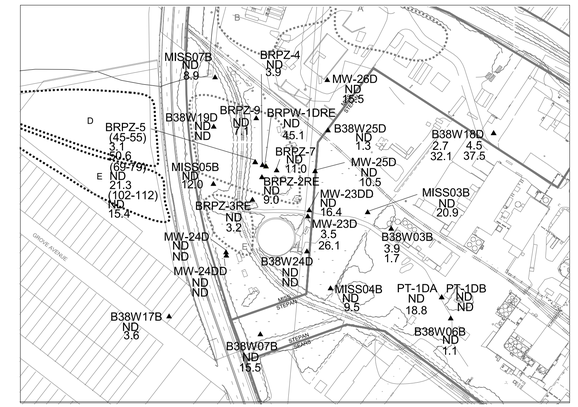
LEGEND:
MW-8D SAMPLE LOCATION
ND WITH LEAD CONCENTRATION
8.7 WITH NICKEL CONCENTRATION

1 FORMER RETENTION POND
2 FORMER RETENTION POND - REMEDIATED
NRC BURIAL PIT
ND NON-DETECT
NA NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF FEDERAL / STATE MCL OR NJ GWQC / PCL

NJ PQL FOR LEAD = 10 ug/L
NJ GWQC FOR NICKEL = 100 ug/L

MW-19DD ND 4.5
MW-19D ND 4.8
MW-8D ND 8.7
MW-7D ND 5.6
MW-1D ND 11.0
MW-5D ND 2.7
MW-4D ND ND
MISS01B ND ND
MW-3D 33.9 6.6
MW-20D ND 14.6
MISS02B ND ND 8.4 10.8
B38W14D ND 9.1
B38W15D 3.8 10.6
B38W02D ND 16.8
BRMW15 ND 10.2
MW-6D ND 8.6
MW-2D ND 7.4
B38W05B ND 35.2
B38W04B 3.8 2.1, 3.4
BRMW16 ND ND
MW-9D ND ND
BRMW17 ND 11.6
MW-10D ND 12.3
BRMW1 ND 19.2
BRMW10 ND 9.6
BRMW11 ND 15.4
BRMW13 ND ND
BRMW14 ND 13.0
BRMW6 ND 27.2
BRMW3 ND ND
MW-12D ND 19.0
B38W12B 160.0 ND
MW-13D ND 8.9
BRMW8 ND 9.5
BRMW12 ND 1.7
BRMW9 ND 72.8
MW-18D ND ND
MW-14D ND 4.8
MW-15D ND ND
MW-17D ND 1.7
MW-16D ND ND



150 0 150 300 Feet

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466, Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE4-26A
LEAD AND NICKEL RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 (2000-2001)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

MW-19D ND ND ND ND
MW-19DD ND ND ND ND ND ND
MW-8D ND 3.8 ND ND ND
MW-7D ND ND ND 39.2 ND ND
MW-1D 59.6 ND 40.9 ND ND
MW-5D ND ND ND ND ND ND
MW-4D ND ND ND ND ND
SADDLE RIVER
WESTERLY BROOK
B38W14D ND ND ND ND ND ND
B38W15D ND ND ND ND ND ND
MW-6D ND ND ND ND ND
MW-2D ND ND ND ND ND ND
B38W02D ND 3.7 ND ND ND
BRMW15 ND ND ND ND ND
B38W05B ND ND ND ND ND
BRMW16 ND ND ND ND ND ND
MW-9D ND ND ND ND ND ND
MW-10D ND ND ND ND ND ND
BRMW17 ND ND ND ND ND ND
BRMW1 ND ND ND ND ND ND
BRMW10 ND ND ND ND ND ND
BRMW11 ND ND ND ND ND ND
BRMW14 ND ND ND ND ND ND
BRMW13 ND ND ND ND ND ND
BRMW6 ND ND ND ND ND ND
BRMW3 ND ND ND ND ND ND
B38W12B ND ND ND ND ND ND
MW-12D ND ND ND ND ND ND
MW-13D ND ND ND ND ND ND
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BRMW8 ND ND ND ND ND ND
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BRMW9 ND ND ND ND ND ND
MW-18D ND ND ND ND ND ND
MW-14D ND ND ND ND ND ND
MW-15D ND ND ND ND ND ND
MW-17D 51.6 3.2 ND ND ND
MW-16D ND ND ND ND ND ND
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MAY AVENUE
GROVE AVENUE
MIDDLESEX TURNPIKE
MIDDLESEX & LAKE
I-80
MIDDLESEX TOWNSHIP
MAYWOOD
LINCOLN AVE
LEXINGTON AVE
CENTRAL AVE
WASHINGTON AVE
HOWARD AVE
HOOVER AVE
ROOSEVELT AVE
MAYWOOD AVE
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ESSEX ST
ORCHARD ST
ELM ST
OAK ST
PARK AVE
WEST AVE
CHESTNUT ST
WALNUT ST
CYPRESS AVE
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ROCKWELL AVE
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MAPLE BLVD
MAPLE PKWY
MAPLE HWY
MAPLE EXPY
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LEGEND:

- MISS07B — BEDROCK WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCES
  - 0.2 WITH BENZENE CONCENTRATION
  - 0.3 WITH TOLUENE CONCENTRATION
  - 0.4 WITH XYLENE CONCENTRATION
- BRPZ-9 — BEDROCK WELL IDENTIFICATION WITH BENZENE EXCEEDANCE
  - ***1500*** WITH BENZENE CONCENTRATION
  - 170 WITH TOLUENE CONCENTRATION
  - ND WITH XYLENE CONCENTRATION
- B38W04B — BEDROCK WELL IDENTIFICATION WITH TOTAL XYLENE EXCEEDANCE
  - ND WITH BENZENE CONCENTRATION
  - 2 WITH TOLUENE CONCENTRATION
  - ***460*** WITH XYLENE CONCENTRATION
- BRPZ-5 — BEDROCK WELL IDENTIFICATION WITH BENZENE AND TOLUENE EXCEEDANCES
  - ***290*** WITH BENZENE CONCENTRATION
  - ***89*** WITH TOLUENE CONCENTRATION
  - 0.6 WITH XYLENE CONCENTRATION
- A — FORMER RETENTION POND
- B — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

ND NON-DETECT

ITALICIZED CONCENTRATIONS DENOTE EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)

GROUNDWATER STANDARD (MCL) FOR:
BENZENE = 1 NJPOL/STATE MCL
TOLUENE = 1000 NJGWQC/STATE AND FEDERAL MCL
TOTAL XYLENE = 40 NJGWQC

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-28
BENZENE, TOLUENE AND XYLENE RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

150 0 150 300 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

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Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

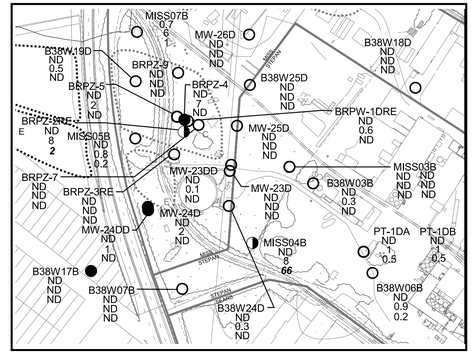
FIGURE 4-29
TETRACHLOROETHENE & TRICHLOROETHENE RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Bedrock-Phase2.apr LAYOUT: PCE&TCE-Bedrock-Phase2-34x22 11 February 2003



100 0 100 200 Feet

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LEGEND:

- MISS07B 0.7 6 1 — BEDROCK WELL IDENTIFICATION WITH NO GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- BRPZ-4 25 7 ND — BEDROCK WELL IDENTIFICATION WITH 1,1-DICHLOROETHENE GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- MW-7D 1 190 1 — BEDROCK WELL IDENTIFICATION WITH 1,2-DICHLOROETHENE GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- BRPZ-2RE ND 8 2 — BEDROCK WELL IDENTIFICATION WITH VINYL CHLORIDE GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- B38W14D 4 50 ND — BEDROCK WELL IDENTIFICATION WITH 1,1-DICHLOROETHENE & 1,2-DICHLOROETHENE GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- MW-8D 0.4 270 2 — BEDROCK WELL IDENTIFICATION WITH 1,2-DICHLOROETHENE & VINYL CHLORIDE GROUNDWATER EXCEEDANCE; WITH 1,1-DICLOROETHENE CONCENTRATION; WITH 1,2-DICHLOROETHENE CONCENTRATION; WITH VINYL CHLORIDE CONCENTRATION
- A — FORMER RETENTION POND
- B — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

ITALICIZED CONCENTRATIONS DENOTE EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN MICROGRAMS PER LITER (ug/L)
GROUNDWATER STANDARD (MCL) FOR:
1,1-DICHLOROETHENE = 2 NJPDWS/STATE MCL
1,2-DICHLOROETHENE = 10 NJDWQC
VINYL CHLORIDE = 2 STATE/FEDERAL MCL

150 0 150 300 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-30
1,1-DICHLOROETHENE, 1,2-DICHLOROETHENE AND VINYL CHLORIDE RESULTS FOR BEDROCK GROUNDWATER SAMPLES PHASE 2 - 2000 - 2002

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Shaw Stone & Webster, Inc.

FUSRAP
Maywood Superfund Site

Groundwater Remedial Investigation Report

Volume 3
Figures 4-31 through 5-29

Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

Prepared for:

US Army Corps
of Engineers®

Contract No. DACW41-99-D-9001

July 2005, Revision 4

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LEGEND:

CB-1 0.38 1.16 6.56	SURFACE WATER SAMPLE LOCATION WITH NO EXCEEDANCES WITH TOTAL RADIUM CONCENTRATION WITH TOTAL THORIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
LB-7 **6.07** 0.93 1.18	SURFACE WATER SAMPLE LOCATION WITH TOTAL RADIUM EXCEEDANCE WITH TOTAL RADIUM CONCENTRATION WITH TOTAL THORIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT
NA	NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (pCi/L)

RADIOLOGICAL CLEAN-UP CRITERIA FOR:
TOTAL RADIUM = 5 pCi/L
TOTAL THORIUM = NO MCL
TOTAL URANIUM = 30 ug/L

REFER TO TABLES 4-49, 4-53 AND 4-56 FOR ACTIVITY AND ISOTOPIC MASS RESULTS FOR URANIUM.

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-31
RADIOLOGICAL RESULTS FOR SURFACE WATER SAMPLES
PHASE 2 - 2000

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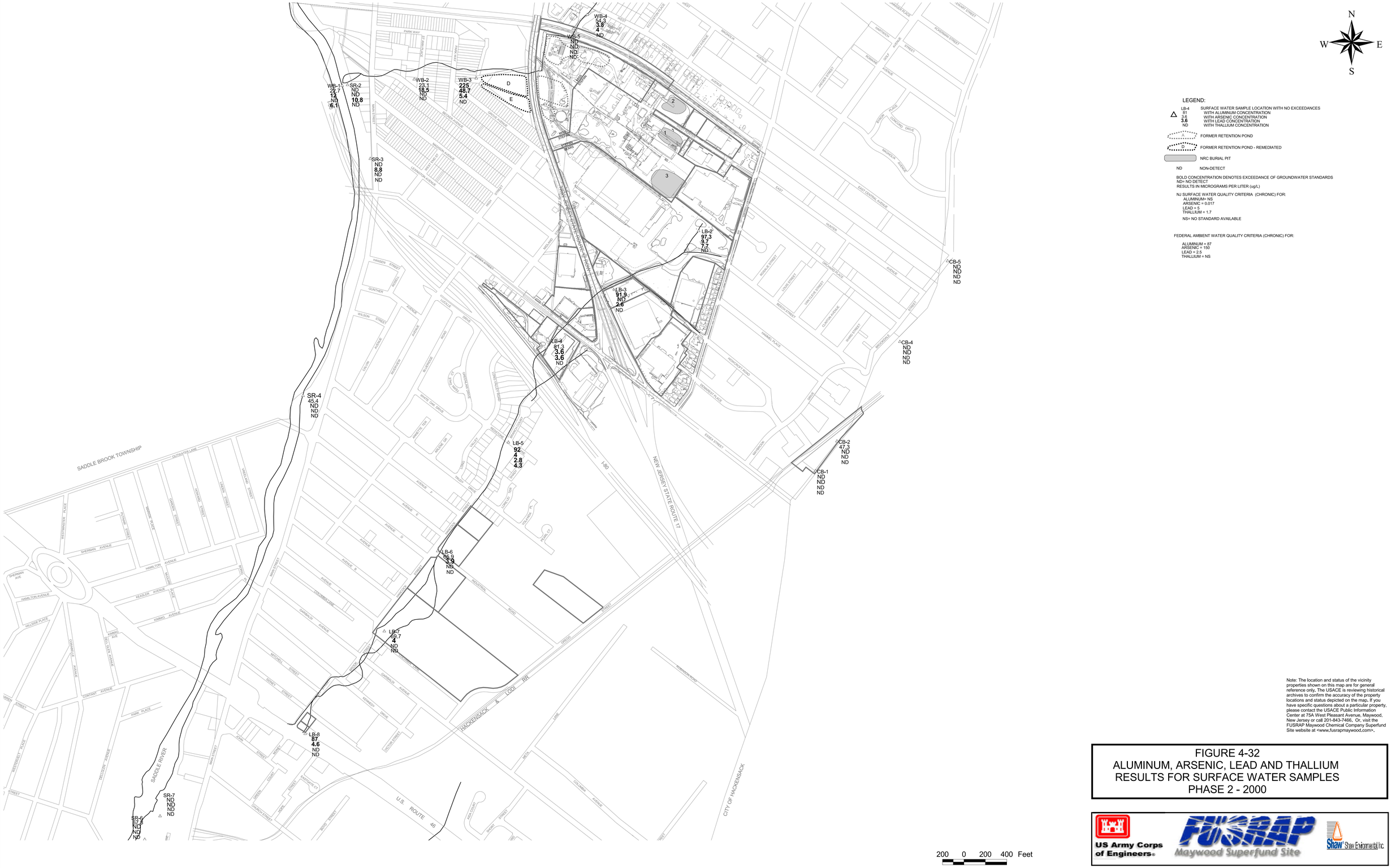

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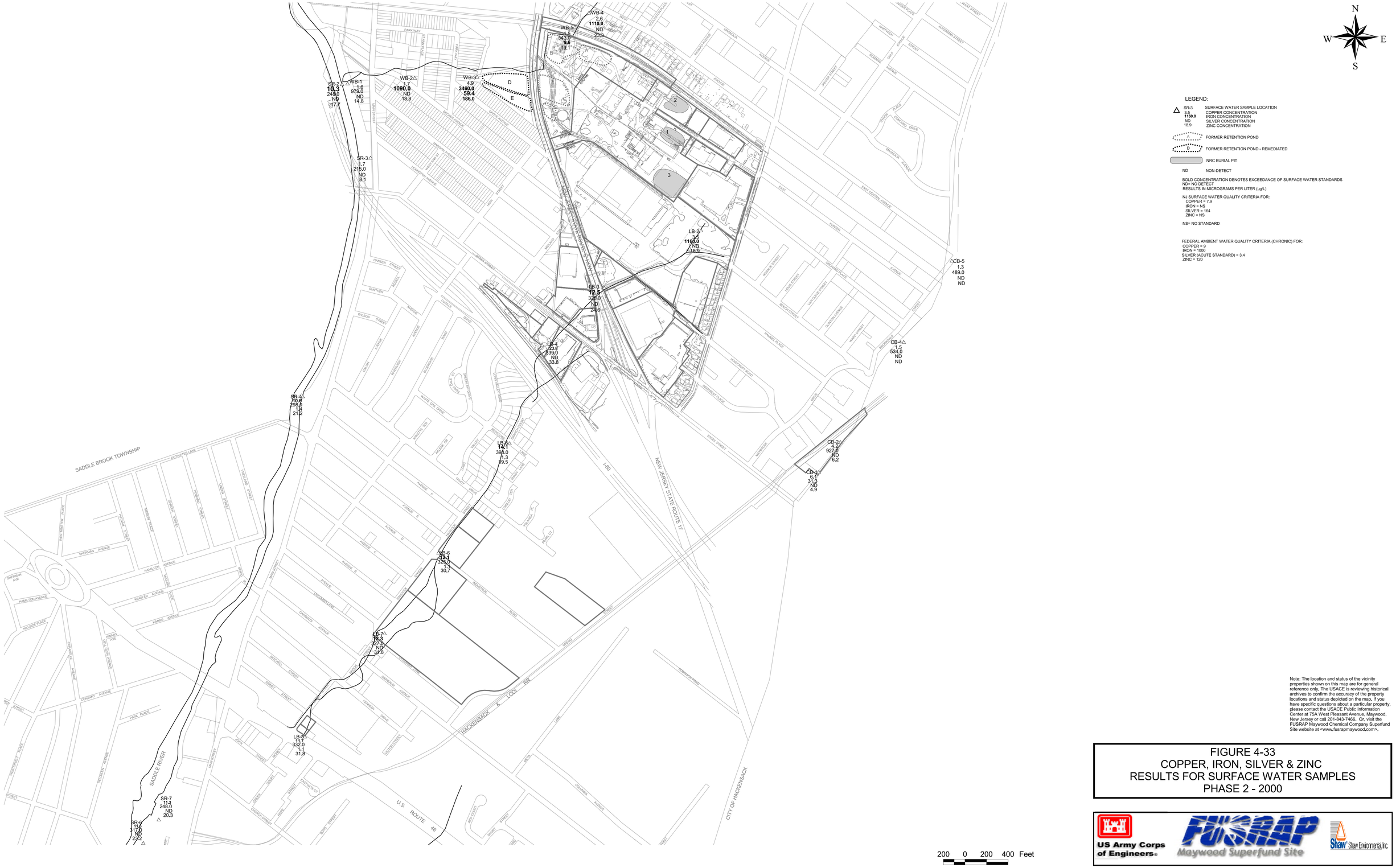
FIGURE 4-32
ALUMINUM, ARSENIC, LEAD AND THALLIUM RESULTS FOR SURFACE WATER SAMPLES PHASE 2 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stew Environmental Inc


N
W
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LEGEND:
SR-3 SURFACE WATER SAMPLE LOCATION
3.5 COPPER CONCENTRATION
1160.0 IRON CONCENTRATION
ND SILVER CONCENTRATION
18.9 ZINC CONCENTRATION
FORMER RETENTION POND
FORMER RETENTION POND - REMEDIATED
NRC BURIAL PIT
ND NON-DETECT
BOLD CONCENTRATION DENOTES EXCEEDANCE OF SURFACE WATER STANDARDS
ND= NO DETECT
RESULTS IN MICROGRAMS PER LITER (ug/L)
NJ SURFACE WATER QUALITY CRITERIA FOR:
COPPER = 7.9
IRON = NS
SILVER = 164
ZINC = NS
NS= NO STANDARD
FEDERAL AMBIENT WATER QUALITY CRITERIA (CHRONIC) FOR:
COPPER = 9
IRON = 1000
SILVER (ACUTE STANDARD) = 3.4
ZINC = 120
SR-2△ 10.3 248.0 ND 17.7
WB-1 1.6 979.0 ND 14.8
WB-2△ 1.7 1090.0 ND 18.8
WB-3△ 4.9 3460.0 59.4 186.0
WB-4 2.6 1110.0 ND 23.3
WB-5△ 3.5 543.0 8.6 19.1
SR-3△ 1.7 215.0 ND 8.1
LB-2△ 3.5 1160.0 ND 18.9
LB-3 12.5 320.0 ND 24.6
LB-4 23.8 339.0 ND 33.8
CB-5△ 1.3 489.0 ND ND
CB-4△ 1.5 534.0 ND ND
CB-2△ 4.2 927.0 ND 6.2
CB-1△ 8.1 31.3 ND 4.9
SR-4△ 10.6 798.0 1.6 21.2
LB-5△ 14.1 398.0 1.3 39.5
LB-6 12.1 325.0 1.1 30.7
LB-7△ 12.3 727.0 ND 37.8
LB-8△ 11.7 332.0 1.1 31.8
SR-7 11.3 248.0 ND 20.3
SR-6 11.6 317.0 ND 23.2
SADDLE BROOK TOWNSHIP
SADDLE RIVER
HACKENSACK & LODI RR
NEW JERSEY STATE ROUTE 17
U.S. ROUTE 46
CITY OF HACKENSACK
1-80
MAYWOOD AVENUE
MAIN STREET
GIRARD AVENUE
EAST CENTRAL AVENUE
RIVER DRIVE
LINCOLN AVENUE
PARK WAY
ESSEX STREET
HANSEN STREET
WILSON STREET
LUCILE DRIVE
CALVIN AVENUE
RIVERVIEW AVENUE
BALDRIDGE ROAD
WHITE OAK DRIVE
GREENVIEW DRIVE
LONG HILL ROAD
HAMILTON AVENUE
KEASBEY AVENUE
KIMMO AVENUE
HELLIGE PLACE
CONSTANT AVENUE
PARK PLACE
WESTERVELT PLACE
DECATUR AVENUE
OUTBACK LANE
WESTMINSTER PLACE
SHERMAN AVENUE
THOMAS STREET
TIMPSON PLACE
VERDEN STREET
HOWARD STREET
LINCOLN STREET
WAKEMAN STREET
SHERMAN AVE
HAMILTON AVENUE
HELLIGE PLACE
KIMMO AVE
DEVLIN PARK DRIVE
COMMERCE AVENUE
CONSTANT AVENUE
PARK PLACE
WESTERVELT PLACE
DECATUR AVENUE
MAIN STREET
GARDENIA AVENUE
COLUMBIA AVENUE
KENNEDY DRIVE
KITCHELL STREET
SIDNEY STREET
OAK STREET
ALDER STREET
CHURCH STREET
GREEN COURT
MARTHA CT
BOYD STREET
MILLER STREET
TROUT DRIVE
HELENE DR
WALNUT DR
ROBERT DR
ROBERT PL
ORIENT WAY
ORIENT TERR
HOLLAND PL
PEARL CT
AVENUE A
AVENUE B
AVENUE C
AVENUE D
AVENUE E
AVENUE F
MAYWOOD-LODI TURNPIKE
MAYWOOD-STATION ROAD
INDUSTRIAL ROAD
ORIENT STREET
HOWARD STREET
MAYWOOD-STATION ROAD
MAYWOOD LANE
MAYWOOD-STATION ROAD
MAYWOOD-STATION ROAD
MAYWOOD-STATION ROAD

LEGEND:

- LB-6 2.05 0.34 — SEDIMENT SAMPLE LOCATION WITH NO EXCEEDANCES WITH RA-226 + TH-232 CONCENTRATION WITH U-238 CONCENTRATION
- LB-1 **31.89** 5.76 — SEDIMENT SAMPLE LOCATION WITH RA-226 + TH-232 EXCEEDANCE WITH RA-226 + TH-232 CONCENTRATION WITH U-238 CONCENTRATION
- FORMER RETENTION POND
- FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF RADIOLOGICAL CLEAN-UP CRITERIA

RESULTS IN PICOCURIES PER GRAM (pCi/g)

RADIOLOGICAL CLEAN-UP CRITERIA FOR:
RA-226 + TH-232 = 5
U-238 = 50

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466, Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-34
RA-226 + TH-232 AND U-238 RESULTS FOR SEDIMENT SAMPLES
PHASE 2 - 2000

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

N
W E
S

LEGEND:

SR-6	SEDIMENT SAMPLE LOCATION
0.94	WITH ARSENIC CONCENTRATION
0.14	WITH CADMIUM CONCENTRATION
5	WITH CHROMIUM CONCENTRATION
8.8	WITH COPPER CONCENTRATION
13.9	WITH LEAD CONCENTRATION
4	WITH NICKEL CONCENTRATION
42.2	WITH ZINC CONCENTRATION
A	FORMER RETENTION POND
B	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT
R	REJECTED

As = ARSENIC
Cd = CADIUM
Cr = CHROMIUM
Cu = COPPER
Pb = LEAD
Ni = NICKEL
Zn = ZINC

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

NJ LOWEST OBSERVED EFFECTS (LOEL) FOR:
ARSENIC = 6
CADIUM = 0.6
CHROMIUM = 26
COPPER = 16
LEAD = 31
NICKEL = 16
ZINC = 120

EPA CONSENSUS BASED TEC
ARSENIC = 9.79
CADIUM = 0.99
CHROMIUM = 43.4
COPPER = 31.6
LEAD = 35.8
NICKEL = 22.7
ZINC = 121

BOLD INDICATED EXCEEDANCE OF LOWEST SEDIMENT QUALITY CRITERIA

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-35
ARSENIC, CADMIUM, CHROMIUM, COPPER, LEAD, NICKEL AND ZINC RESULTS FOR SEDIMENT SAMPLES PHASE 2 - 2000

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

LEGEND:

CB-3	SEDIMENT SAMPLE LOCATION
30.3	WITH CERIUM CONCENTRATION
ND	WITH DYSPROSIUM CONCENTRATION
50.8	WITH LANTHANUM CONCENTRATION
15.6	WITH NEODYMIUM CONCENTRATION
10.3	WITH YTTRIUM CONCENTRATION

A — FORMER RETENTION POND

D — FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

ND NON-DETECT

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

FEDERAL / STATE SEDIMENT STANDARDS FOR RARE EARTH ELEMENTS (REE) DO NOT EXIST

REGION IX PRG FOR RESIDENTIAL SOIL = 16,000 mg/kg

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-36
RARE EARTH ELEMENTS (REE) RESULTS FOR SEDIMENT SAMPLES
PHASE 2 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

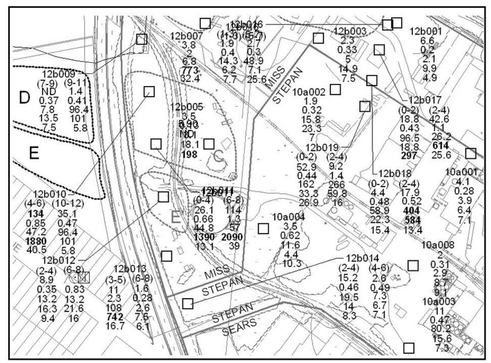
Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\ GWRI-Sediment-Phase2.apr LAYOUT: Ree-Sediment-Phase2-34x22 August 5 2004

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-37
COMBINED RA-226 + TH-232 AND U-238 RESULTS FOR GEOPROBE & MONITORING WELL SOIL SAMPLES PHASE 1 AND 2 - 2000 - 2002

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.



LEGEND:

- 12b009 / 2.6 / 0.37 / 7.8 / 13.5 / 7.5 — SOIL SAMPLE IDENTIFICATION WITH CONCENTRATION WITH ARSENIC CONCENTRATION WITH BERYLLIUM CONCENTRATION WITH LEAD CONCENTRATION WITH LITHIUM CONCENTRATION WITH NICKEL CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SITE SPECIFIC SSLs
ARSENIC = 122
BERYLLIUM = 63
LEAD = 400
LITHIUM = 194
NICKEL = 214

BOLD DENOTES EXCEEDANCE OF SSL CRITERIA

N W E S

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7488. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-38A
ARSENIC, BERYLLIUM, LEAD, LITHIUM AND NICKEL RESULTS FOR GEOPROBE SOIL SAMPLES PHASE 1 - 2000

US Army Corps of Engineers® — FUSRAP Maywood Superfund Site — Shaw Environmental, Inc.

LEGEND:

12b002 40.0 ND 9.40 ND	SOIL SAMPLE IDENTIFICATION WITH CONCENTRATION WITH BARIUM CONCENTRATION WITH CADMIUM CONCENTRATION WITH CHROMIUM CONCENTRATION WITH THALLIUM CONCENTRATION
D	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT
R	REJECTED

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SITE SPECIFIC SSLs
BARIUM= 1600
CADMIUM = 8
CHROMIUM (TOTAL) = 242
THALLIUM = 1.2

BOLD INDICATES EXCEEDANCE OF SSL CRITERA

N W E S

18a001 (2-4) (8-10) 34.5 48.5 0.18 0.10 13.00 9.30 ND ND
18a002 (0-2) (2-4) 27.1 14.8 0.37 0.17 7.40 1.20 ND ND
18a003 (0-2) (2-4) 60.7 47.5 0.15 0.07 12.40 10.30 ND ND
18a004 (0-3) (3-6) 22.1 14.9 0.20 ND 3.50 1.60 ND ND
12b004 63.9 0.10 45.40 ND
12b002 40.0 ND 9.40 ND
12b015 (0-2) (2-4) 62.2 45.1 0.32 ND 19.50 20.00 ND ND
12b006 21.8 0.05 **356.00** ND
10a007 46.2 ND 11.30 ND
11b001 39.5 0.05 10.30 ND
10a005 45.4 ND ND 12.70
10a006 44.4 ND 10.00 ND
09a004 49.6 ND 111.00 ND
09a009 (2-4) (4-6) 51.6 77.7 ND ND 11.90 14.20 ND ND
11a001 51.2 ND 10.50 ND
09a005 53.1 ND 6.60 ND
09a010 (2-4) (0-2) 102.0 77.6 0.06 0.04 92.90 21.90 ND ND
09a003 63.6 ND 6.50 ND
09a007 (1-3) (3-5) 304.0 179.0 ND ND **490.00** 163.00 ND 0.43
09a008 (2-4) (4-6) 367.0 428.0 0.17 0.44 117.00 15.80 ND ND
06d001 198.0 ND **796.00** ND
06c002 189.0 0.03 12.00 ND
09a001 117.0 ND 13.70 ND
09a002 88.1 ND 6.40 ND
05c001 94.6 ND 10.60 ND
06b001 127.0 ND 9.00 ND
08a003 101.0 ND 9.40 ND
08a002 110.0 ND **262.00** ND
08a001 44.5 ND 4.50 0.41
06a001 68.1 ND 7.10 ND
04a002 34.2 0.09 12.30 ND
04a003 150.0 **10.10** 16.70 ND
06c001 203.0 ND 6.20 ND
06a001 25.1 ND 6.70 ND
05a001 22.4 ND 11.50 ND
04a001 379.0 0.67 **251.00** ND
05b001 106.0 ND 29.40 0.69
07a001 78.4 0.11 19.60 ND
02a001 142.0 ND 31.10 ND
02a002 174.0 ND 111.00 0.62
02c001 59.2 ND 10.70 ND
02d001 29.8 ND 8.20 0.41
02d002 130.0 0.16 72.4 0.46
03a001 97.5 2.30 31.80 0.54
02d003 121.0 0.50 24.10 ND
01a001 51.9 0.37 7.60 ND

WESTERLY BROOK
SADDLE RIVER
SADDLE BROOK TOWNSHIP
LODI BROOK
NEW JERSEY STATE ROUTE 17
HACKENSACK & LODI RR
MISS STEPAN
STEPAN
SEARS

200 0 200 400 Feet

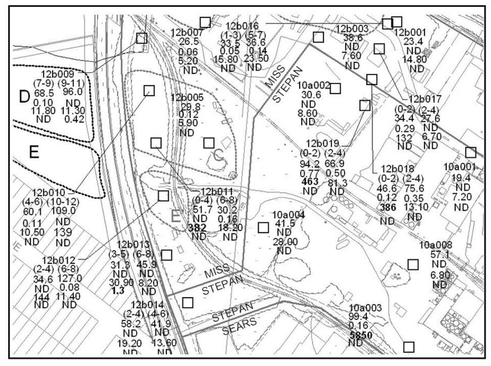


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FIGURE 4-38B
BARIUM, CADMIUM, CHROMIUM (TOTAL) AND THALLIUM RESULTS FOR GEOPROBE SOIL SAMPLES PHASE 1 - 2000

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw® Shaw Environmental, Inc.

LEGEND:

- 12b002 — SOIL SAMPLE IDENTIFICATION WITH CONCENTRATION
- (7-10) — DEPTH (FT)
- 0.03 — WITH MERCURY CONCENTRATION
- ND — WITH SELENIUM CONCENTRATION
- FORMER RETENTION POND
- FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- R — REJECTED

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SITE SPECIFIC SSLs

MERCURY = 2
SELENIUM = 5

BOLD INDICATES EXCEEDANCE OF SSL CRITERA

200 0 200 400 Feet

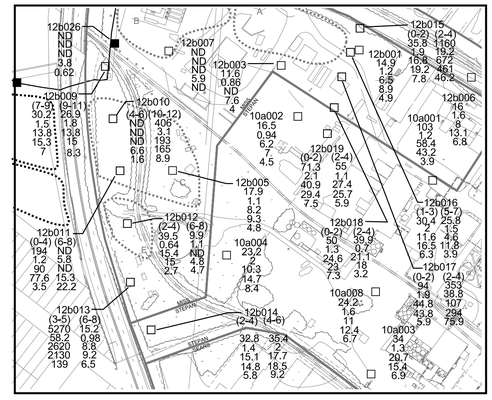
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7486. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-38C
MERCURY AND SELENIUM
RESULTS FOR GEOPROBE SOIL SAMPLES
PHASE 1 - 2000

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw® Shaw Environmental, Inc.



LEGEND:

10a003 34 1.3 20.7 15.4 6.9	PHASE 1 GEOPROBE SAMPLE IDENTIFICATION WITH CERIUM CONCENTRATION WITH DYSPROSIUM CONCENTRATION WITH LANTHANUM CONCENTRATION WITH NEODYMIUM CONCENTRATION WITH YTTRIUM CONCENTRATION
12b020 33.9 1.9 9.4 17.1 7	PHASE 2 GEOPROBE SAMPLE IDENTIFICATION WITH CERIUM CONCENTRATION WITH DYSPROSIUM CONCENTRATION WITH LANTHANUM CONCENTRATION WITH NEODYMIUM CONCENTRATION WITH YTTRIUM CONCENTRATION
	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT

RESULTS IN MICROGRAMS PER KILOGRAM (mg/kg)
SOIL STANDARDS FOR RARE EARTH ELEMENTS DO NOT EXIST

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7486. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-39
RARE EARTH ELEMENTS (REE) RESULTS FOR GEOPROBE SOIL SAMPLES PHASE 1 AND 2 - 2000 - 2002

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

FIGURE 4-40
BENZENE IN OVERBURDEN SOILS

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\Drawings\July 2004\GWRI_rev2.apr LAYOUT: BENZENE-OB-SOILS - 22x17 November 3, 2004

LEGEND:

MW-8S	MONITORING WELL IDENTIFICATION
3.0	WITH ARSENIC CONCENTRATION
0.3	WITH BERYLLIUM CONCENTRATION
42.9	WITH LEAD CONCENTRATION
6.5	WITH LITHIUM CONCENTRATION
10.5	WITH NICKEL CONCENTRATION
12b026	GEOPROBE IDENTIFICATION
1.5	WITH ARSENIC CONCENTRATION
1.3	WITH BERYLLIUM CONCENTRATION
10.9	WITH LEAD CONCENTRATION
828.0	WITH LITHIUM CONCENTRATION
19.1	WITH NICKEL CONCENTRATION

FORMER RETENTION POND

FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

ND NON-DETECT

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/Kg)

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

SITE SPECIFIC SSLs

ARSENIC = 122

BERYLLIUM = 63

LEAD = 400

LITHIUM = 194

NICKEL = 214

BOLD DENOTES EXCEEDANCE OF SSL CRITERIA

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-40A
ARSENIC, BERYLLIUM, LEAD, LITHIUM, AND NICKEL RESULTS FOR MONITORING WELL AND GEOPROBE SOIL SAMPLES
PHASE 2 - 2000 - 2002

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc.

LEGEND:

MW-8S
- 151.0 WITH BARIUM CONCENTRATION
- 0.1 WITH CADMIUM CONCENTRATION
- 8.9 WITH CHROMIUM (total) CONCENTRATION
- ND WITH THALLIUM CONCENTRATION

12b020
- 133.0 WITH BARIUM CONCENTRATION
- ND WITH CADMIUM CONCENTRATION
- 11.5 WITH CHROMIUM (total) CONCENTRATION
- ND WITH THALLIUM CONCENTRATION

FORMER RETENTION POND

D FORMER RETENTION POND - REMEDIATED

NRC BURIAL PIT

ND NON-DETECT

RESULTS IN MILLIGRAMS PER KILOGRAM (mg/Kg)

SAMPLE DEPTHS (FT BGS) ARE PRESENTED WHERE MORE THAN ONE SAMPLE WAS OBTAINED AT THE SAME LOCATION

SITE SPECIFIC SSLs

BARIUM = 1600

CADMIUM = 8

CHROMIUM (TOTAL) = 242

THALLIUM = 1.2

BOLDING DENOTES EXCEEDANCE OF SSL CRITERIA

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-40B
BARIUM, CADMIUM, CHROMIUM (total) AND THALLIUM RESULTS FOR MONITORING WELL AND GEOPROBE SOIL SAMPLES PHASE 2 - 2000 - 2002

US Army Corps of Engineers®

FUSRAP Maywood Superfund Site

Shaw® Shaw Environmental, Inc.

MW-7S
ND

18a001
ND

18a002
ND

18a003
ND

18a004
ND

MW-3S
ND

MW-20S
ND

B38W01S
ND

WEST

MISS01AA
ND

12b020
9

12b015
ND

MISS02A
ND

12b026
ND

12b-029
ND

12b-027
0.7

12b-028
2

12b016
71

50

5

12b017
4

1

12b009
ND

MISS06A
ND

MISS07A
ND

12b018
ND

MISS STEPAN

PARK WAY

13a003
ND

13a001
ND

WESTERLY BROOK

14a003
ND

B38W14S
0.2

13a004
ND

13a002
ND

12b010
ND

PW-1S
0.3

B38W19S
ND

OVPZ-17
ND

B38W25S
ND

12b019
ND

TEST PIT 5

14a002
ND

D

E

C

14a001
ND

B38W15S
0.2

12b011
36

MW-25S
0.4

MISS03A
ND

MISS05A
ND

E

B38W24S
ND

12b012
ND

12b013
ND

BECKER AVENUE

GROVE AVENUE

MISS STEPAN

PT-2S
2500

MW-2S
ND

B38W17A
0.1

12b014
ND

STEPAN

SEARS

40

42

44

46

48

50

52

54

ON AVENU

JTE-17 ROW

OBMW3
63

100 0 100 200 Feet

80 0 80 160 Feet

N

W E

S

LEGEND:

- 12b011 / 36 — WELL/GEOPROBE IDENTIFICATION WITH DETECTED BENZENE CONCENTRATION
- 5 — LINE OF EQUAL BENZENE CONCENTRATION
- 5 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP MCL OF 1 ug/L

RESULTS IN PARTS PER BILLION (ug/L)

FEDERAL MCL = 5
NJDEP MCL = 1

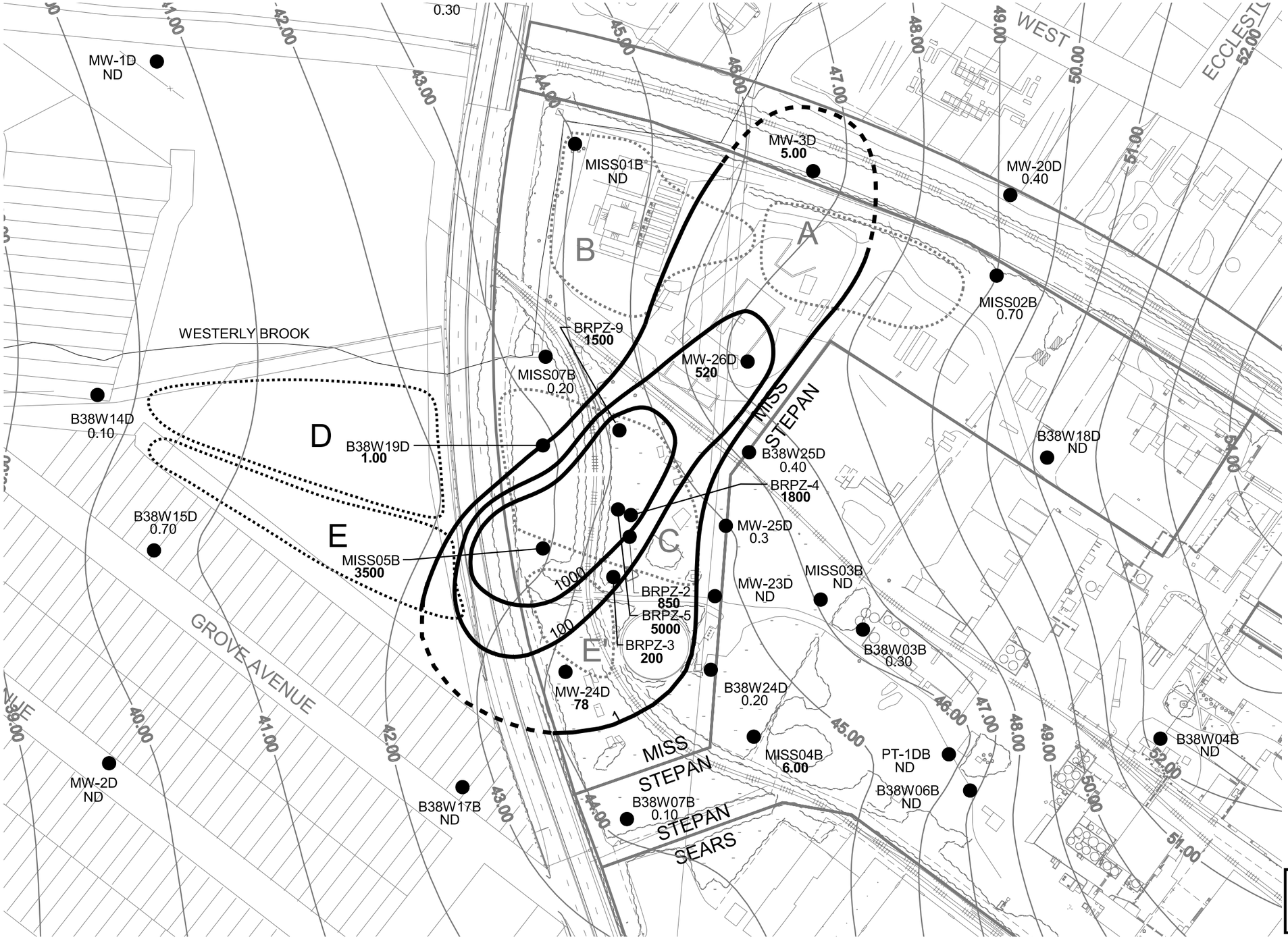
FIGURE 4-41
OVERBURDEN BENZENE RESULTS FOR GEOPROBE AND OVERBURDEN MONITORING WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Environmental Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Overburden.apr LAYOUT: Benzene-Overburden-17x11 August 13, 2004



Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7468. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 4-42
BENZENE RESULTS FOR BEDROCK
MONITORING WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Benzene-Bedrock-17x11 August 13, 2004

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LEGEND:

- MW-27D 5 ug/L — BEDROCK WELL IDENTIFICATION WITH BENZENE CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- RESULTS IN MICROGRAMS PER LITER (ug/L)
- POTENTIAL SOURCE AREA

BOLDED CONCENTRATIONS DENOTE EXCEEDANCE OF BENZENE GROUNDWATER STANDARD OF 1 ug/L (NJ GWQC)

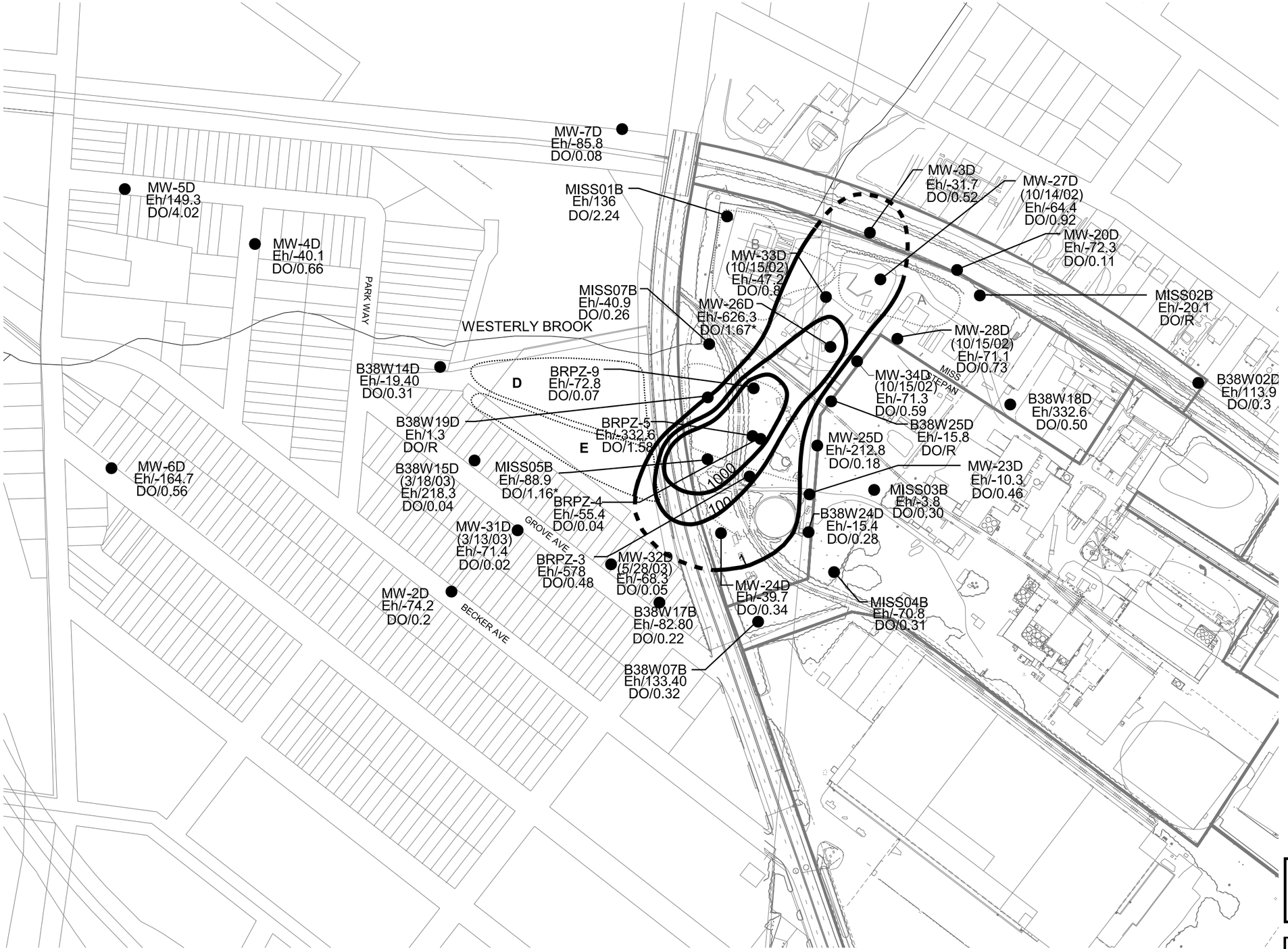
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

100 0 100 200 Feet

FIGURE 4-43
BENZENE RESULTS FOR
BEDROCK WELL GROUNDWATER SAMPLES
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Chem.apr LAYOUT: Benzene- Basic17x11 August 23, 2004



LEGEND:

- MW-4D / 149.3 mV / 4.02 mg/L — BEDROCK WELL IDENTIFICATION; EH FIELD MEASURMENT; DO FIELD MEASURMENT
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- R — MEASURMENT REJECTED

RESULTS IN MILLIGRAMS PER LITER (mg/L) FOR DO AND MILLIVOLTS (mV) FOR Eh.

- 10 — LINE OF EQUAL BENZENE CONCENTRATION
- 10 — DASHED WHERE INFERRED
- * — THESE VALUES ARE INCONSISTENT WITH OTHER SAMPLING DATA SHOWING DEEPLY REDUCED CONDITIONS AT THESE WELLS AND MAY REFLECT D.O. METER ERROR.

FIGURE 4-44
Eh AND DO FIELD DATA
BEDROCK WELLS -
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Chem.apr LAYOUT: Eh-Do-17x11 August 18, 2004

OXIDATION-REDUCTION POTENTIALS FOR VARIOUS OXIDATION-REDUCTION REACTIONS

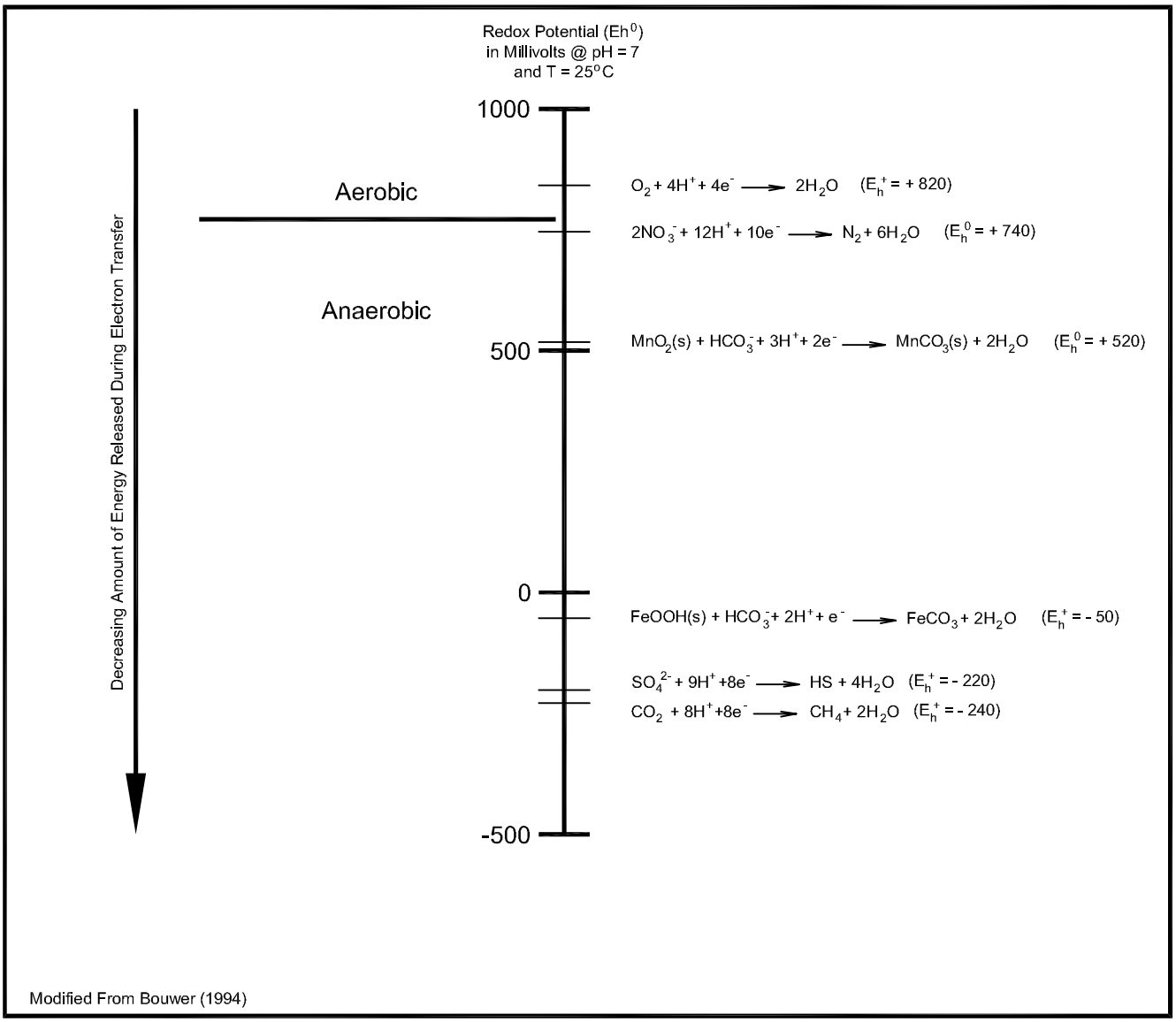
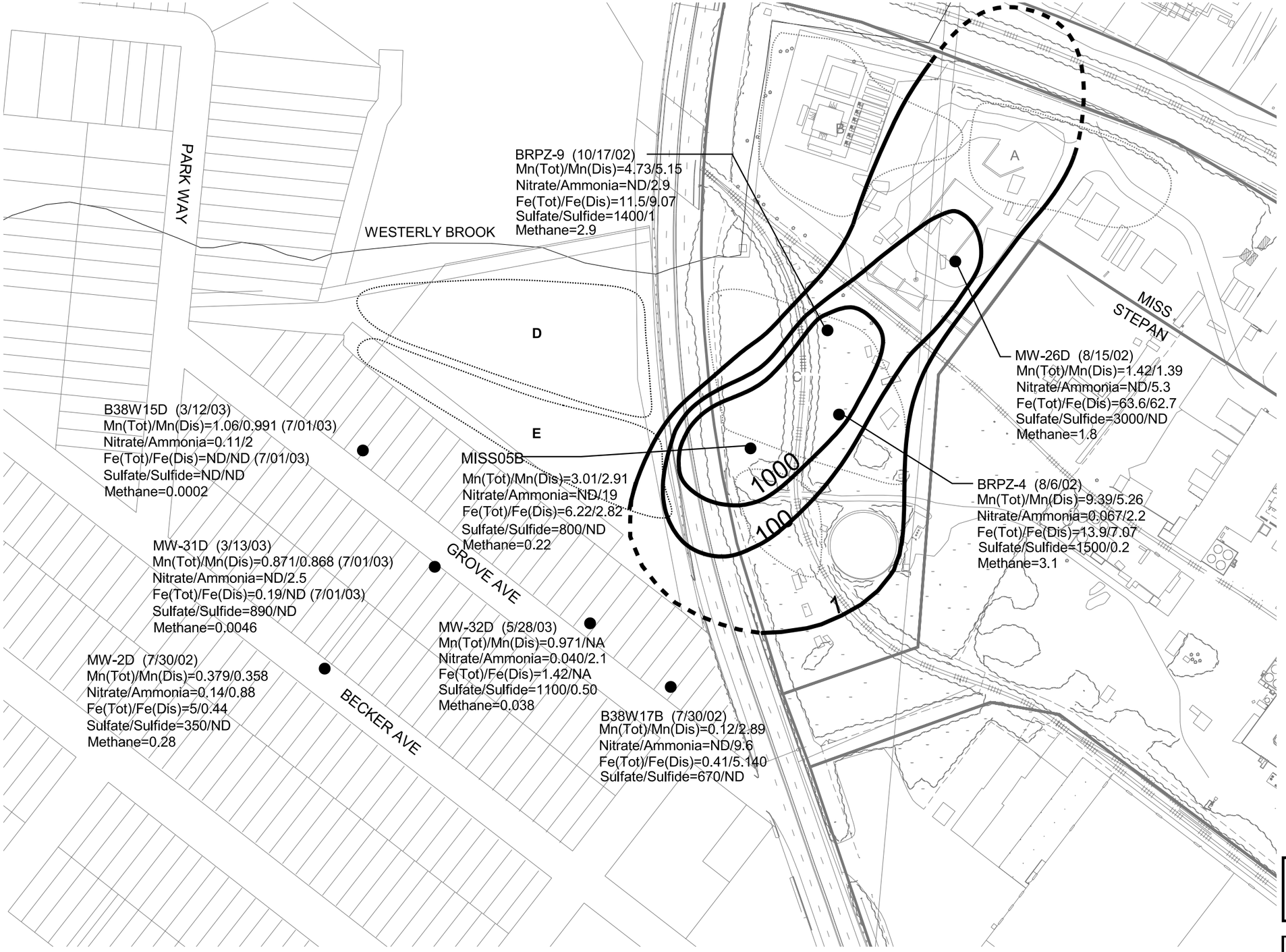


Figure 4-45
Oxidation-Reduction Potential for Various
Oxidation-Reduction Reactions

US Army Corps of Engineers
FUSRAP
Maywood Superfund Site
Shaw



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LEGEND:

MW-26D (8/15/02)
Mn(Tot)/Mn(Dis)=1.42/1.39 mg/L
Nitrate/Ammonia=ND/5.3 mg/L
Fe(Tot)/Fe(Dis)=63.6/62.7 mg/L
Sulfate/Sulfide=3000/ND mg/L
Methane=1.8 mg/L

BEDROCK WELL IDENTIFICATION WITH RESULTS

TOTAL AND FIELD FILTERED SAMPLES WERE COLLECTED FOR IRON AND MANGANESE. THE DISSOLVED IRON/MANGANESE ARE ASSUMED TO APPROXIMATE Fe+2 AND Mn+2 GROUNDWATER CONCENTRATIONS AT THE TIME OF COLLECTION.

A — FORMER RETENTION POND

D — FORMER RETENTION POND - REMEDIATED

ND — NON-DETECT

NA — NOT ANALYZED

NC — NOT CALCULATED

RESULTS IN MILLIGRAMS PER LITER (mg/L)

10 — LINE OF EQUAL BENZENE CONCENTRATION

10 — DASHED WHERE INFERRED

80 0 80 160 Feet

FIGURE 4-46
ELECTRON ACCEPTOR REDUCTION DATA
BEDROCK WELLS - SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Chem.apr LAYOUT: Electron-Acceptors-17x11 August 18, 2004

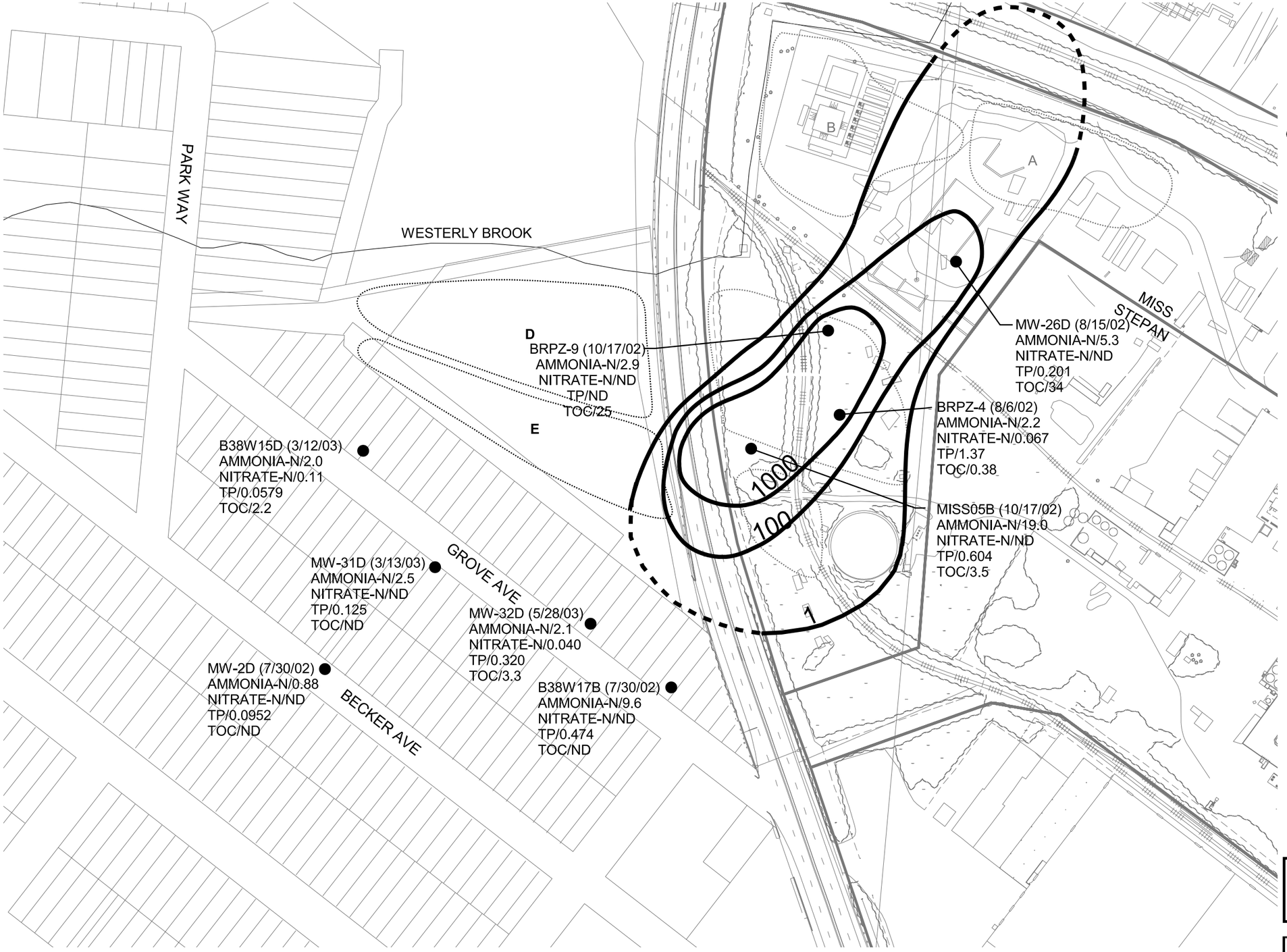


FIGURE 4-47
NUTRIENT DATA
BEDROCK WELLS -
SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers
FUSRAP
Maywood Superfund Site

\\Bosfs01\Maywood\Maywood\Task0515\drawings\July 2004\Chem.apr LAYOUT: Nutrient-17x11 August 18, 2004

N
W E
S

PARK WAY

WESTERLY BROOK

GROVE AVE

BECKER AVE

MISS STEPAN

B

A

D

E

BRPZ-9
(10/17/02)
BOD5/9.4
COD/125
THC/300
BDC/300

MW-26D
(8/15/02)
BOD5/20
COD/105
THC/ND
BDC/ND

BRPZ-4
(8/06/02)
BOD5/4.8
COD/40.3
THC/ND
BDC/ND

MISS05B
(7/31/02)
BOD5/9.1
COD/19.7
(10/17/02)
THC/300
BDC/300

B38W15D
(3/18/03)
BOD5/1
COD/10
THC/160
BDC/270

MW-31D
(3/13/03)
BOD5/0.42
COD/ND
THC/1600
BDC/1200

MW-32D
(5/28/03)
BOD5/3.9
COD/9.82
THC/75000
BDC/1700

MW-2D
(7/30/02)
BOD5/ND
COD/ND
THC/1300
BDC/430

B38W17B
BOD5/4.7
COD/33.6
THC/630
BDC/460

1000
100
10
1

LEGEND:

MW-26D	BEDROCK WELL IDENTIFICATION
BOD5/20 mg/L	BOD5
COD/105 mg/L	CHEMICAL OXYGEN DEMAND (COD)
THC/ND CFU/mL	TOTAL HETEROTROPH COUNT (THC)
BDC/ND CFU/mL	BTEX DEGRADER COUNT (BDC)

A FORMER RETENTION POND

D FORMER RETENTION POND - REMEDIATED

ND NON-DETECT

NA NOT ANALYZED

RESULTS IN MILLIGRAMS PER LITER (mg/L) FOR BOD5 AND COD
CFUs/mL [COLONY FORMING UNITS] FOR TOTAL HETEROTROPHS
AND BTEX DEGRADER

10 LINE OF EQUAL BENZENE CONCENTRATION

10 DASHED WHERE INFERRED

80 0 80 160 Feet

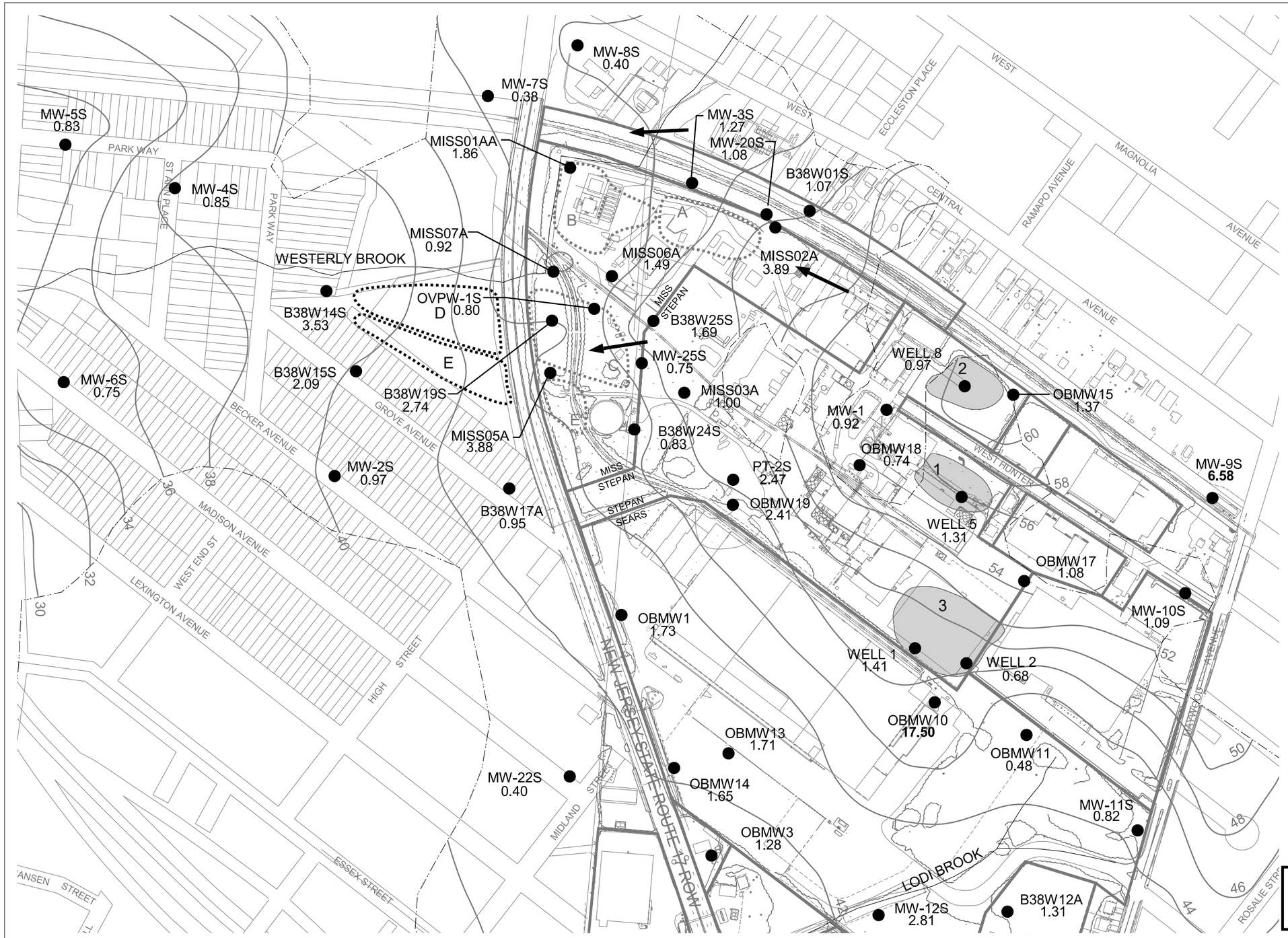
FIGURE 4-48
OXYGEN DEMAND AND MICROBIOLOGIC DATA
BEDROCK MONITORING WELLS
- SUPPLEMENTAL INVESTIGATION

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw

\\Bosfs01\Maywood\Maywood\Task0510\drawings\jULY 2004\Chem.apr LAYOUT: Biological-Activity-17x11 August 18 2004



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LEGEND:

- PT-2S 2.47 — WELL IDENTIFICATION WITH TOTAL RADIUM CONCENTRATION
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP/FEDERAL MCL OF 5 pCi/L

RESULTS IN PICOCURIES PER LITER (pCi/L)

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-1
TOTAL RADIUM RESULTS FOR OVERBURDEN WELL GROUNDWATER SAMPLES (2000 - 2002)

150 0 150 300 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Contours-Overburden.apr LAYOUT: radium-(total)-overburden-17x11 04 February 2003

N
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MW-8S 2.50
MW-7S 2.84
MW-3S 0.90
MW-20S R
MISS01AA 0.72
B38W01S 1.32
MW-5S 2.31
MW-4S 2.00
OVPW-1S 4.50
MISS07A 2.22
WESTERLY BROOK
MISS06A 2.03
MISS02A 1.15
B38W14S 1.08
B38W25S 0.68
WELL-8 2.21
MW-6S 3.21
MW-25S 0.04
B38W15S 1.18
MW-1 0.48
OBMW15 1.25
MISS03A 11.23
B38W19S 1.92
MISS05A **73.48**
B38W24S 0.66
PT-2S 0.84
OBMW18 1.74
MW-2S 2.11
MW-9S 0.95
B38W17A 1.53
OBMW19 0.59
WELL-5 **30.02**
OBMW17 1.37
OBMW1 2.84
MW-10S 1.46
WELL-1 0.71
WELL-2 R
OBMW10 3.92
OBMW11 0.76
OBMW13 1.98
MW-22S 5.63
OBMW14 3.12
MW-11S 1.54
OBMW3 3.94

PARK WAY
ST ANN PLACE
BECKER AVENUE
GROVE AVENUE
MADISON AVENUE
WEST END ST
LEXINGTON AVENUE
HIGH STREET
MIDLAND STREET
ESSEX STREET
ANSEN STREET
MISS STEPAN
STEPAN
SEARS
WEST
ECCLESTON PLACE
CENTRAL AVENUE
RAMAPO AVENUE
MAGNOLIA AVENUE
WEST HUNTER
MAYWOOD AVENUE
NEW JERSEY STATE ROUTE 17
LODI BROOK
LILLIE STREET

A B C D E

1 2 3

30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60

LEGEND:

- B38W19S 1.92 — WELL IDENTIFICATION WITH TOTAL URANIUM CONCENTRATION
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- R — REJECTED

RESULTS IN PICOCURIES PER LITER (pCi/L)
NJDEP\FEDERAL MCL = 30 ug/L

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP/FEDERAL MCL OF 30ug/L

REFER TO TABLE 4-31 FOR ACTIVITY AND ISOTOPIC MASS RESULTS FOR URANIUM.

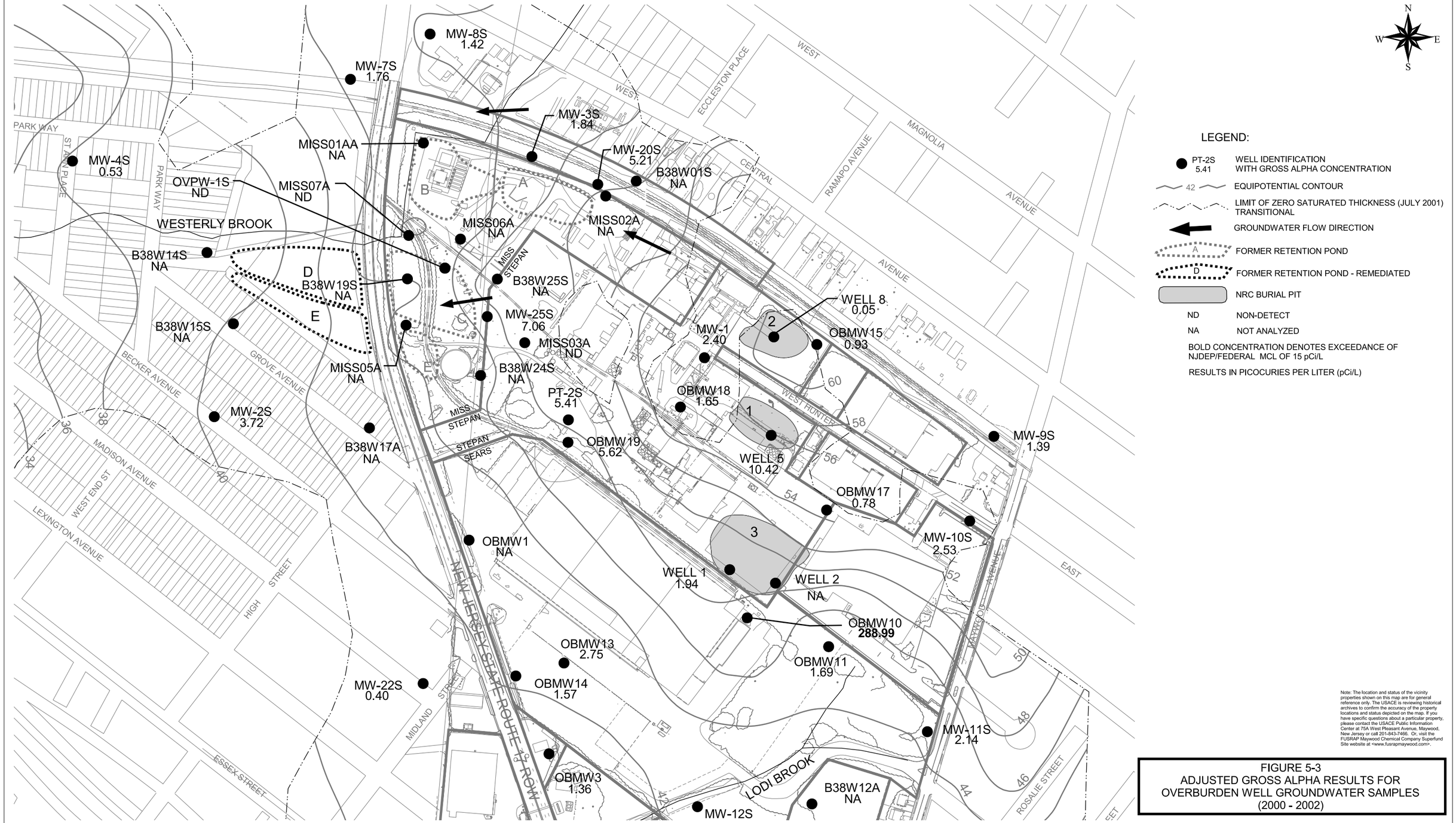
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7468. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-2
TOTAL URANIUM RESULTS FOR
OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2002)

150 0 150 300 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Contours-Overburden.apr LAYOUT: uranium-overburden-17x11 25 April 2003



LEGEND:

- PT-2S 5.41 — WELL IDENTIFICATION WITH GROSS ALPHA CONCENTRATION
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP/FEDERAL MCL OF 15 pCi/L

RESULTS IN PICOCURIES PER LITER (pCi/L)

150 0 150 300 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-3
ADJUSTED GROSS ALPHA RESULTS FOR OVERBURDEN WELL GROUNDWATER SAMPLES (2000 - 2002)

US Army Corps of Engineers | FUSRAP Maywood Superfund Site | Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Contours-Overburden.apr LAYOUT: grossalpha-overburden-17x11 7 February 2003

MW-7S ND
MW-4S ND
OVPW-1S ND
MISS07A ND
B38W19S 31.8
WESTERLY BROOK
B38W14S ND
B38W15S 4.1
MW-2S ND
B38W17A ND
MISS05A 2.4
MISS01AA 3.6
MW-3S 831
MW-20S 465
B38W01S ND
MISS02A 2600
12B006
MISS06A ND
B38W25S 18.5
MW-25S ND
MISS03A 218
B38W24S ND
PT-2S 3.9
OBMW19 ND
OBMW18 ND
B38W02D
WELL 8 ND
OBMW15 ND
WELL 5 5.9
OBMW17 ND
MW-9S ND
MW-10S ND
OBMW1 ND
WELL 1 3.8
WELL 2 15
OBMW10 19.8
OBMW14 55.2
OBMW13 3.8
OBMW11 ND
MW-11S ND
OBMW3 ND
B38W12A 13.7
MW-12S 13.2
MW-13S 42.9
OBMW7 ND
A
A'
D
E
1000
500
8
2
1
3
60
58
56
54
52
50
48
46
44
42
36
38
40
WEST
ECCLESTON PL
MAGNOLIA AVENUE
CENTRAL AVENUE
RAMAPO AVENUE
MAYWOOD AVENUE
EAST
ST ANN PLACE
PARK WAY
BECKER AVENUE
GROVE AVENUE
MADISON AVENUE
WEST END ST
LEXINGTON AVENUE
HIGH STREET
MIDLAND STREET
ESSEX STREET
LUCILLE
MISS STEPAN
STEPAN
SEARS
WEST HUNTER
NEW JERSEY STATE ROUTE 17 ROW
LODI BROOK
ROSALIE STREET
LOUIS STREET
BEECH STREET
VAN C

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LEGEND:

- MW-20S 465 — WELL IDENTIFICATION WITH ARSENIC CONCENTRATION
- 100 — LINE OF EQUAL ARSENIC CONCENTRATION
- 100 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP PQL OF 8 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)
NJDEP/FEDERAL MCL = 50

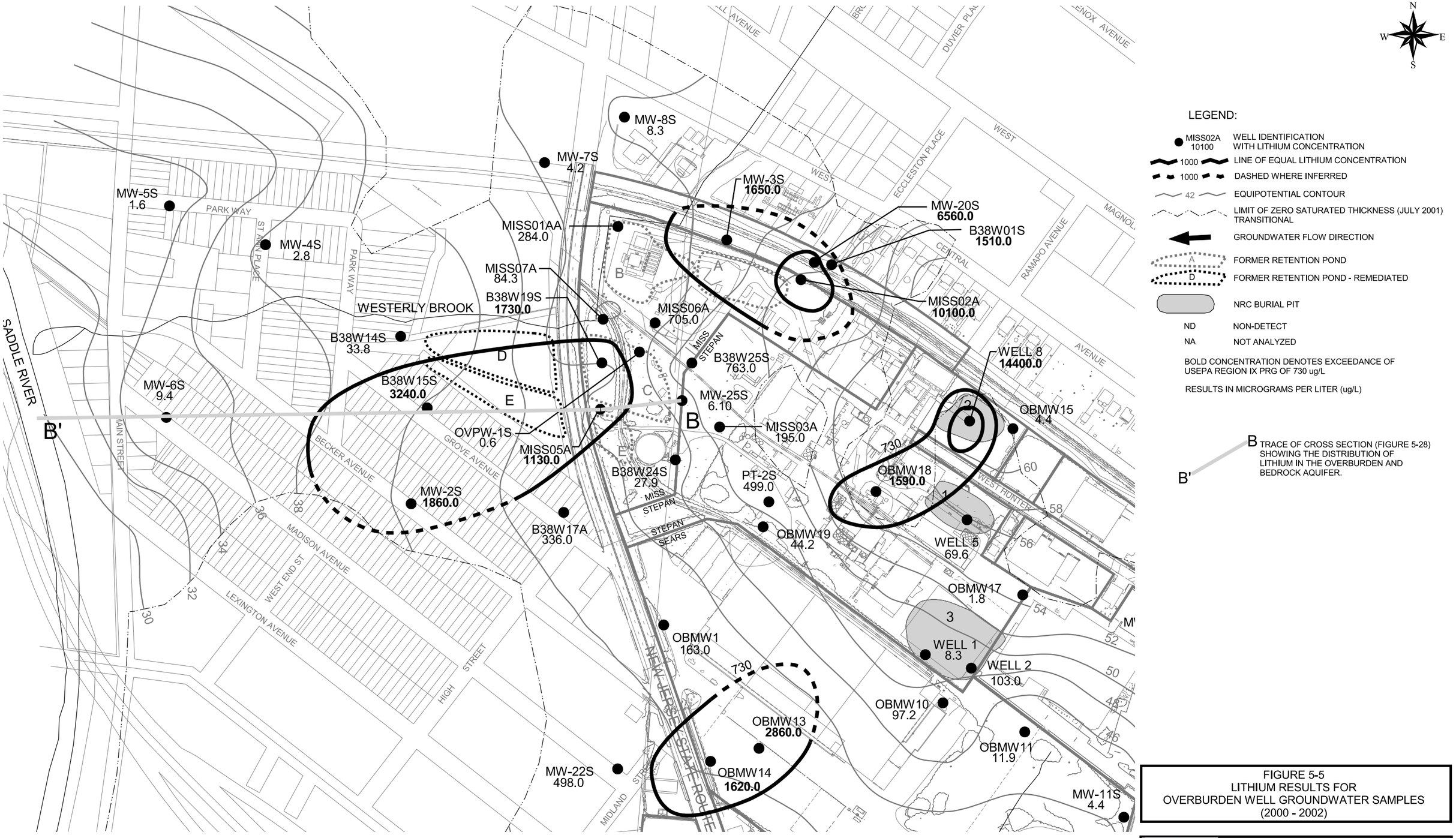
A — A' TRACE OF CROSS SECTION (FIGURE 5-27) SHOWING THE DISTRIBUTION OF ARSENIC IN THE OVERBURDEN BEDROCK AQUIFER.

200 0 200 400 Feet

FIGURE 5-4
ARSENIC RESULTS FOR
OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Contours-Overburden.apr LAYOUT: Arsenic-Overburden-17x11 July 7, 2005



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LEGEND:

- MISS02A 10100 — WELL IDENTIFICATION WITH LITHIUM CONCENTRATION
- 1000 — LINE OF EQUAL LITHIUM CONCENTRATION
- 1000 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF USEPA REGION IX PRG OF 730 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)

B — B' TRACE OF CROSS SECTION (FIGURE 5-28) SHOWING THE DISTRIBUTION OF LITHIUM IN THE OVERBURDEN AND BEDROCK AQUIFER.

200 0 200 400 600 Feet

FIGURE 5-5
LITHIUM RESULTS FOR
OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Contours-Overburden.apr LAYOUT: Lithium-Overburden-17x11 May 25, 2005

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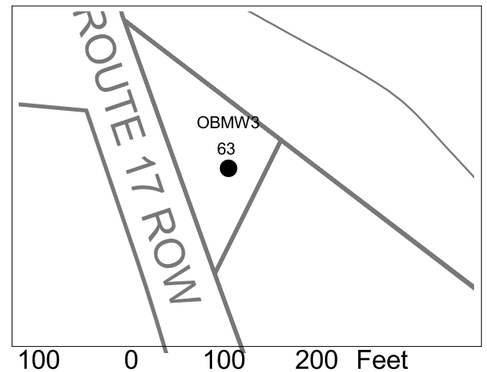
LEGEND:

- 12b011 / 36 — WELL/GEOPROBE IDENTIFICATION WITH DETECTED BENZENE CONCENTRATION
- 5 — LINE OF EQUAL BENZENE CONCENTRATION
- 5 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- LIMIT OF ZERO SATURATED THICKNESS (JULY 2001) TRANSITIONAL
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP MCL OF 1 ug\L

RESULTS IN PARTS PER BILLION (ug/L)

FEDERAL MCL= 5
NJDEP MCL = 1



Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-6
OVERBURDEN BENZENE RESULTS FOR GEOPROBE AND OVERBURDEN MONITORING WELL GROUDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Sept_2004_update\Contours-Overburden_rev3.apr LAYOUT: Benzene September 20, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES

MW-19S (11/2000) NA
GW-4 (4/1998) 140000
MW-1 (06/2002) 37000
MW-2 (06/2002) 3.5
MW-3 (06/2002) 56000
MW-4 (06/2002) 75000

MW-7S **200**
MW-8S 0.6
MW-1S NA
MW-1S NA
MW-5S ND
MW-4S 0.2
MISS01AA ND
MW-3S ND
B38W01S ND
MW-20S ND
12b020 ND
12b026 ND
MISS02A ND
12b009 ND
MISS06A ND
MISS07A ND
15a001 ND
14a003 3
13a003 **360**
13a001 **200**
13a002 ND
B38W14S 6
13a004 ND
14a002 **55**
12b010 ND
B38W19S ND
OVPW-1S ND
B38W25S ND
15a002 ND
14a001 **22**
12b011 ND
MISS03A ND
MW-6S 0.2
B38W15S ND
12b012 ND
B38W24S ND
MISS05A ND
12b013 ND
MW-2S **5**
B38W17A ND
PT-2S ND
12b014 ND
15a003 4
OBMW19 ND

AVENUE
DURAND
LINCOLN
BROOK
HERGESELL AVENUE
BROOK AVE
WEST
ECCLESTON
PARK WAY
ST ANN PLACE
WESTERLY BROOK
SADDLE RIVER
I-80
MAIN STREET
BECKER AVENUE
GROVE AVENUE
MADISON AVENUE
WEST END ST
MISS STEPAN
SEARS

38 40 42 36 34 44 46 48 50 52 54 100 1

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LEGEND:

- MW-8S 0.60 — WELL IDENTIFICATION WITH TETRACHLOROETHENE CONCENTRATION
- 10 — LINE OF EQUAL TETRACHLOROETHENE CONCENTRATION
- 10 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP MCL OF 1 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL MCL = 5
NJDEP = 1

NOTE:
GEOPROBE BORING GW-4 WAS ADVANCED IN 1998 BY DEP. LOCATION APPROXIMATE.

DATA FROM SAMPLES MW-1 THROUGH MW-4 ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002 AS PART OF THEIR RI DATED JULY 31, 2002.

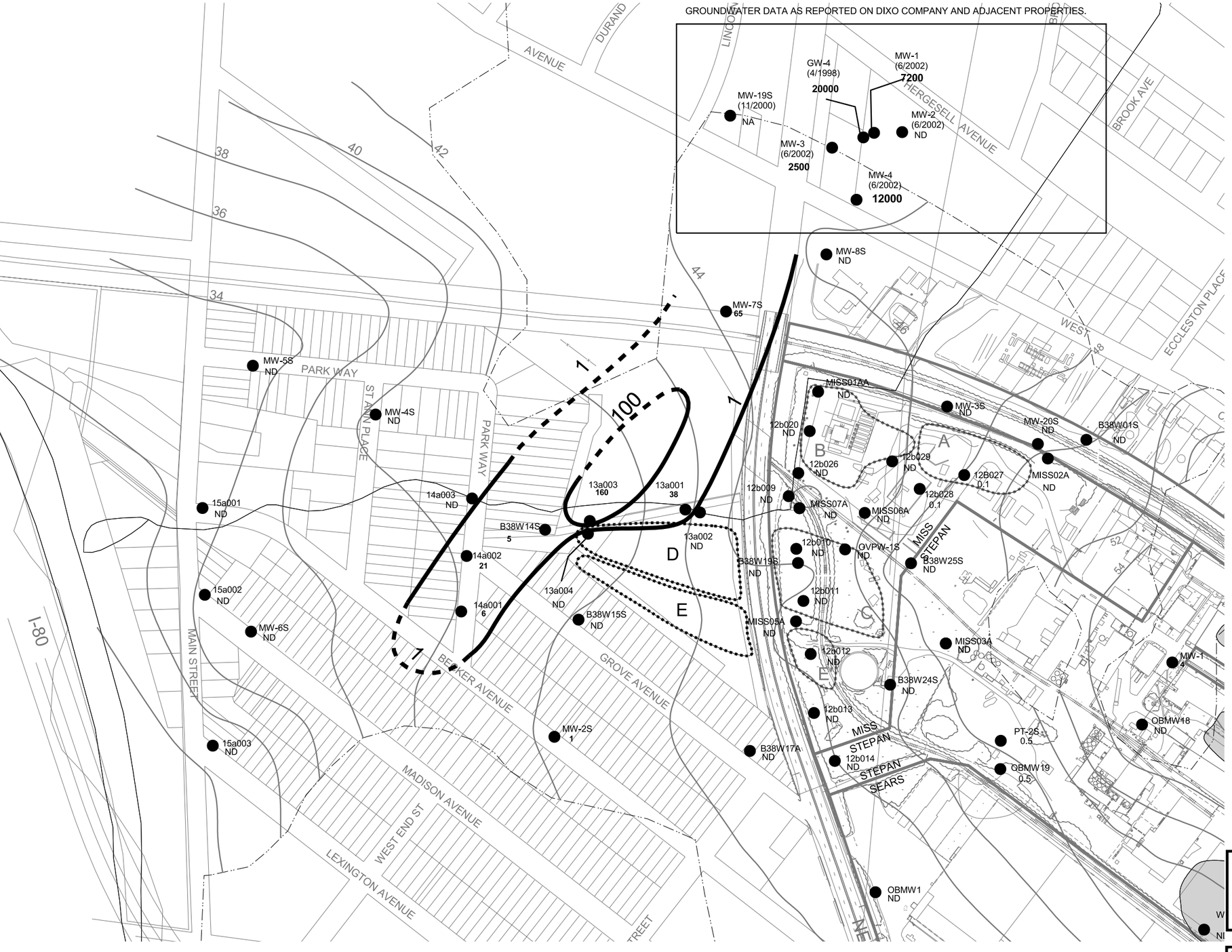
0 200 400 600 800 Feet

FIGURE 5-7
TETRACHLOROETHENE RESULTS FOR
OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2001)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Sept_2004_update\Contours-Overburden_REV3.apr LAYOUT: Tetrachloroethene 17x11 September 20, 2004

GROUNDWATER DATA AS REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES.



LEGEND:

- MW-20D 0.1 — WITH TRICHLOROETHENE CONCENTRATION WELL IDENTIFICATION
- 5 — LINE OF EQUAL TRICHLOROETHENE CONCENTRATION
- 5 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJDEP MCL OF 1 ug/L

RESULTS IN PARTS PER BILLION (ug/L)

FEDERAL MCL = 5
NJDEP MCL = 1

NOTE:
GEOPROBE BORING GW-4 WAS ADVANCED IN 1998 BY DEP. LOCATION APPROXIMATE.

DATA FROM SAMPLES MW-1 THROUGH MW-4 ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002 AS PART OF THEIR RI DATED JULY 31, 2002.

70 0 70 140 Feet

FIGURE 5-8
TRICHLOROETHENE RESULTS FOR
OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Sept_2004_update\Contours-Overburden_rev3.apr LAYOUT: Trichloroethene17x11 November 3, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES ARE FOR CIS-1,2 - DICHLOROETHENE.

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LEGEND:

- MW-20D 0.1 — WELL IDENTIFICATION WITH DICHLOROETHYLENE CONCENTRATION
- 10 — LINE OF EQUAL DICHLOROETHYLENE CONCENTRATION
- 10 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJGWQC OF 10 ug/L FOR 1,2-DICHLOROETHANE (CIS)

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL MCL = 70 FOR 1,2-DICHLOROETHENE (CIS)
FEDERAL MCL = 100 FOR 1,2-DICHLOROETHENE (TRANS)
NJDEP GWQC = 10 FOR 1,2-DICHLOROETHENE (CIS)

NOTE:
GEOPROBE BORING GW-4 WAS ADVANCED IN 1998 BY DEP. LOCATION APPROXIMATE.

DATA FROM SAMPLES MW-1 THROUGH MW-4 ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002 AS PART OF THEIR RI DATED JULY 31, 2002.

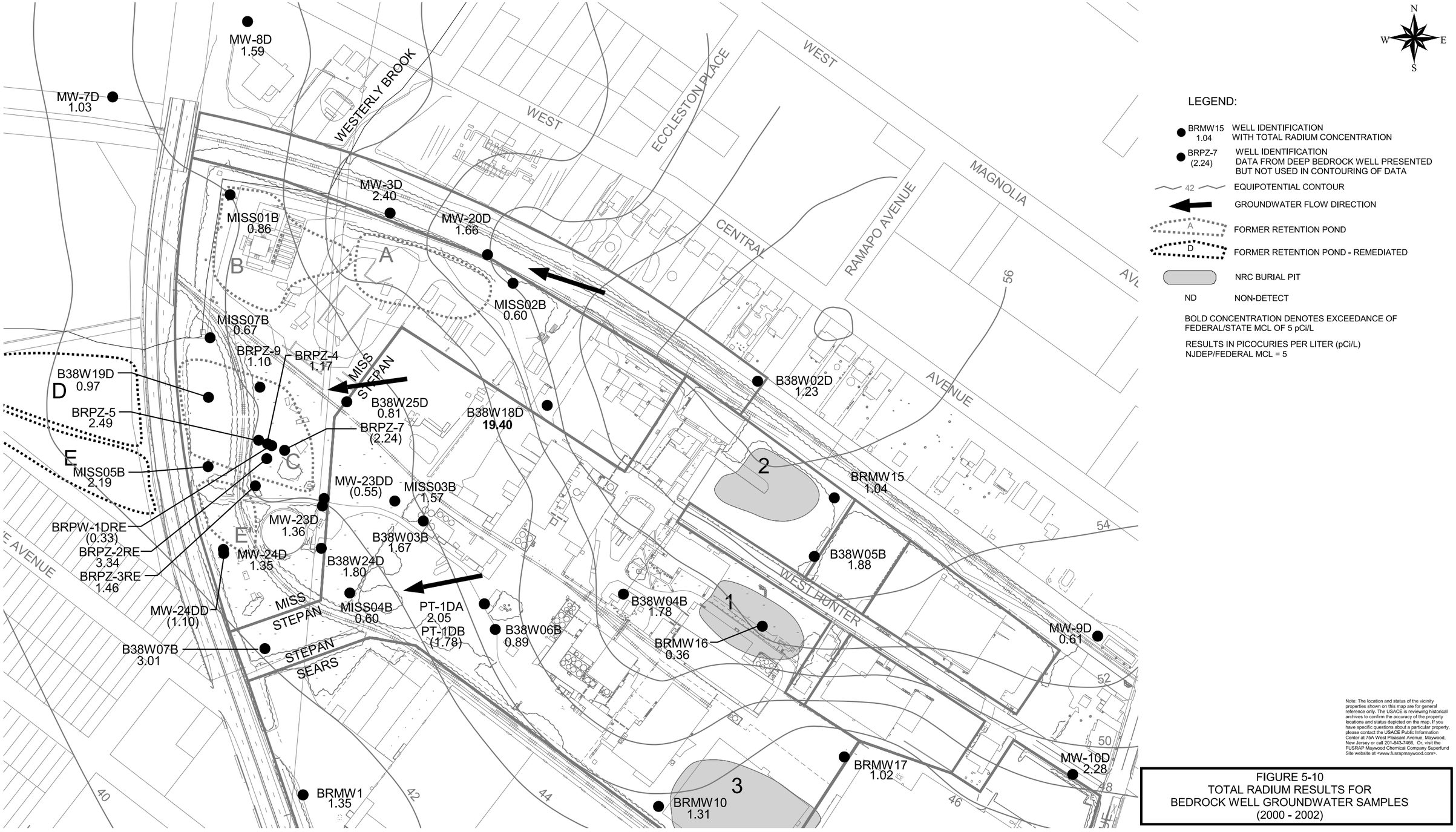
MW-19S (11/2000) NA
GW-4 (4/1998) 69000
MW-1 (6/2002) 9200
MW-2 (6/2002) ND
MW-3 (6/2002) 2800
MW-4 (6/2002) 28000
MW-8S 1
MW-7S 28
MW-5S ND
MW-4S ND
15a001 ND
14a003 ND
13a003 140
13a001 100
13a002 5
B38W14S 10
14a002 28
13a004 ND
14a001 6
15a002 ND
MW-6S ND
B38W15S ND
15a003 ND
MW-2S 6
B38W17A ND
MISS01AA ND
12b020 ND
12b026 ND
12b009 ND
MISS07A ND
12b010 ND
B38W19S ND
12b011 ND
OVPZ-17 ND
MISS05A ND
12b012 ND
12b013 ND
12b014 ND
MW-3S ND
MW-20S ND
12b029 0.5
12b028 1
12B027 1
B38W01S ND
MISS02A ND
MISS06A ND
OVPW-1S ND
B38W25S ND
MW-25S ND
MISS03A ND
B38W24S ND
PT-2S 6
OBMW19 0.3
MW-1 ND
OBMW18 ND

0 200 400 600 800 Feet

FIGURE 5-9
1,2-DCE (TOTAL) RESULTS FOR OVERBURDEN WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\Sept_2004_update\Contours-Overburden_rev3.apr LAYOUT: DCE 17x11 November 3, 2004

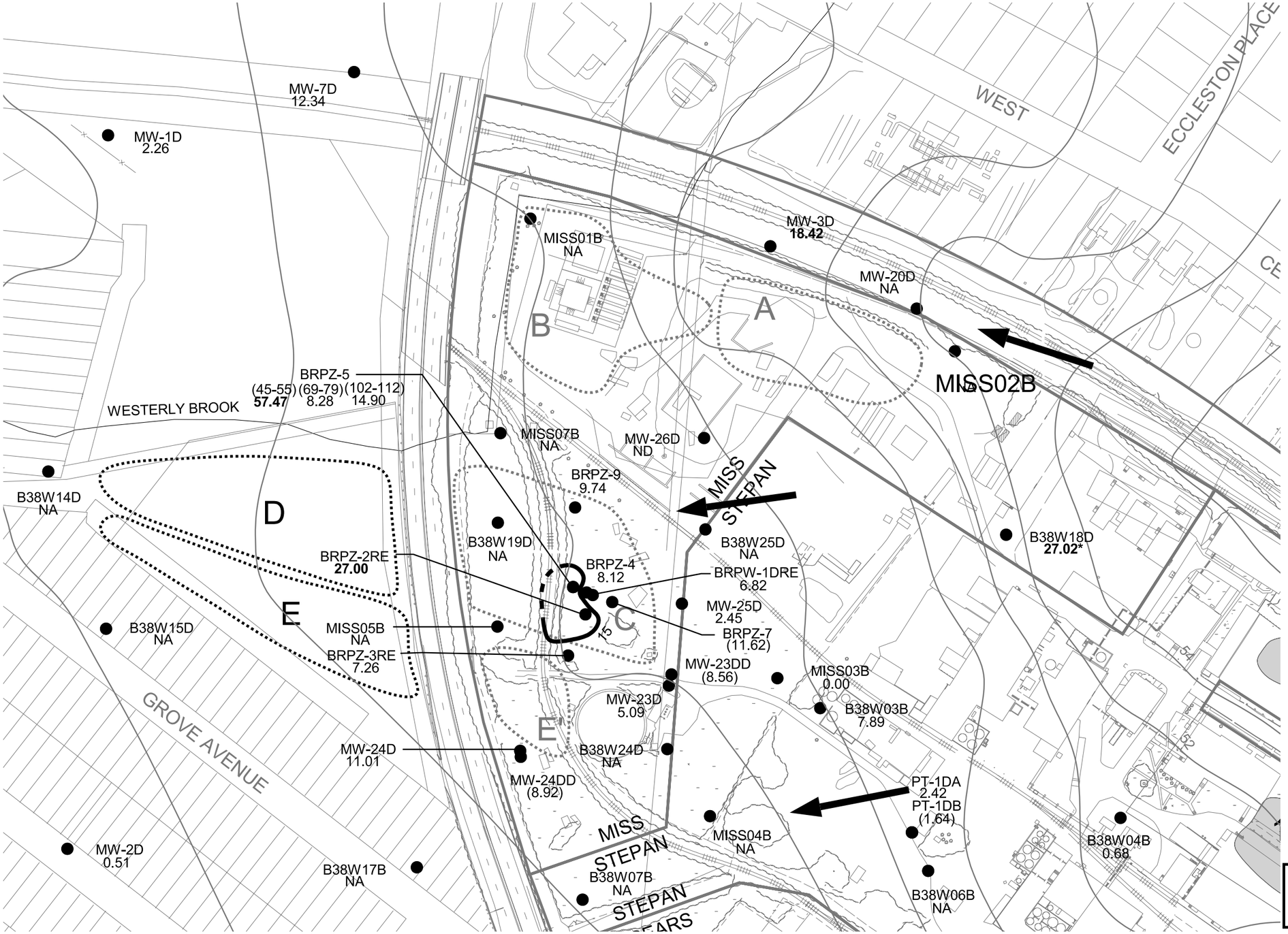


Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-10
TOTAL RADIUM RESULTS FOR
BEDROCK WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Radium-(Total)-Bedrock-17x11 November 22, 2004



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LEGEND:

- BRPZ-5 67.74 — WELL IDENTIFICATION WITH GROSS ALPHA CONCENTRATION
- BRPZ-7 (11.62) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 15 — LINE OF EQUAL GROSS ALPHA CONCENTRATION
- 15 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- NA — NOT ANALYZED
- * — BASED ON ANNUAL ENVIRONMENTAL MONITORING DATA, 2002.

BOLD CONCENTRATION DENOTES EXCEEDANCE OF FEDERAL/STATE MCL OF 15 pCi/L

RESULTS IN PICOCURIES PER LITER (pCi/L)
NJDEP/FEDERAL MCL = 15

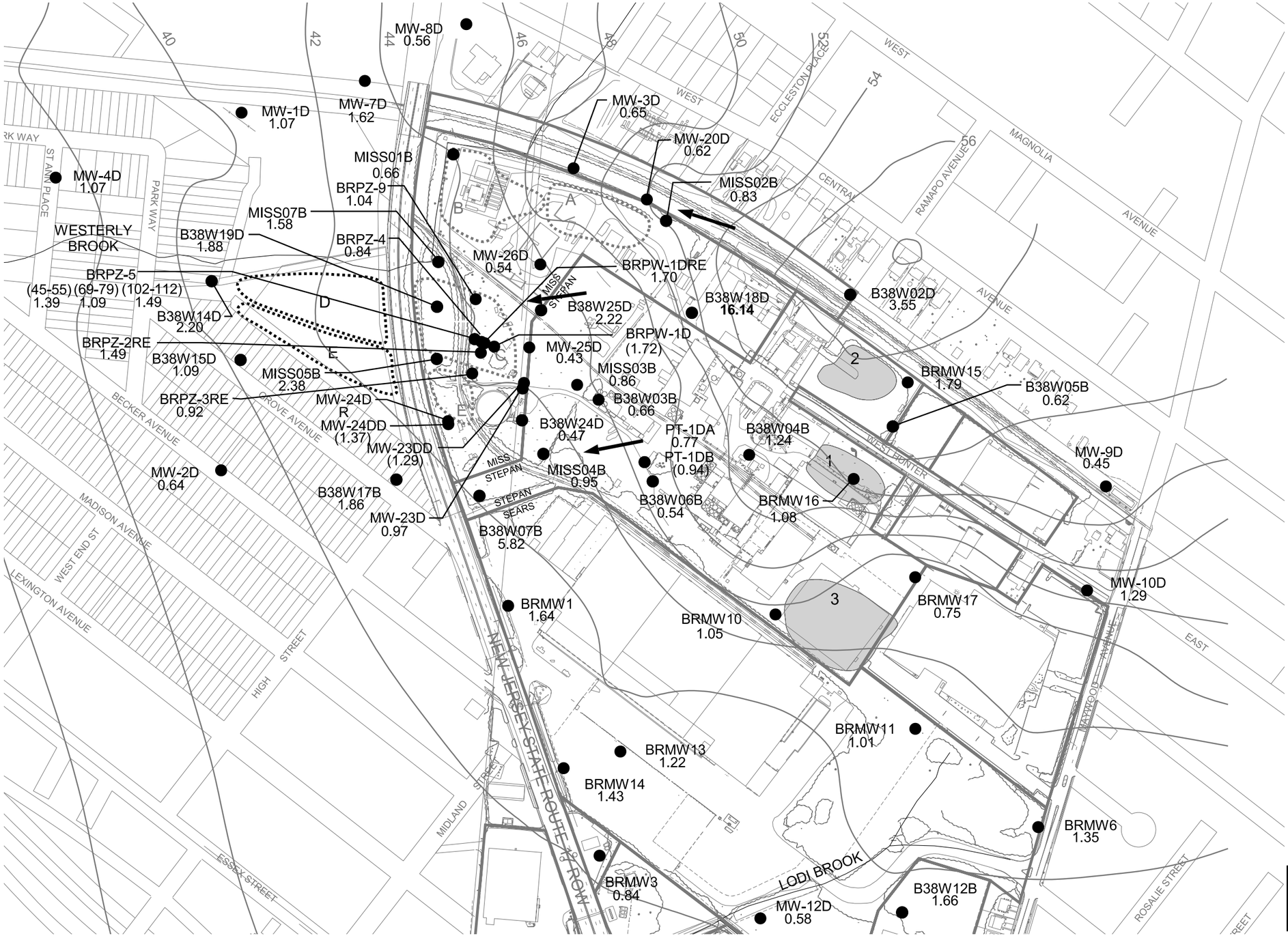
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-11
ADJUSTED GROSS ALPHA RESULTS FOR
BEDROCK WELL GROUNDWATER SAMPLES
(2000 - 2002)

80 0 80 160 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Gross-Alpha-Bedrock-17x11 November 22, 2005



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LEGEND:

- B38W02D 3.55 — WELL/GEOPROBE IDENTIFICATION WITH TOTAL THORIUM CONCENTRATION
- PT-1DB (0.94) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROSS ALPHA STANDARD OF 15 pCi/L

RESULTS IN PICOCURIES PER LITER (pCi/L)

SURROGATE STANDARD OF 15 pCi/L (GROSS ALPHA STANDARD)

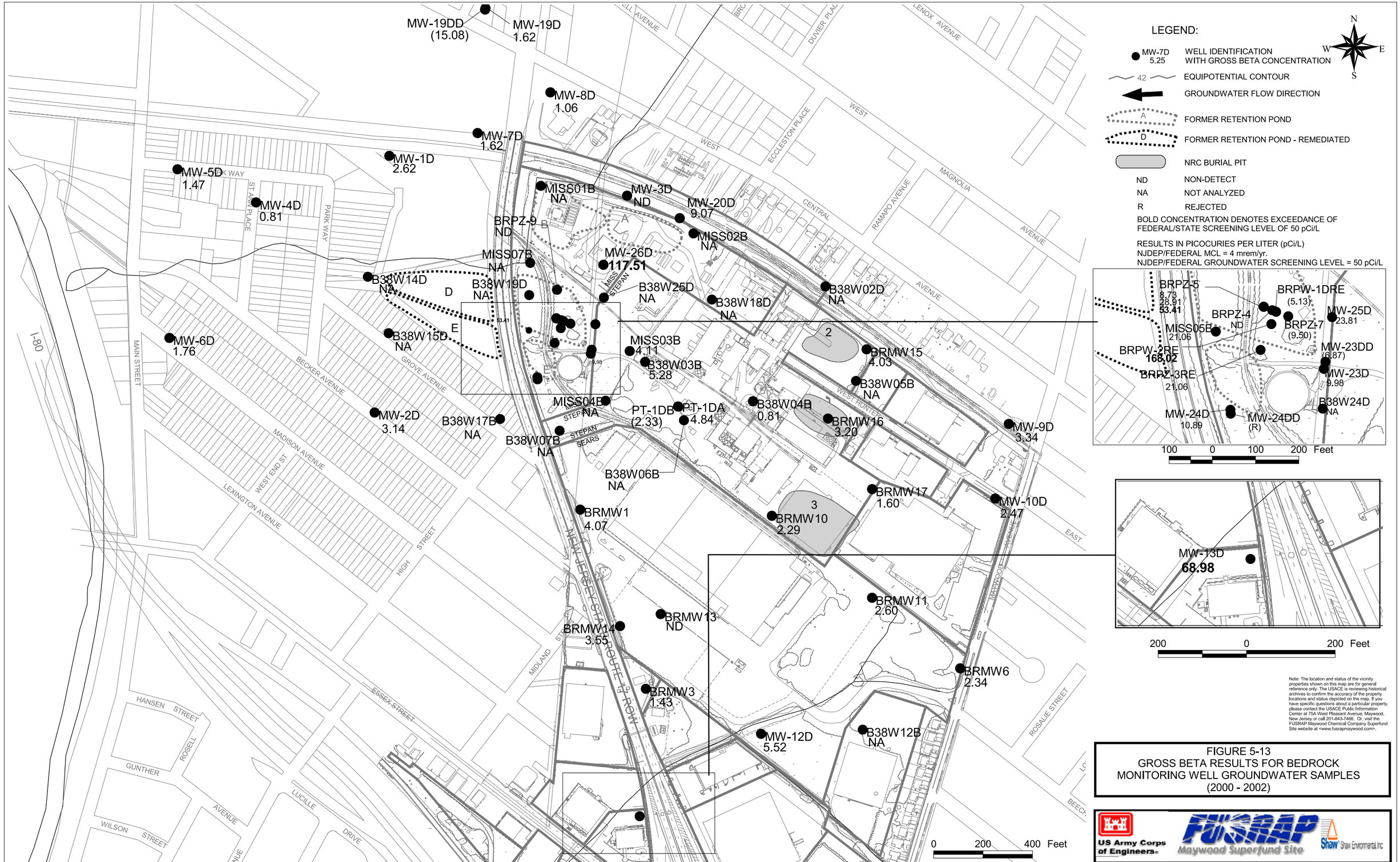
Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-12
TOTAL THORIUM RESULTS FOR
BEDROCK WELL GROUNDWATER SAMPLES
(2000 - 2002)

200 0 200 400 Feet

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Thorium-(Total)-Bedrock-17x11 November 22, 2004



LEGEND:

- MW-7D 5.25 — WELL IDENTIFICATION WITH GROSS BETA CONCENTRATION
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED
- R — REJECTED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF FEDERAL/STATE SCREENING LEVEL OF 50 pCi/L

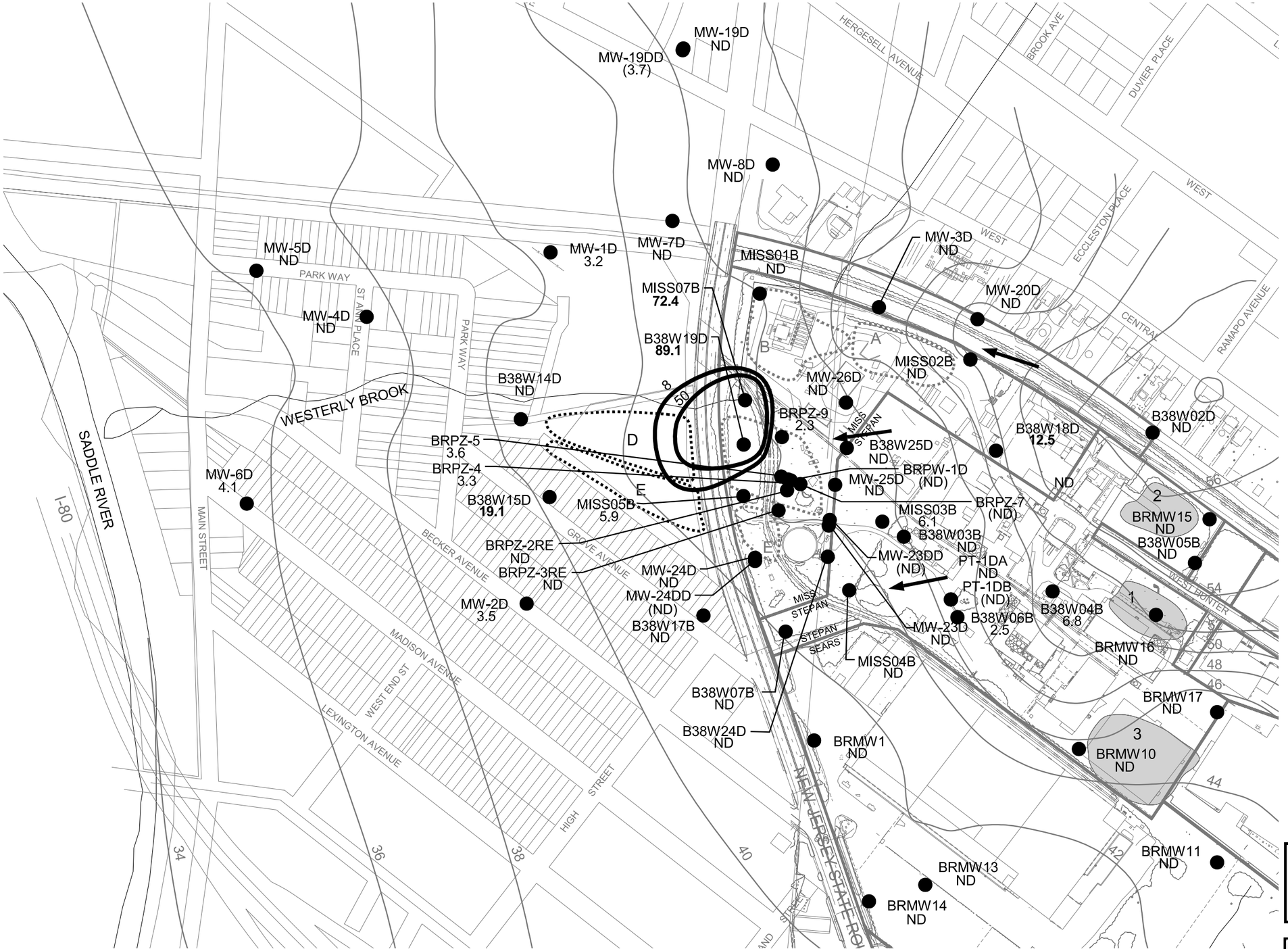
RESULTS IN PICOCURIES PER LITER (pCi/L)
NJDEP/FEDERAL MCL = 4 mrem/yr.
NJDEP/FEDERAL GROUNDWATER SCREENING LEVEL = 50 pCi/L

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-13
GROSS BETA RESULTS FOR BEDROCK
MONITORING WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Gross Beta Bedrock 17x11 June 22, 2005



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LEGEND:

- MISS07B 72.4 — WELL IDENTIFICATION WITH ARSENIC CONCENTRATION
- MW-19DD (3.7) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 8 — LINE OF EQUAL ARSENIC CONCENTRATION
- 8 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

ND NON-DETECT
NA NOT ANALYZED

RESULTS IN MICROGRAMS PER LITER (ug/L)
NJDEP/FEDERAL MCL = 50
NJDEP GWQC PQL = 8

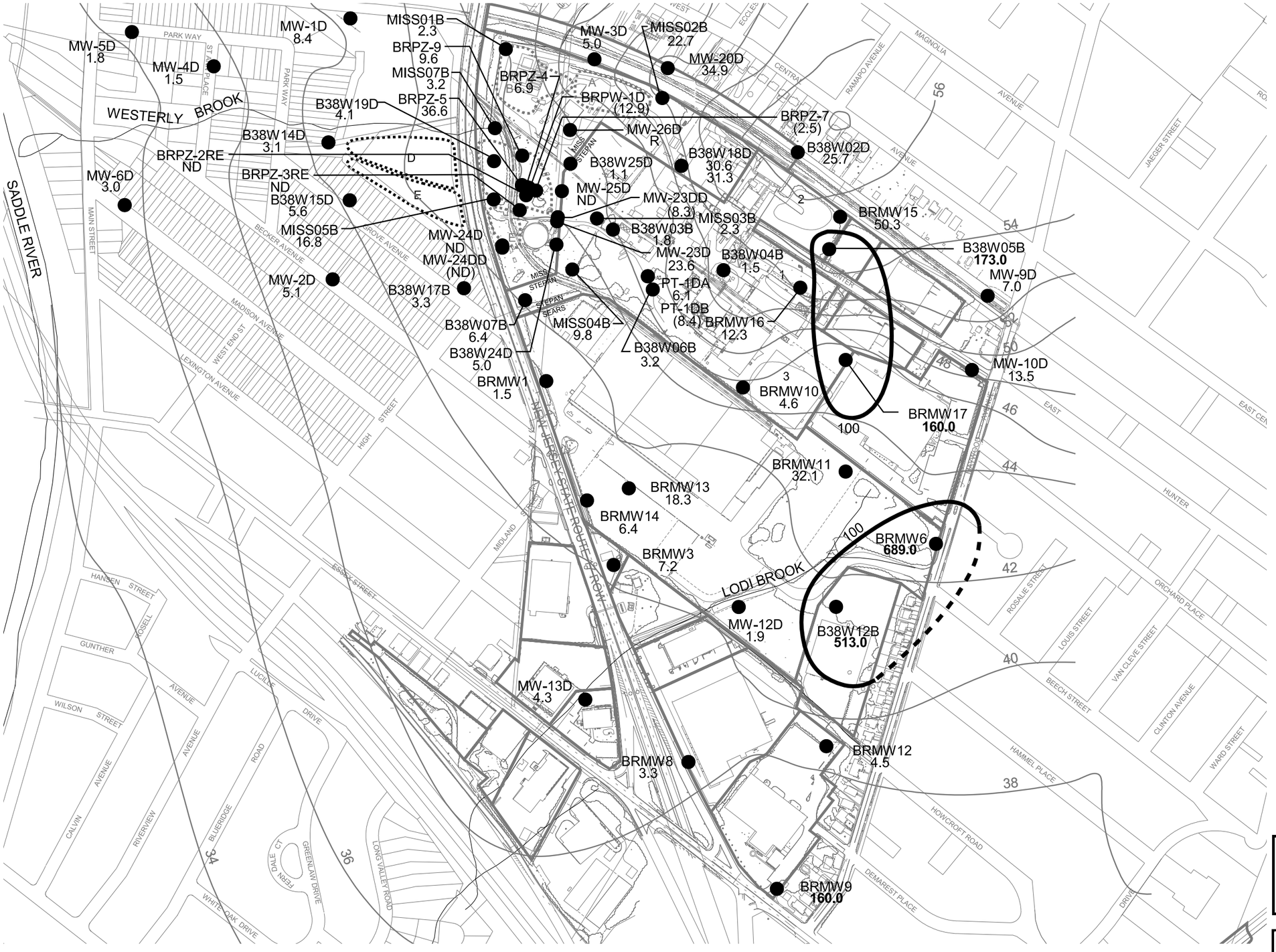
BOLD CONCENTRATION DENOTES EXCEEDANCE OF NJGWQC MCL OF 8 ug/L

200 0 200 400 Feet

FIGURE 5-14
ARSENIC RESULTS FOR SHALLOW
BEDROCK WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Arsenic-Bedrock-17x11 November 17, 2004



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LEGEND:

- BRMW15 50.3 — WELL IDENTIFICATION WITH DETECTED CHROMIUM CONCENTRATION
- PT-1DB (8.4) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 100 — LINE OF EQUAL CHROMIUM CONCENTRATION
- 100 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT

ND NON-DETECT
NA NOT ANALYZED
R REJECTED

RESULTS IN MICROGRAMS PER LITER (ug/L)
NJDEP/FEDERAL MCL = 100

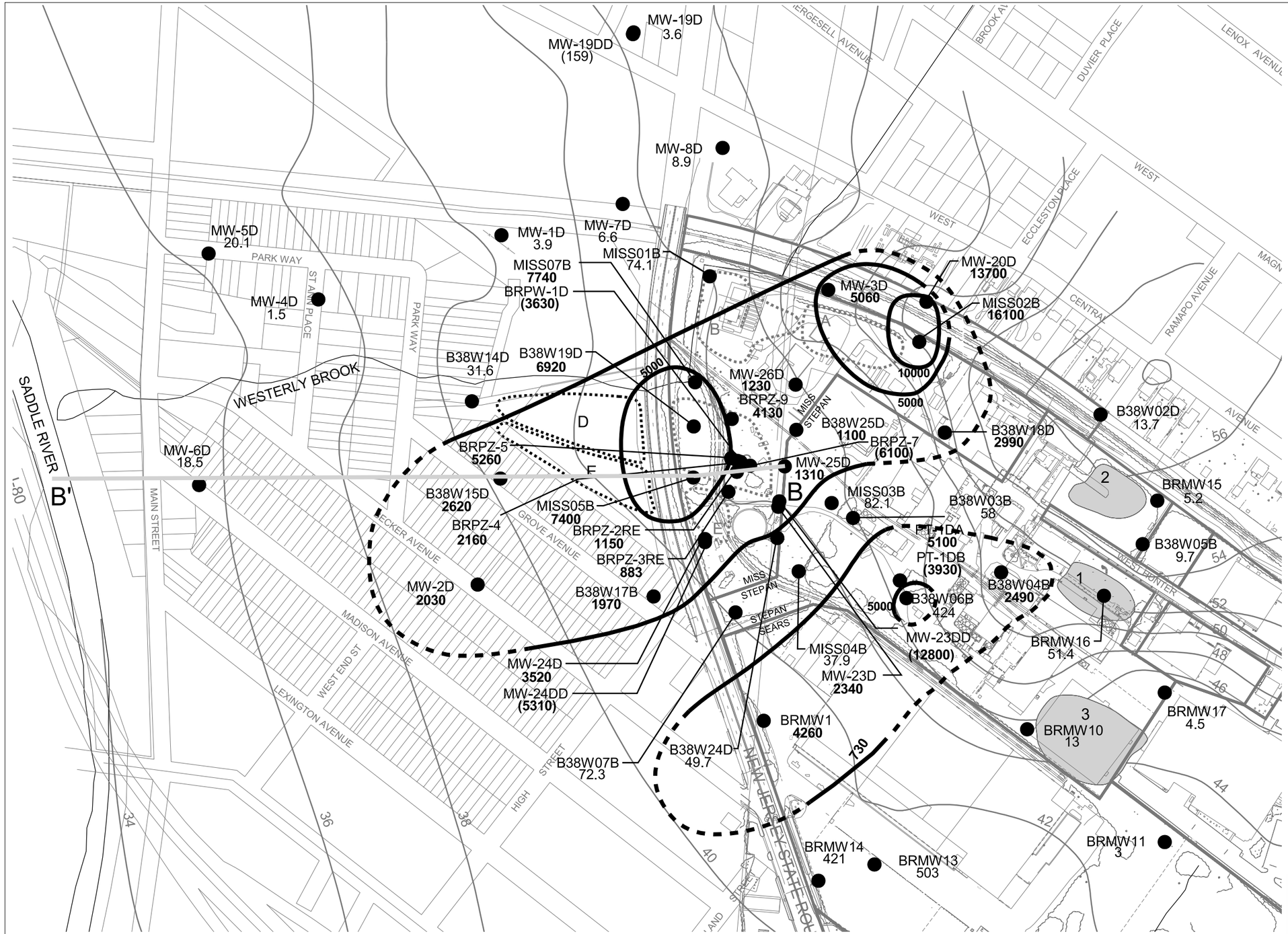
BOLD CONCENTRATION DENOTES EXCEEDANCE OF FEDERAL/STATE MCL OF 100 ug/L

200 0 200 400 Feet

FIGURE 5-15
TOTAL CHROMIUM RESULTS FOR
BEDROCK WELL GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: Chromium-Bedrock-17x11 November 22, 2004



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LEGEND:

- MW-20D 13700 — WELL IDENTIFICATION WITH LITHIUM CONCENTRATION
- PT-1DB (3930) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 730 — LINE OF EQUAL LITHIUM CONCENTRATION
- 730 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- 1 — NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF REGION IX PRG OF 730 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)
USEPA REGION IX PRG = 730

B — B' TRACE OF CROSS SECTION (FIGURE 5-28) SHOWING THE DISTRIBUTION OF LITHIUM IN THE OVERBURDEN AND BEDROCK AQUIFER.

ORIGINALLY FIGURE 5-16 FROM GWRI REPORT DATED NOVEMBER 2004

200 0 200 400 600 Feet

FIGURE 5-16
LITHIUM RESULTS FOR SHALLOW BEDROCK GROUNDWATER SAMPLES
(2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock_2.apr LAYOUT: Lithium-Bedrock-17x11 May 25, 2005

LEGEND:

- MW-27D 5 ug/L — BEDROCK WELL IDENTIFICATION WITH BENZENE CONCENTRATION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- RESULTS IN MICROGRAMS PER LITER (ug/L)
- 10 — LINE OF EQUAL BENZENE CONCENTRATION
- 10 — DASHED WHERE INFERRED
- 47 — LINE OF EQUAL HYDRAULIC HEAD (JUNE 2003)
- POTENTIAL SOURCE AREA

BOLDED CONCENTRATIONS DENOTE EXCEEDANCE OF BENZENE GROUNDWATER STANDARD OF 1 ug/L (NJ GWQC)

C — C' TRACE OF CROSS SECTION (FIGURE 5-28) SHOWING THE DISTRIBUTION OF BENZENE IN THE OVERBURDEN AND BEDROCK AQUIFER.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-17
BENZENE RESULTS FOR BEDROCK WELL GROUNDWATER SAMPLES SUPPLEMENTAL INVESTIGATION

100 0 100 200 Feet

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Chem.apr LAYOUT: Benzene-17x11 August 18, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES.

MW-19D ND
MW-19DD (0.5)
MW-3D 8200
MW-2D 2
MW-4D 20000
MW-8D 80
MW-7D 1200
MW-1D 9
MW-5D 1
MW-4D 9
MW-6D 22
MW-2D 37
B38W14D 300
B38W15D 150
B38W19D ND
B38W17B ND
MISS07 9
MISS05B ND
MISS01B 12
MW-3D ND
MW-20D ND
MW-26D ND
MISS02B ND
PZ-9 ND
PZ-5 0.8
B38W25D ND
B38W18D ND
B38W02D ND
BRPW-1D (4)
MW-25D ND
MISS03B ND
B38W03B ND
PZ-3 ND
PZ-4 3
PZ-2 0.5
B38W24D ND
PT-1DA ND
PT-1DB (ND)
MISS04B ND
B38W04B ND
B38W06B ND
B38W07B ND
MW-23D ND
B38W05B 0.1
BRMW1 ND

1
100
1000
A
B
C
D
E
1
2
3

WESTERLY BROOK
SADDLE RIVER
I-80
PARK WAY
ST ANN PLACE
MAIN STREET
BOOKER AVENUE
GROVE AVENUE
MADISON AVENUE
LEXINGTON AVENUE
WEST END ST
STREET
AVENUE
BURAND PLACE
LINCOLN
HERGESELL AVENUE
BROOK AVENUE
WILHELM PL
DUVIER PLACE
LENOX AVENUE
WEST
ECCLESTON PLACE
CENTRAL
RAMAPO AVENUE
WESTBOUND
MISS STEPAN
STEPAN
SEARS
NEWELL
34
36
38
40
42
44
46
48
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52
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56

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LEGEND:

- MW-8D 80 — WELL IDENTIFICATION WITH TETRACHLOROETHENE CONCENTRATION
- MW-19DD (0.5) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 1 — LINE OF EQUAL TETRACHLOROETHENE CONCENTRATION
- 1 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF STATE MCL OF 1 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL MCL = 5
NJDEP MCL = 1

NOTE:
DATA FROM SAMPLES MW-2D THROUGH MW-4D ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

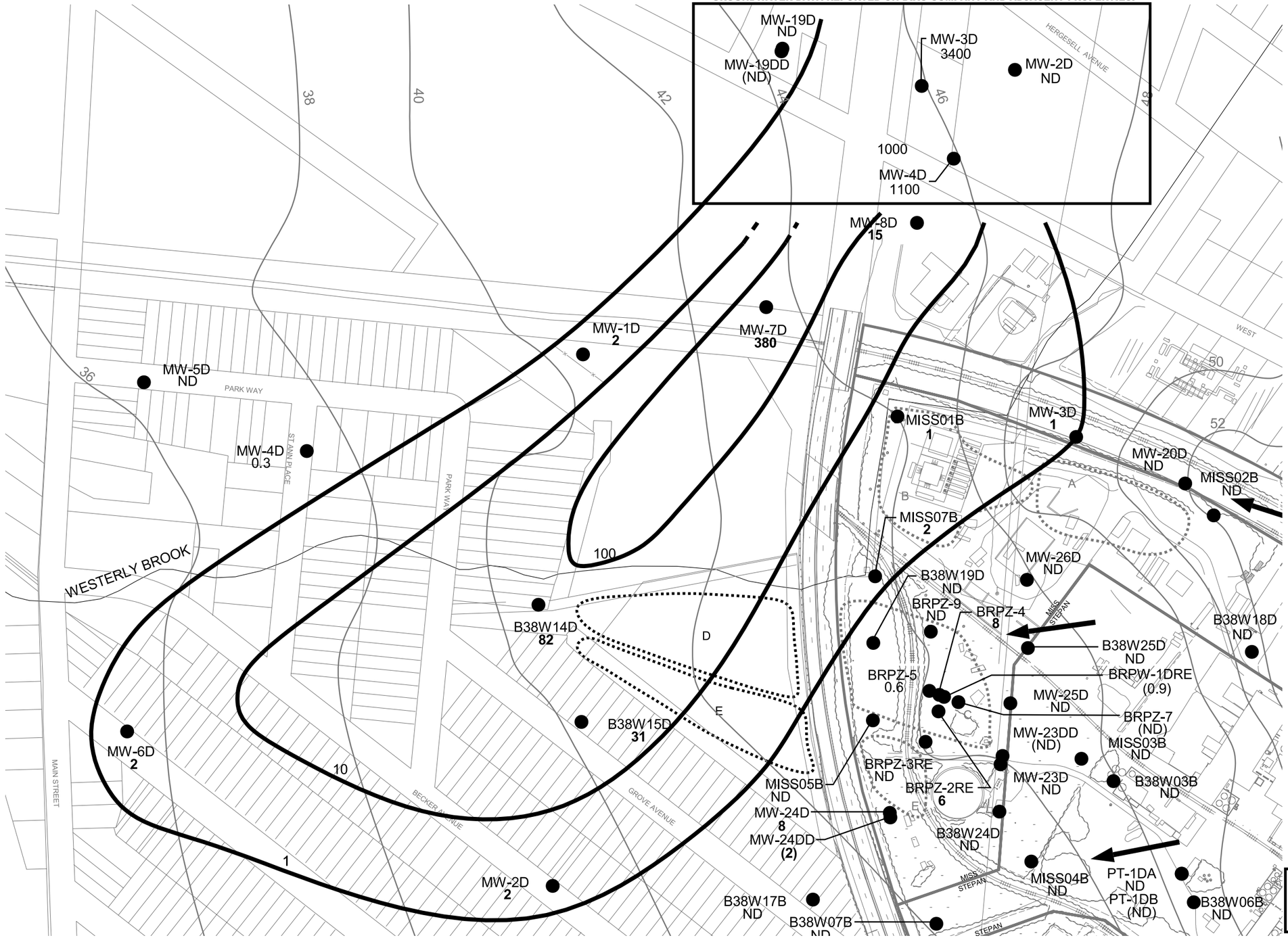
200 0 200 400 Feet

FIGURE 5-18
TETRACHLOROETHENE RESULTS FOR SHALLOW BEDROCK MONITORING WELL GROUNDWATER SAMPLES (2000 - 2002)

US Army Corps of Engineers®
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: pce-bedrock-17x11 November 17, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES.



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LEGEND:

- MW-7D 380 — WELL IDENTIFICATION WITH TCE CONCENTRATION
- MW-19DD (ND) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 50 — LINE OF EQUAL TCE CONCENTRATION
- 50 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF STATE MCL OF 1 ug/L

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL MCL = 5
NJDEP MCL = 1

NOTE:

DATA FROM SAMPLES MW-2D THROUGH MW-4D ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002.

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-19
TCE RESULTS FOR SHALLOW BEDROCK MONITORING WELL GROUNDWATER SAMPLES (2000 - 2002)

100 0 100 200 Feet

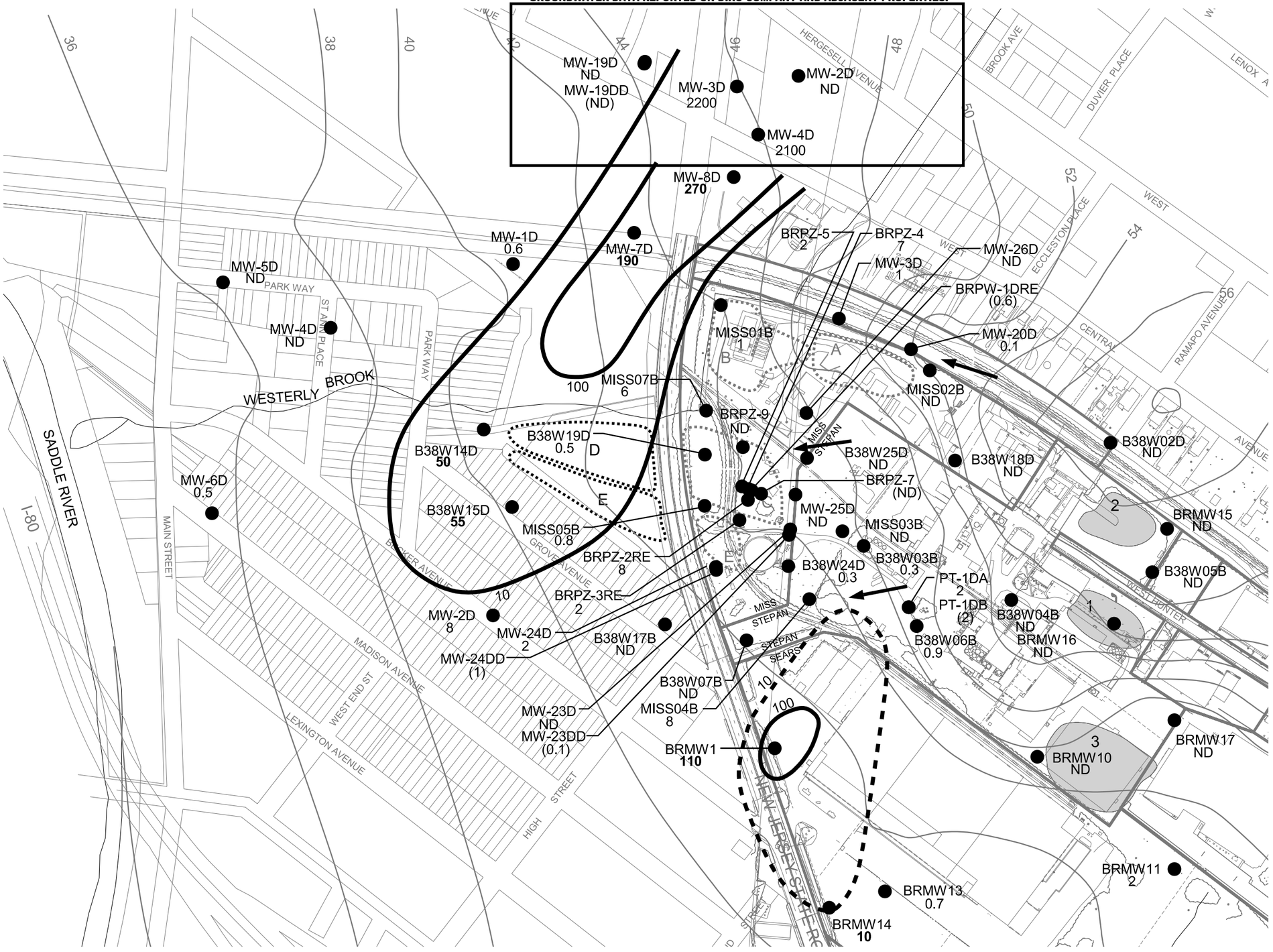
US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: TCE-Bedrock-17x11 November 22, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES.



LEGEND:

- MW-20D 0.1 — WELL IDENTIFICATION WITH 1,2-DICHLOROETHENE (TOTAL) CONCENTRATION
- MW-24DD (1) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 10 — LINE OF EQUAL 1,2-DICHLOROETHENE (TOTAL) CONCENTRATION
- 10 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF 1,2-DICHLOROETHENE (CIS) STANDARDS OF 10 ug/L. RESULTS ARE FOR 1,2-DICHLOROETHENE (TOTAL).

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL MCL = 70 FOR 1,2-DICHLOROETHENE (CIS)
FEDERAL MCL = 100 FOR 1,2-DICHLOROETHENE (TRANS)
NJDEP GWQC = 10 FOR 1,2-DICHLOROETHENE (CIS)

NOTE:
DATA FROM SAMPLES MW-2D THROUGH MW-4D ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002.

200 0 200 400 Feet

FIGURE 5-20
TOTAL 1,2-DICHLOROETHENE RESULTS FOR BEDROCK WELL GROUNDWATER SAMPLES (2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: DCE-Bedrock-17X11 November 22, 2004

GROUNDWATER DATA REPORTED ON DIXO COMPANY AND ADJACENT PROPERTIES.

MW-19DD (ND)
MW-19D ND
MW-2D ND
MW-3D 98
MW-4D ND
MW-8D 2
MW-7D 1
MW-1D ND
MW-5D ND
MW-4D ND
MW-6D ND
MW-2D 0.2
MW-26D ND
BRPW-1DRE (ND)
BRPZ-5 0.1
BRPZ-4 ND
MW-3D ND
MW-20D ND
MISS01B ND
MISS07B 1
BRPZ-9 ND
WESTERLY BROOK
B38W14D ND
B38W19D ND
MISS05B 0.2
B38W15D 0.6
BRPZ-2RE 2
BRPZ-3RE ND
MW-24D ND
MW-24DD (ND)
MW-23DD (ND)
MW-23D ND
B38W17B ND
B38W07B ND
MISS02B ND
B38W25D ND
BRPZ-7 (ND)
MW-25D ND
MISS03B ND
B38W03B ND
B38W24D ND
PT-1DA 0.5
PT-1DB (0.5)
B38W06B 0.2
MISS04B 66
B38W18D ND
B38W02D ND
BRMW15 ND
B38W05B ND
B38W04B ND
BRMW16 ND
MW-9D ND
MW-10D ND
BRMW17 ND
BRMW10 ND
BRMW1 210
BRMW13 ND
BRMW14 1
BRMW11 0.1
BRMW6 ND
FORMER AROMATICS AREA
PARK WAY
STAIN PLACE
BECKER AVENUE
GROVE AVENUE
MADISON AVENUE
WEST END ST
LEXINGTON AVENUE
HIGH STREET
MIDLAND STREET
MISS STEPAN
STEPAN SEAMS
MISS STEPAN
NEW JERSEY STATE ROUTE 440
BROOK AVENUE
DUVIER PLACE
LENOX AVENUE
WEST
ECCLESTON PLACE
CENTRAL
RAMAPO AVENUE
MAGNOLIA AVENUE
WESTERLY BROOK
MAYWOOD AVENUE
WEST PORTER
54
56
52
50
48
46
44
42
38
36

LEGEND:

- BRMW11 0.10 — WELL IDENTIFICATION WITH VINYL CHLORIDE CONCENTRATION
- BRPZ-7 (0.5) — WELL IDENTIFICATION DATA FROM DEEP BEDROCK WELL PRESENTED BUT NOT USED IN CONTOURING OF DATA
- 2 — LINE OF EQUAL VINYL CHLORIDE CONCENTRATION
- 2 — DASHED WHERE INFERRED
- 42 — EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- A — FORMER RETENTION POND
- D — FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- ND — NON-DETECT
- NA — NOT ANALYZED

RESULTS IN MICROGRAMS PER LITER (ug/L)
FEDERAL/STATE MCL = 2

BOLD CONCENTRATION DENOTES EXCEEDANCE OF FEDERAL/STATE MCL OF 2 ug/L

NOTE:

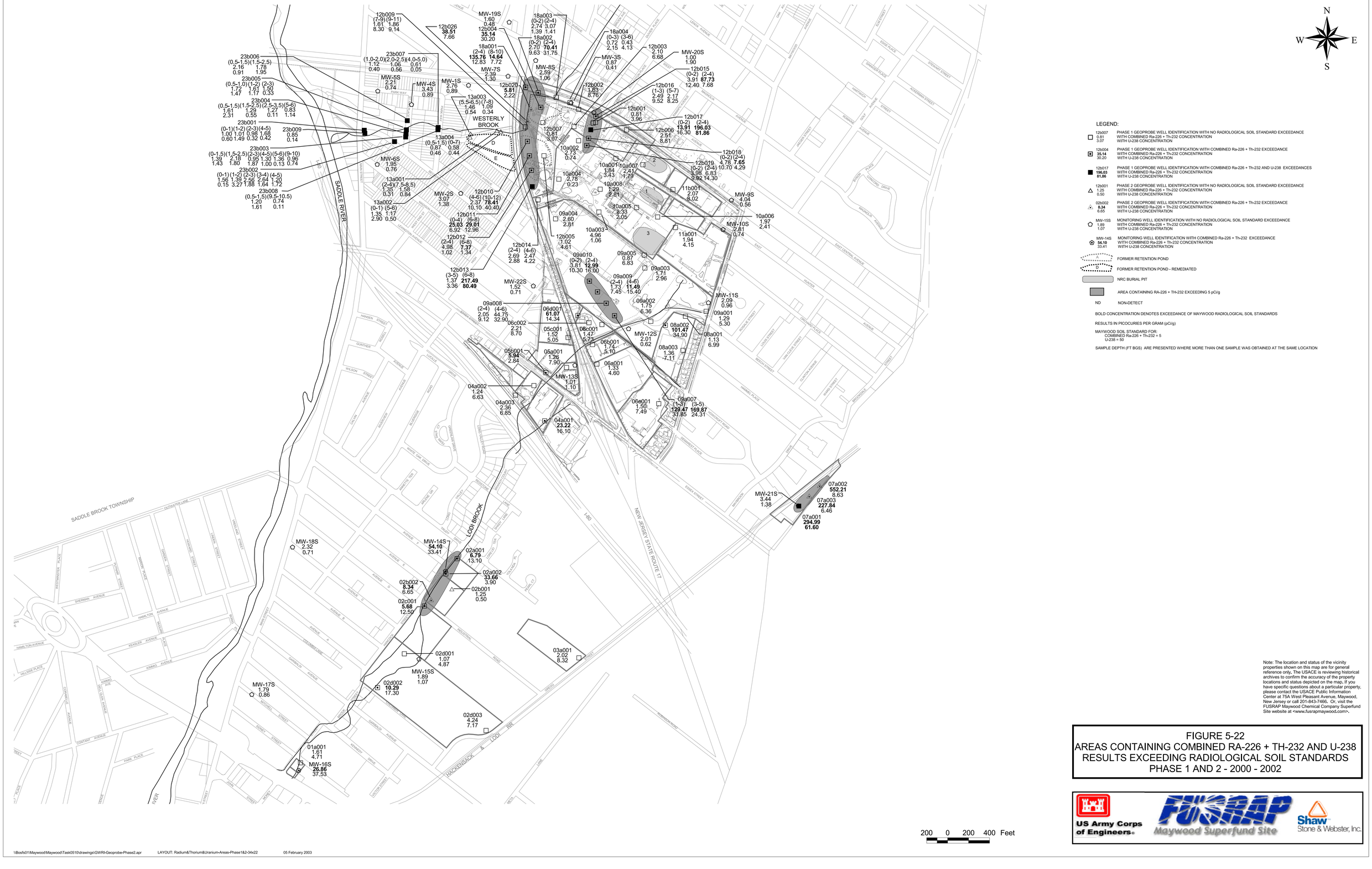
DATA FROM SAMPLES MW-2D THROUGH MW-4D ON THE DIXO COMPANY PROPERTY WERE OBTAINED ON JUNE 17, 2002.

200 0 200 400 Feet

FIGURE 5-21
VINYL CHLORIDE RESULTS FOR SHALLOW BEDROCK WELL GROUNDWATER SAMPLES (2000 - 2002)

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: VC-Bedrock-17X11 November 22, 2004



Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-22
AREAS CONTAINING COMBINED RA-226 + TH-232 AND U-238 RESULTS EXCEEDING RADIOLOGICAL SOIL STANDARDS PHASE 1 AND 2 - 2000 - 2002

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Stone & Webster, Inc.

N

W E

S

LEGEND:

CB-1 0.38 1.16 6.56	SURFACE WATER SAMPLE LOCATION WITH NO EXCEEDANCES WITH TOTAL RADIUM CONCENTRATION WITH TOTAL THORIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
LB-7 **6.07** 0.93 1.18	SURFACE WATER SAMPLE LOCATION WITH TOTAL RADIUM EXCEEDANCE WITH TOTAL RADIUM CONCENTRATION WITH TOTAL THORIUM CONCENTRATION WITH TOTAL URANIUM CONCENTRATION
	EXTENT OF FUSRAP RELATED WASTE
A	FORMER RETENTION POND
D	FORMER RETENTION POND - REMEDIATED
	NRC BURIAL PIT
ND	NON-DETECT
NA	NOT ANALYZED

BOLD CONCENTRATION DENOTES EXCEEDANCE OF GROUNDWATER STANDARDS

RESULTS IN PICOCURIES PER LITER (pCi/L)

RADIOLOGICAL CLEAN-UP CRITERIA FOR:
TOTAL RADIUM = 5 pCi/L
TOTAL THORIUM = NO MCL
TOTAL URANIUM = 30 ug/L

REFER TO TABLES 4-49, 4-53 AND 4-56 FOR ACTIVITY AND ISOTOPIC MASS RESULTS FOR URANIUM.

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

FIGURE 5-23
RADIOLOGICAL RESULTS FOR SURFACE WATER SAMPLES
PHASE 2 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GW\Rb-SurfaceWater-Phase2.apr LAYOUT: Radiologicak-Areas-SurfaceWater-Phase2-34x22 25 April 2003

Figure 5-24 - RESERVED

N

W E

S

LEGEND:

- LB-6 2.05 0.34 — SEDIMENT SAMPLE LOCATION WITH NO EXCEEDANCES WITH RA-226 + TH-232 CONCENTRATION WITH U-238 CONCENTRATION
- LB-1 **31.89** 5.76 — SEDIMENT SAMPLE LOCATION WITH RA-226 + TH-232 EXCEEDANCE WITH RA-226 + TH-232 CONCENTRATION WITH U-238 CONCENTRATION
- FORMER RETENTION POND
- FORMER RETENTION POND - REMEDIATED
- NRC BURIAL PIT
- EXTENT OF FUSRAP RELATED WASTE
- ND — NON-DETECT

BOLD CONCENTRATION DENOTES EXCEEDANCE OF RADIOLOGICAL CLEAN-UP CRITERIA

RESULTS IN PICOCURIES PER GRAM (pCi/g)

RADIOLOGICAL CLEAN-UP CRITERIA FOR:
RA-226 + TH-232 = 5
U-238 = 50

200 0 200 400 Feet

Note: The location and status of the vicinity properties shown on this map are for general reference only. The USACE is reviewing historical archives to confirm the accuracy of the property locations and status depicted on the map. If you have specific questions about a particular property, please contact the USACE Public Information Center at 75A West Pleasant Avenue, Maywood, New Jersey or call 201-843-7466. Or, visit the FUSRAP Maywood Chemical Company Superfund Site website at <www.fusrapmaywood.com>.

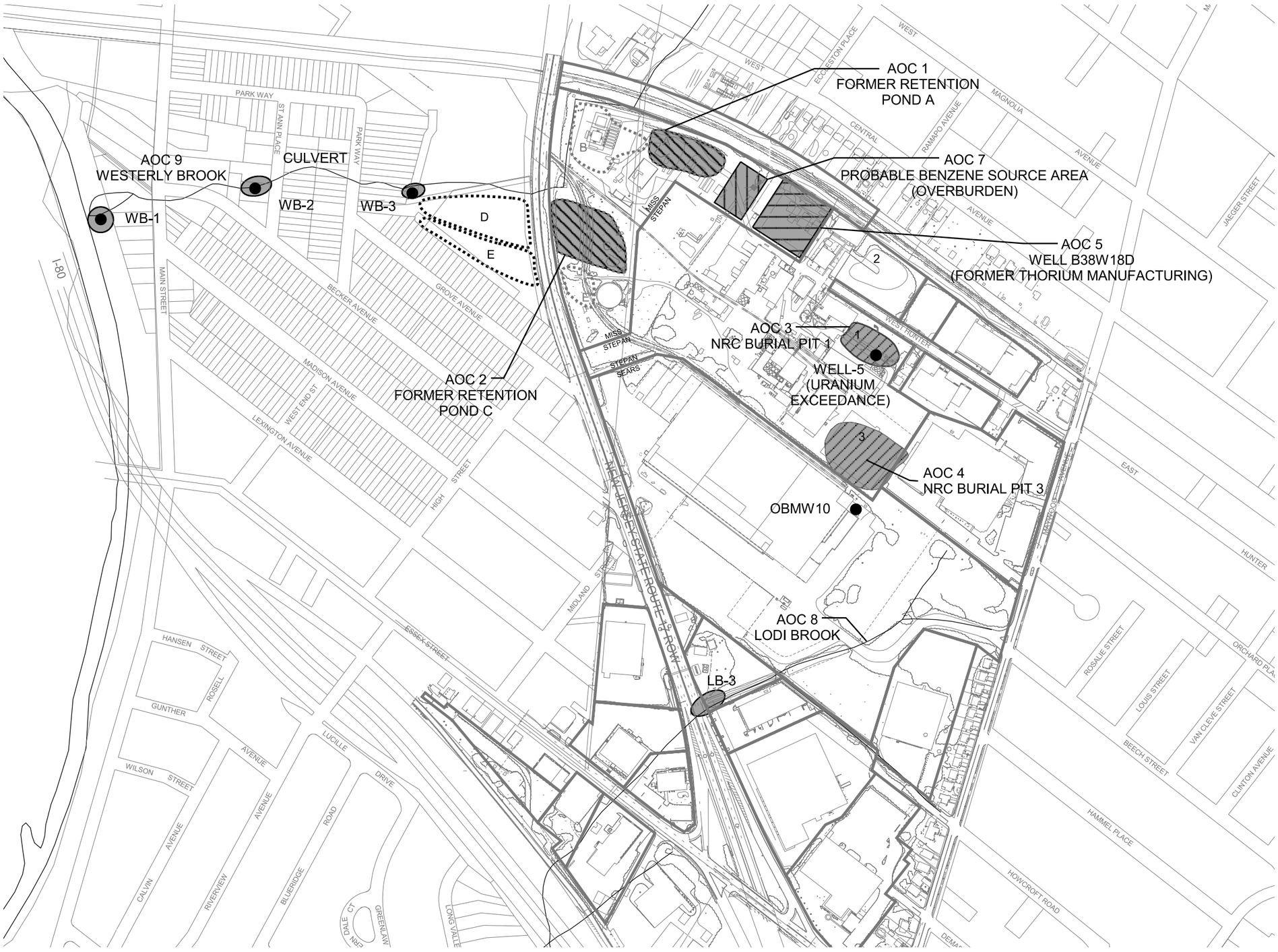
FIGURE 5-25
RA-226 + TH-232 AND U-238 RESULTS FOR SEDIMENT SAMPLES
PHASE 2 - 2000

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\Bosfs01\Maywood\Maywood\Task0510\drawings\GWRI-Sediment-Phase2.apr LAYOUT: Radiological-Area-Sediment-Phase2-34x22 5 February 2003



LEGEND:

- OBMW10 — OVERBURDEN MONITORING WELL
- AOC 1 — FORMER RETENTION POND
- AOC 3 — NRC BURIAL PIT
- AOC 7 — PROBABLE BENZENE SOURCE AREA
- AOC 5 — FORMER THORIUM MANUFACTURING
- WB-1 — EXTENT OF FUSRAP WASTE

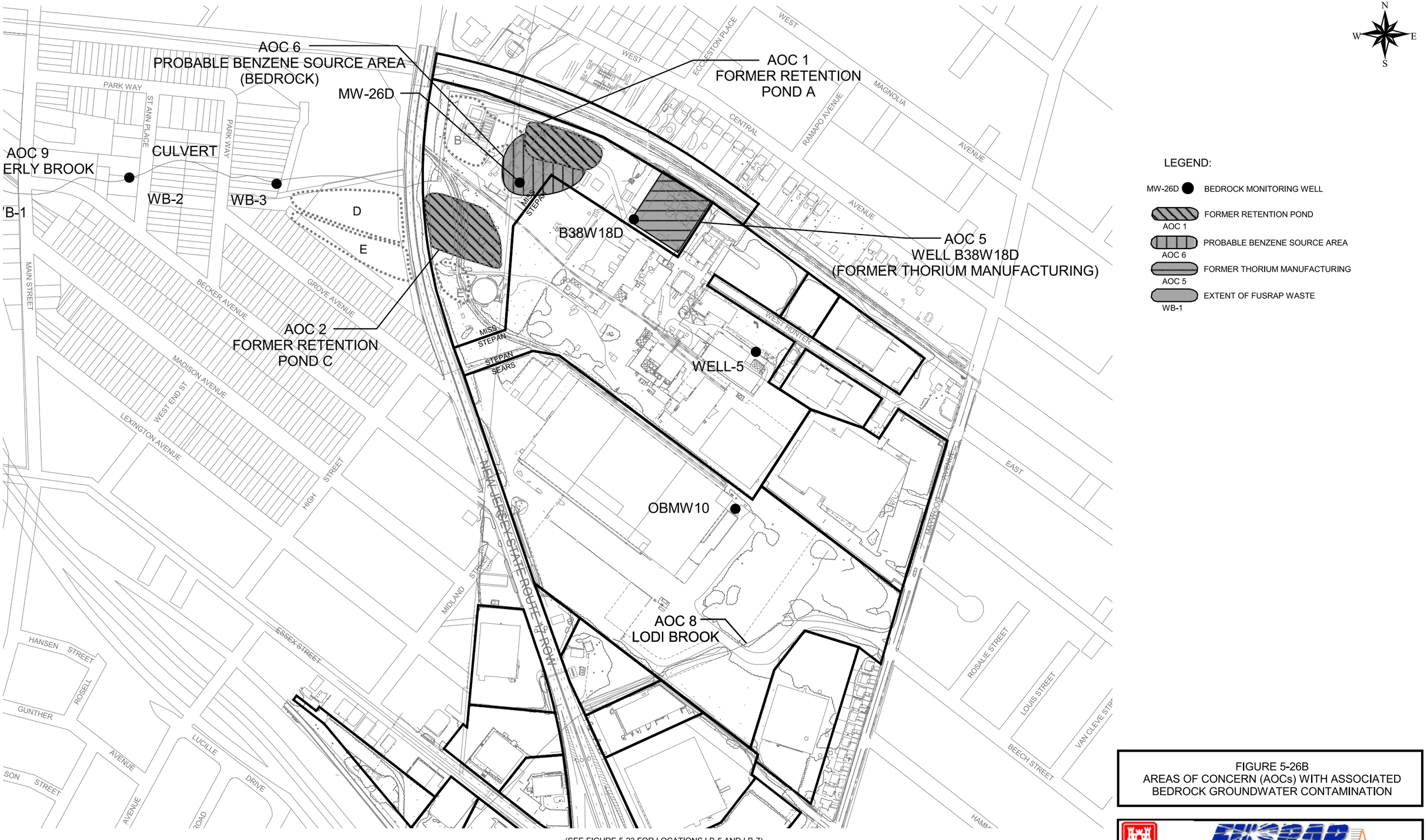
(SEE FIGURE 5-23 FOR LOCATIONS LB-5 AND LB-7)

200 0 200 400 Feet

FIGURE 5-26A
AREAS OF CONCERN (AOCs) WITH ASSOCIATED
OVERBURDEN GROUNDWATER
SURFACE WATER OR SEDIMENT
CONTAMINATION

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Environmental Inc

\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: AOC-Overburden-17X11 JULY 6, 2005



(SEE FIGURE 5-23 FOR LOCATIONS LB-5 AND LB-7)

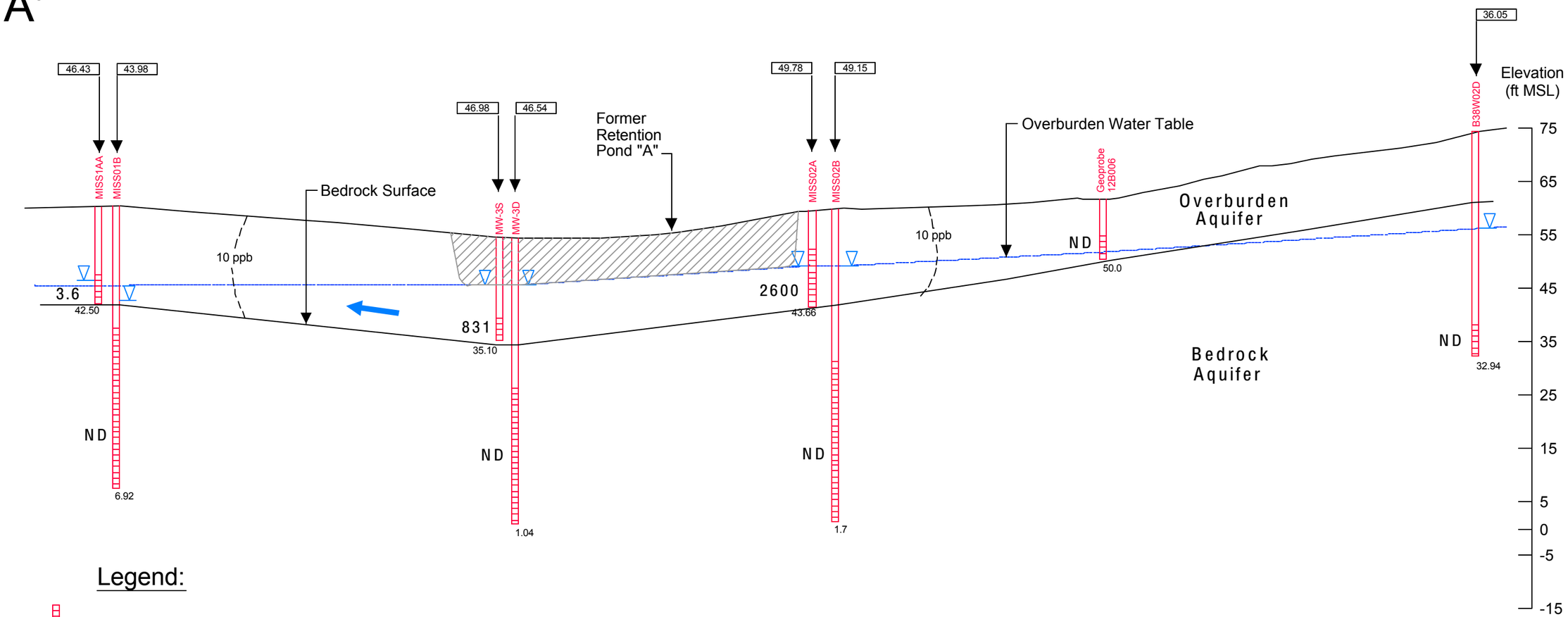
FIGURE 5-26B
AREAS OF CONCERN (AOCs) WITH ASSOCIATED
BEDROCK GROUNDWATER CONTAMINATION

US Army Corps of Engineers
FUSRAP Maywood Superfund Site
Shaw Shaw Environmental, Inc

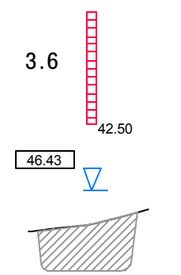
\\Bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\Contours-Bedrock.apr LAYOUT: AOC-Bedrock-17x11 July 06, 2005

A'

A



Legend:



Screened well interval with base screen elevation (ft MSL) shown at bottom, Arsenic concentration in ug/l shown in bold number at mid screen interval.

Overburden water table or bedrock potentiometric surface. All elevation data collected during the December 2001 synoptic round.

Probable extent of Former Retention Pond "A".

Plotted extent of the Arsenic plume to the 10.0 ug/L Federal MCL.

Groundwater flow direction.

Notes:

1. Phase I (2000) Arsenic data was utilized at geoprobe 12B006.
2. Cross Section Plan is shown in Figure 5-4.

0 100 200

APPROXIMATE SCALE

Figure 5-27

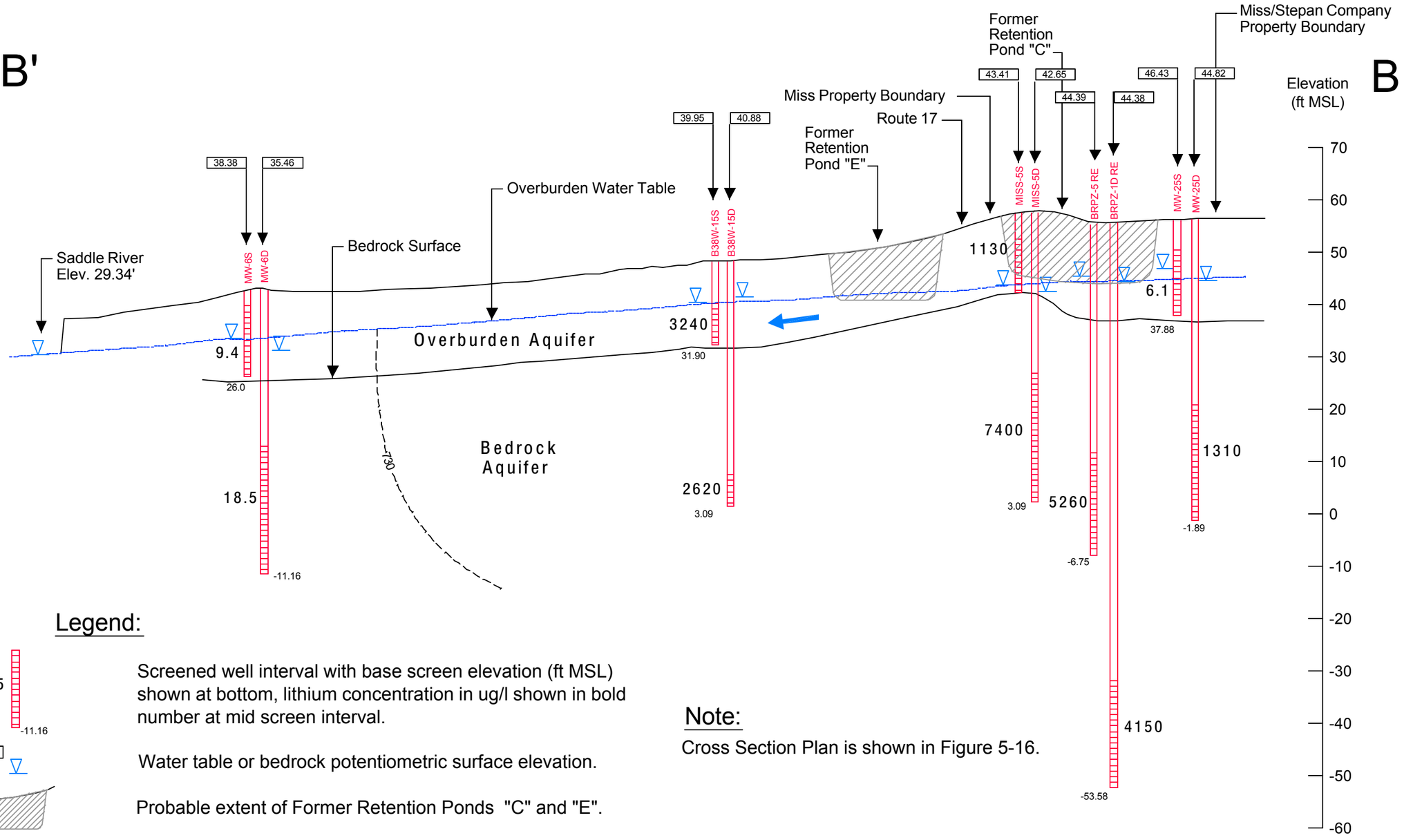
Distribution of Arsenic in the Overburden and Bedrock Aquifer

US Army Corps of Engineers

FUSRAP Maywood Superfund Site

Shaw Stone & Webster, Inc.

\\bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\10898383.dwg
Plot Date/Time: 09/08/04 10:33am



Legend:

18.5 / -11.16 — Screened well interval with base screen elevation (ft MSL) shown at bottom, lithium concentration in ug/l shown in bold number at mid screen interval.

38.38 — Water table or bedrock potentiometric surface elevation.

Probable extent of Former Retention Ponds "C" and "E".

730 — Plotted (downgradient) extent of lithium groundwater excedence. The applied groundwater standard is the Region IX PR for lithium in groundwater.

Groundwater flow direction.

Note:

Cross Section Plan is shown in Figure 5-16.

0 200 400

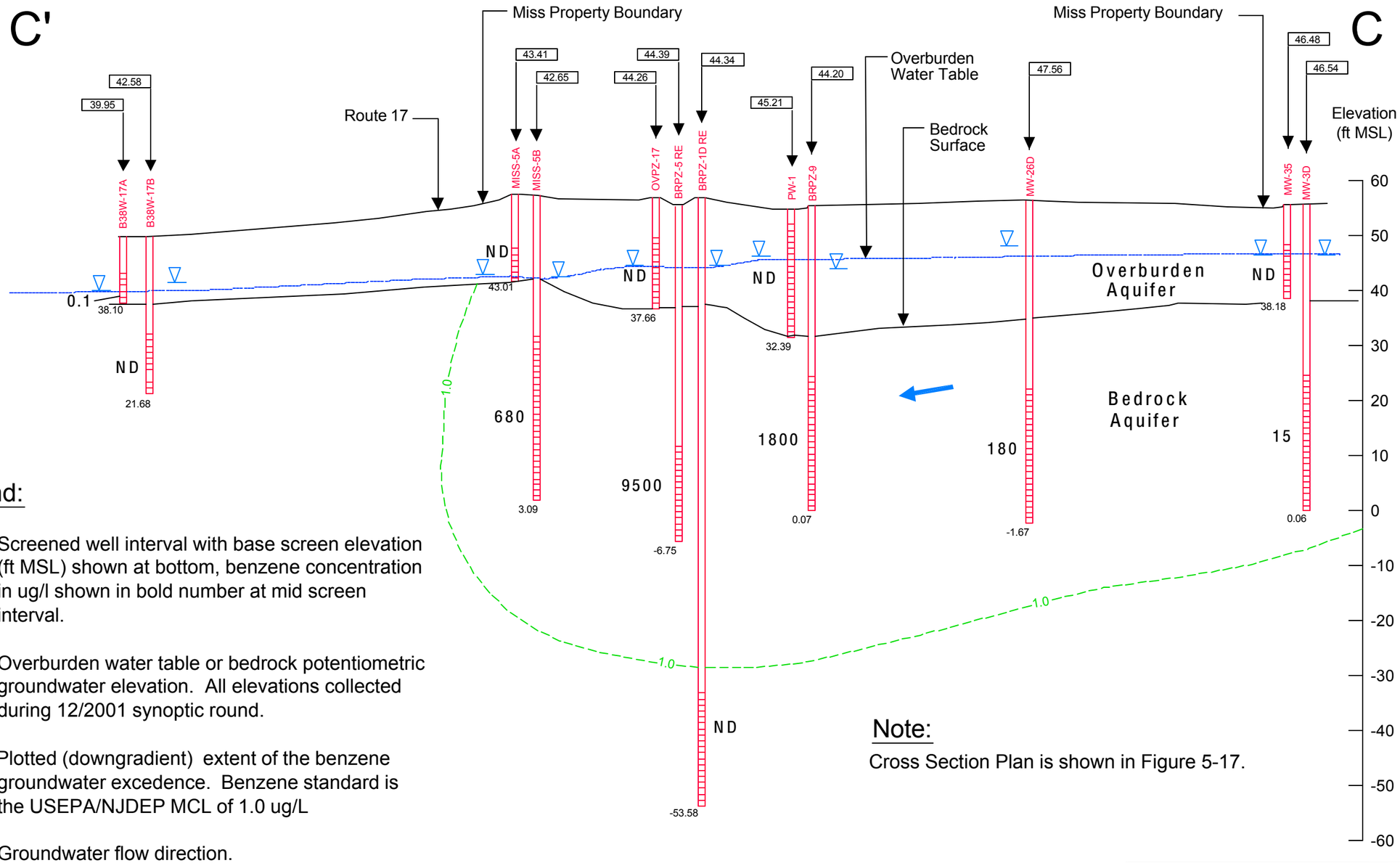
APPROXIMATE SCALE

Figure 5-28

Distribution of Lithium in the Overburden and Bedrock Aquifer

US Army Corps of Engineers® FUSRAP Maywood Superfund Site Shaw Stone & Webster, Inc.

\\bosfs01\Maywood\Maywood\Task0510\drawings\July 2004\108783B1.dwg
Plot Date/Time: 11/22/04 10:00am



Legend:

9500 / -6.75 — Screened well interval with base screen elevation (ft MSL) shown at bottom, benzene concentration in ug/l shown in bold number at mid screen interval.

44.26 — Overburden water table or bedrock potentiometric groundwater elevation. All elevations collected during 12/2001 synoptic round.

1.0 — Plotted (downgradient) extent of the benzene groundwater excedence. Benzene standard is the USEPA/NJDEP MCL of 1.0 ug/L

Groundwater flow direction.

Note: Benzene data in bedrock was collected as part of the Supplemental (2002) Benzene Investigation. Overburden benzene data was not collected during this investigation, and Phase II (2000-2001) data is reported for overburden wells.

Note:

Cross Section Plan is shown in Figure 5-17.

0 100 200

APPROXIMATE SCALE

Figure 5-29

Distribution of Benzene in the Overburden and Bedrock Aquifer

US Army Corps of Engineers — FUSRAP Maywood Superfund Site — Shaw Stone & Webster, Inc.

\\bosfs01\Maywood\Maywood\Task05\10\drawings\July 2004\108783B2.dwg
Plot Date/Time: 09/08/04 10:29am

FUSRAP
Maywood Superfund Site

Groundwater Remedial Investigation Report

Volume 4
Appendices A through D (partial)

Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

Prepared for:

US Army Corps
of Engineers®

Contract No. DACW41-99-D-9001

July 2005, Revision 4

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	APPENDIX N	WELL SAMPLING RECORDS
	APPENDIX O	VIDEO SURVEY AND OBSERVATIONS: LODI AND WESTERLY BROOK S
	APPENDIX P	MONITORING WELL CLUSTER HYDROGRAPHS
	APPENDIX Q	METEOROLOGY
	APPENDIX R	BATCH SORPTION RESULTS
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APPENDIX B COAL ASH: POTENTIAL METALS CONCENTRATIONS

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II CONTAMINANTS OF CONCERN (COCS)
III MCW MATERIAL PROCESSING
IV POTENTIAL ORIGIN OF METAL CONSTITUENTS
V METALS AS A FUSRAP WASTE
VI CONCLUSIONS
REFERENCES
APPENDIX A CALCULATION – POTENTIAL METAL CONCENTRATIONS IN MISS SOILS DUE TO MCW COAL FIRING / ASH DISPOSAL

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APRIL 6, 1940 AERIAL PHOTOGRAPH
APRIL 7, 1951 AERIAL PHOTOGRAPH
APRIL 12, 1961 AERIAL PHOTOGRAPH 1
APRIL 12, 1961 AERIAL PHOTOGRAPH 2
MARCH 25, 1974 AERIAL PHOTOGRAPH 1
MARCH 25, 1974 AERIAL PHOTOGRAPH 1
MAP IN VICINITY OF WESTERLY BROOK, ROCHELLE PARK, NEW JERSEY
SEPTEMBER 15, 1936 WPA NEW JERSEY RIPARIAN & STREAM SURVEY OF SADDLE RIVER AND PASSAIC RIVER DRAINAGE BASIC

APPENDIX D WELL SEARCH INFORMATION

APPENDIX A
HISTORIC SITE PLANS

PLOTTED: 01/14/94

Base Plan: 0,0

DCA Rotation: 0

I hereby certify to Stepan Company that I am a professional land surveyor duly licensed to practice in the State of New Jersey, and that the property is shown in accordance with the following:

[illegible] Plan of Section Bergen County, New Jersey. Scale 1000 feet = 1 inch, revised to 11-21-86, prepared by Warren [illegible], P.L.S., N.J.L.S. No. 13457.

Topography shown hereon has been prepared by Atlantis Aerial Surveys, Inc., 11-30-93.

The official tax map of the Borough of Maywood, Bergen County, New Jersey.

The official tax map of the Township of Rochelle Park, Bergen County, New Jersey.

I further declare to the best of my professional knowledge and belief, that this map is a correct and accurate representation of the hazardous waste facility as of the date hereon as provided by Stepan Company. The survey is certified only to the above named party. No responsibility or liability is assumed by the certifying surveyor and/or firm for the use of survey for any other purpose including, but not limited to, use of survey for re-sale, affidavit, resale of property, or to any other person not listed in certification either directly or indirectly. Only those copies of this certification marked with an original of the land surveyor's embossed seal shall be considered to be valid copies.

No determination has been requested or performed concerning tidelands, riparian grants, or subsurface encroachments which may exist. The premises surveyed, the features depicted hereon, have been made for the benefit of an aerial survey. Survey information furnished with the benefit of an abstract of title and is subject to all [illegible] and may be subject to easements or claims of easements not shown and not shown by the public record, subject of rights or claims of parties in possession not shown by the public record, lot and block numbers depicted hereon refer to the official tax maps of the Borough of Maywood and Township of Rochelle Park, Bergen County, New Jersey.

Elevations hereon derived from aerial data provided by Atlantis Aerial Surveys, Inc., dated, revised to 11/30/93.

Bearings shown hereon relate to deed bearing system [illegible] noted otherwise.

Legend

SWG	TAKING DATE
DCB	DRAINAGE CATCH BASIN
MH	MANHOLE
UTP	UTILITY POLE
DS	DOWN SPOUT
OHU	OVERHEAD LINE UTILITY POLE
[illegible]	PARCEL NUMBER
55	ELEVATION CONTOUR
55.5	SPOT ELEVATION
	TRAVERSE LINE
	PERIMETER PROPERTY LINE
	R.O.W. LINE
	FENCE LINE
	TREE LINE
	EXISTING BUILDINGS
	HAZARDOUS MATERIAL CONTAINMENT AREAS
	APPROXIMATE LIMITS OF TRANSFER ZONE

NOTE:

CITY WATER, RIVER WATER, RIVER WATER RETURN AND SANITARY PIPES SHOWN HEREON WERE DIGITIZED FROM A SKETCH MAP DATED SEPTEMBER 1972 FROM STEPAN AND FOR INFORMATIONAL USE ONLY.

LEGEND:

—SAN— SANITARY PIPING

—RW— RIVER WATER

···CW··· CITY WATER

--RWR-- RIVER WATER RETURN

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

1 inch = 50 ft.

NO.	DATE	REVISIONS	BY	CHECKED
3	1/14/94	TRANSFER AREAS, PARKING AREAS/HAZ. MATERIALS REVISED	JPB	MK
2	12/7/94	TRANSFER AREAS REVISED	MSF	MJG
1	12/6/94			

COASTAL ENVIRONMENTAL SERVICES INC.

STEPAN COMPANY

ONE FRANKLIN PLAZA

[illegible] BOROUGH OF MAYWOOD AND TOWNSHIP OF ROCHELLE PARK, BERGEN COUNTY, NEW JERSEY, ON PART OF TAX BLOCKS

PLAN OF TOPOGRAPHIC FEATURES

SITUATE IN THE TOWNSHIP OF ROCHELLE PARK, BERGEN COUNTY, NEW JERSEY

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE ABOVE PLAN AND DESCRIPTION BY ME ARE ACCURATE AS SHOWN.

MARTIN D. KATZ, P.L.S. • PE&LS

TM

[illegible] PROFESSIONAL ENGINEER AND LAND SURVEYOR

[illegible] DATE

SCALE: AS SHOWN | DRAWN BY: [illegible] | CHECKED BY: MJG

FILE: [illegible] | FIELD BK: [illegible] | FIELD BY: •

DRAWING NO. [illegible]

SHEET [illegible]

[illegible] PROPERTY OF [illegible] AND IS LOANED FOR USE ON THIS PROJECT ONLY AND IS NOT TO BE USED ON ANY OTHER PROJECT OR EXTENSIONS OF THIS PROJECT WITHOUT THE WRITTEN PERMISSION OF [illegible] IS PROHIBITED.

R.O. BERGEN 3383

MIDDLE STATES
N.S. 7967

SECTION D - D

SECTION B - B

SECTION A - A

SECTION G - G

SECTION E-E

SECTION F - F

SECTION H - H

SECTION J - J

HUNTER AVE

RESERVOIR

SECTION C - C

SKETCH No. 1
SKETCH OF PUMPS & PIPING FOR BUILDING 5-A.
¼ SCALE

SKETCH No. 2
SKETCH OF FIRE PUMP IN BUILDING 49
¼ SCALE

SKETCH No. 3
SKETCH OF PUMPS & PIPING IN BUILDING 36-B.
¼ SCALE

MAYWOOD CHEMICAL WORKS
MAYWOOD BERGEN CO. N. J.
W. F. KENNISON SCALE 1-50' NOV. 22, 1933

APPENDIX B
COAL ASH POTENTIAL METALS CONCENTRATIONS

I INTRODUCTION

The Remedial Investigation (RI) report for the FUSRAP Maywood Superfund Site (FMSS) reported that seven metals (arsenic, cobalt, copper, lead, nickel, selenium and vanadium) were identified as meeting the criteria of FUSRAP waste.

The USACE is responsible for FUSRAP waste in accordance with the Federal Facilities Agreement (FFA) between USDOE and USEPA dated April 22, 1991. In accordance with the FFA: "FUSRAP Waste" is defined to mean and be specifically limited to all contamination, both radiological and chemical, whether commingled or not, on the MISS and all the radiological contamination above USDOE's action levels related to past thorium processing at the Maywood Chemical Works (MCW) site occurring on any vicinity properties. Also included are any chemical or non-radiological contamination on Vicinity Properties that would satisfy either of the following requirements:

- The chemical or non-radiological contaminants are mixed or commingled with radiological contamination above USDOE's action levels; or

- The chemical or non-radiological contaminants originated in the MISS ***or were associated with the specific thorium manufacturing or processing activities at the MCW site which resulted in the radiological contamination.***

The metals could thus be construed as FUSRAP if the FFA conditions are met. While previous investigators made this attribution, based on review of past operations conducted at the MCW and data collected at the MISS, it is believed this attribution is not correct for a number of reasons: (1) monazite sands do not contain these metals in measured quantities and the use, processing, and washing of the sand or its process residues do not produce those metals in the measured quantities, (2) whereas uranium ores and processing can generate such metals, uranium processing did not occur at MCW, and (3) whereas lithium was processed at MCW, the use and processing of lithium ores or its process residues do not produce these metals in measured quantities. It is believed that the appropriate attribution for several of these metals relates to the site-wide storage and residue disposal related to fossil fuel use at the site for over at least five (5) decades. Quantitatively it is readily demonstrated that even under the most conservative scenarios, coal residue more than reasonably can be demonstrated to be a profound, and the only probable significant source of arsenic, copper and lead. The other metals (cobalt, nickel, selenium and vanadium) are of such low concentration that, notwithstanding their source, they do not meet risk levels of concern.

The foregoing refutations and attributions are developed and discussed on the following pages in qualitative and quantitative terms. Based on the information developed, it is concluded that: (a) the seven metals identified do not meet the criteria of FUSRAP waste because they are either: (1) the result of site activities conducted at the MCW which are <u>not intrinsic</u> to the processing of Thorium and/or (2) are not constituents of concern

(COCs); and (b) even if it is possible that the metals existed within the geographic limits of the MISS and could have been transported offsite, the concentrations offsite are not expected to exceed risk based limits.

II CONTAMINANTS OF CONCERN (COCs)

The Remedial Investigation for the FMSS (BNI 1992) reports that seven metals detected at the Maywood site (arsenic, cobalt, copper, lead, nickel, selenium, and vanadium) were metals identified as meeting the criteria of FUSRAP waste. The Baseline Risk Assessment (BRA) (DOE 1993) eliminated cobalt, nickel, selenium, and vanadium as potential COCs in MISS soils for risk to human health and the environment. These metals were eliminated as potential COCs because the mean of detected concentrations in MISS soils were less than or equal to twice the mean background concentration. This conclusion was based on a review of chemical data in surficial soils (0-2 feet) and for soils in "all horizons". Refer to Table 1 (Surficial Soils) and Table 2 (Soils in All Horizons) which were developed from Tables 2-4 and 2-5, respectively, in the BRA (DOE 1993).

Table 1
Potential Inorganic Contaminants of Concern in MISS Surficial Soils

Contaminants	Frequency of Detection	Range of Detected Concentrations	Estimated Mean Exposure Concentration	Mean Background Concentration
Arsenic	9/10	2.3 – 20.8	10	3.3
Cobalt	5/10	3.1 – 8.80	4.5	7.6
Copper	9/10	15.2 – 173	62	18
Lead	10/10	36.3 – 399	149	39
Nickel	6/10	7.8 – 83.7	15	9
Selenium	4/10	0.55 – 1.2	0.66	0.45
Vanadium	8/10	9.8 - 19	13	20

BRA (DOE 1993)

Table 2
Potential Inorganic Contaminants of Concern in MISS Soils (All Horizons)

Contaminants	Frequency of Detection	Range of Detected Concentrations	Estimated Mean Exposure Concentration	Mean Background Concentration
Arsenic	78/79	0.53 – 1060	9.8	3.3
Cobalt	73/79	1.0 – 269	5.7	7.6
Copper	71/79	3.0 – 224	42	18
Lead	69/79	2.2 – 580	76	39
Nickel	79/79	2.8 – 135	12	9
Selenium	18/79	0.41 – 3.40	0.41	0.45
Vanadium	74/79	1.8 – 30.6	11	20

BRA (DOE 1993)

Review of Table 1 and Table 2 demonstrates that the estimated mean exposure concentration for cobalt and vanadium are below background levels in MISS surficial soils, while the estimated mean exposure concentrations for cobalt, selenium, and vanadium are below background concentrations in site soils at all horizons. Nickel has an estimated mean exposure concentration above background, but less than twice background in both surficial soils and soils in all horizons. Thus, based on this data these metals are not considered COCs in MISS soils.

Based on further review of Tables 1 and 2, arsenic, copper, and lead have estimated mean exposure concentrations higher than twice background levels. Thus, there is merit to considering these as Potential Contaminants of Concern (PCOCs).

III MCW MATERIAL PROCESSING

Thorium was extracted and processed from monazite sands at the MCW from 1916 to 1957. In addition, lithium metal was extracted and produced from lithium ore during the first half of last century. Both processes have been reported in the RI (BNI 1992) to be potential sources of the subject metals (As, Co, Cu, Pb, Ni, Se, V) in MISS soils. However, based on a review of the Stepan Chemical Company Docket Book papers (Memo from E.H. Nichols to D.H. Francis, 1963) and other multiple sources (Brady 1991, Culbert 1956, Dreesen 1982, Luetze 1988, Meldrum 1997, Weast 1983), these metals are not known to be associated with monazite sands or chemicals used in thorium processing and/or lithium processing. Additionally, it has been perceived that uranium is a potential source of metal constituents in MISS soils. Uranium ores are associated with these metals, however, there is no history of uranium processing at MCW.

Monazite Sands and Thorium

Thorium is a highly radioactive metal used for various industrial purposes. Monazite sand is the chief source of thorium (Brady 1991) and nearly all domestic thorium has been extracted from monazite or produced as a byproduct from the processing of monazite for rare-earth metals. Additionally, monazite is the only ore from which thorium can be extracted in significant quantities. Monazite ores are found in India, Brazil, Sri Lanka, Australia, South Africa, Canada, Malagasy, the United States and some parts of Europe (Cuthbert 1958). Analyses of monazite sands from several significant areas are provided below in Table 3.

Table 3
Analysis of Monazite Sands

Constituent	Percentage Range			
	Brazil	India & Ceylon	United States	Malaya and Australia
ThO_2	1.1- 10.0	7.9-10.8	1.2 – 7.0	3.4 – 8.4
Ce_2O_3	31.2 – 32..5	26.7 – 31. 9	31.4 – 37.3	25.5 – 33.7
P_2O_5	25.5 – 29.3	24.6 – 27.7	18.4 – 29.3	23.7 – 27.9
SiO_2	0-10.1	0.9 – 2.5	0.3 – 6.4	0.9 – 2.2
ZrO_2	0 – 5.7		0 – 3.2	
TiO_2	0 – 2.6		0 – 4.7	
Fe_2O_3	0 – 4.2	0.8 – 1.5	0 – 7.8	0.4 – 2.8
Al_2O_3	0 – 0.8	0.1 – 0.7	0 – 2.5	0.03 – 0.8
$(La,Di)_2O_3$	26.0 – 36.0	28.5 – 33.5	0 – 31.6	30.3 – 35.5
CaO	0 – 1.1	0.1 – 0.8	0 – 1.2	0.2 – 0.9
H_2O	0 – 0.9	0.2 – 2.2	0 – 0.2	0.5 – 1.3
Miscellaneous	0 – 1.2	0 – 2.7	0 – 7.7	

(Cuthbert 1958)

As can be seen from Table 3, none of the seven metals are reported as constituents of monazite sands.

As documented in the "Part 40 Inspection" of the MCW conducted on August 30, 1963 and September 4, 1963, monazite sands were obtained from sources in the Carolinas, as well as from foreign imports *(Stepan Chemical Company Docket Book; Docket No. 40-8610).* Monazite sands originating in Carolina are not found to contain any of the seven metals (Refer to Table 4). Additionally, Carolina monazite is not associated with uranium (Refer to Table 4), which has been reported to be a potential source of metal constituents in the MISS soils.

Table 4
Chemical Composition of Natural Monazites

MINERAL SOURCE	UO_2 (%wt)	ThO_2 (%wt)	Lanthanide Oxides (%wt)	Other Oxides (%wt)	P_2O_5 (%wt)
Piona, Italy	15.64	11.34	35.24	6.76	31.02
Ratunapura, Sri Lanka	0.10	14.32	53.51	5.03	26.84
San Mateo, California (beach sands)	6.95	4.22	N.D.	N.D.	N.D.
Burke County, North Carolina	0	6.49	62.26	1.97	29.28

(Cuthbert 1958)

Thorium Processing

The major impurities associated with monazite sand are titanium, iron, silica and phosphate. The thorium extraction process is designed to separate the thorium, rare earth and uranium content of monozite sand from its phosphate and silica gangue[1]. These impurities are generally 2 percent, 1 percent, 2 percent, and 25 percent, respectively (Cuthbert 1958).

The methods of thorium extraction (digestion) are typically a variation of the sulfuric acid digestion process and/or the caustic soda digestion process which have been used in large scale industrial operations. Both methods destroy the chemical structure of monazite sand, by selectively digesting different components. The most common method uses heated sulfuric acid to form a monazite sulfate solution of thorium, rare earths, and uranium, leaving a filterable residue consisting of silica, zircon, or other gangue material present in the monazite concentrate. In the process, phosphate and sulfate ions are carried along with the valuable elements. Utilizing caustic soda is a viable alternative and/or addition to the process. Hot concentrated caustic soda dissolves the gangue, leaving the valuable elements as solid components of a slurry which may be filtered, washed and dried to form a cake of hydrous metal oxides (metal oxide precipitates).

Monazite sand processing at the MCW for the production of thorium is well documented in the Stepan Docket Book papers (Memo from E.H. Nichols to D.H. Francis, 1963 and a "Process Description" in an inspection report conducted on May 24, 1957). The process employed used a heated sulfuric acid extraction process. The process was described as follows:

a. Monazite is received in 50 lb. Bags which arrive in freight car lots. The bags are carried to the sulfate mill and the ore dumped into a hopper,
b. The ore is fed from the hopper into an open dissolving vat and made into a sulfate solution by dissolving in sulfuric acid at elevated temperature,
c. The contents of the sulfate vat are then dumped into water and the solution is pumped into evaporating tanks in the Evaporator Building,
d. Thorium and rare earths are separated by evaporation. The thorium content is removed as an oxalate and carbonized out of the oxalate with a carbonate solution,
e. The thorium is then separated as a hydroxide, the hydroxide converted to a chloride and the chloride reconverted to a hydroxide. These steps are wet operations except for the final filtering operations. The oxalate and hydroxide filter cakes are shoveled into drums for temporary storage and transferred to the Hydroxide Building,
f. The final operations involve dissolving the hydroxide in nitric acid in large silica dishes. The solution is hand-stirred and evaporated until crystalization takes place. The crystals are ground by hand with mortar and pestal and then packaged.

[1] Gangue is defined as the commercially worthless mineral matter associated with economically valuable metallic minerals in a deposit.

A review of this process shows that none of the seven metals are present as a component of the process or of the residues produced.

Lithium Ore Processing

The RI identified lithium ore processing as a potential source for metal constituents at the MISS. It is known that lithium ore processing existed at MCW. The following discussion of lithium ore processing demonstrates that neither processing operations nor process residues are a potential source of the seven metals.

Spodumene is the most important lithium ore mineral and is characterized by high lithium content, vast deposits and numerous processing advantages. Spodumene is a lithium aluminum silicate, $LiAlSi_2O_6$, and has a theoretical lithia, Li_2O, content of 8.03%. The sulfuric acid process is the preferred commercial method of lithium extraction from spodumene ore. The first step is to convert the form of spodumene to a more reactive form. This is achieved by heating in a brick-lined rotary kiln. The kiln discharge is cooled, ground by ball milling, and mixed with sulfuric acid. The mixture is heated in a small rotary kiln to produce an exothermic reaction which forms soluble lithium sulfate, leaving an insoluble lithium ore residue. The lithium sulfate solution contains excess sulfuric acid and small amounts of aluminum, iron, and other alkali sulfates. The excess sulfuric acid is neutralized with ground limestone. The slurry is then filtered to separate the ore residue, giving a mixed alkali sulfate solution that is free of iron and aluminum but that is saturated with calcium sulfate. Magnesium from the limestone is precipitated using hydrated lime, followed by precipitation of calcium using soda ash. Further process operations are utilized to separate out sodium sulfate, which is centrifuged and converted to the anhydrous salt for by-product sale (Kirk-Othmer, 1995).

Lithium has also been produced by an electrolytic process devised in 1893. However, this method and other methods of lithium metal production have not had the commercial success of the sulfuric acid process. Based on a review of lithium recovery by the sulfuric acid process (and electrolytic production methods), there is no evidence that the use and processing of lithium ores or its process residues produce any of the seven metals in measured quantities.

IV POTENTIAL ORIGIN OF METAL CONSTITUENTS

Coal as a Source of Energy at MCW

The MCW site was constructed in 1895. Thorium was processed at MCW from 1916 to 1956. Until the 1950's, energy was supplied by the burning of coal at the MCW. Energy use appears to be quite significant during the first half of the 20th century as evidenced by aerial photos of the site during this period (Stepan, dated 2/13/1928). These photos show five tall stacks on-site, one of which is still in use today (or in the proximate location as a previous one). In 1957, the facility was converted to gas as the energy source.

Some of the ash resulting from past coal-firing was ultimately disposed at the MISS. Hydrologic cross-sections of the MISS soils (Figures 3-11 to 3-15; BNI 1992) show fill areas (designated as ash and sludge, and undifferentiated fill) up to 10 feet and more across the MISS site. As indicated by Table 5, arsenic, copper and lead are significant constituents of coal ash. Arsenic in coal ash ranges from about 1 to 1,700 ppm, copper ranges from about 3 to 3,000 ppm and lead ranges from about 3 to 1,600 ppm.

Table 5
Chemical Constituents of Bottom Ash and Fly Ash (ppm)

Chemical Constituents	Range
Arsenic	0.98 – 1,700
Barium	96.0 – 13,900
Cadmium	0.1 – 250
Chromium	11.0 – 7,400
Copper	2.8 – 3,020
Lead	3.1 – 1,600
Manganese	31.0- 4,400
Mercury	0.01 – 22
Selenium	0.08 - <500
Silver	1.0 – 50
Zinc	14.0 – 13,000

(Hart; 1978)

No data is readily available regarding coal analyses and quantities used at MCW during the first half of the last century. However, for estimating purposes it was assumed that the site used an eastern coal with a heating value of 13,000 Btu/lb (See Table 6) and an ash content of 15% (Hart 1978).

Table 6
Eastern Coal Heating Values

State	Heating Value (Btu/lb)
Pennsylvania	12,745
Pennsylvania	12,925
Virginia	11,925
West Virginia	14,715
Pennsylvania	13,800
Pennsylvania	13,720
Pennsylvania	13,800
Pennsylvania	13,325

(B&W 1972)

Presently, the Stepan boilers (1 of 2 boilers are typically used) are rated at 53 Mbtu/hr (Per discussion with Mr. Walter Hill, Plant Engineer at Stepan on February 8, 2000). Present operations utilize one stack compared to the five stacks referred to previously, and fuel use (Btu's) under past coal operations was considerably higher than it is today (according to the Plant Engineer). However, in order to provide a conservative estimate of metal concentrations (i.e., low estimate), it was assumed that the coal fuel use was based on 50 Mbtu/hr firing. The total coal use was based on 50 years operation (although coal was used until 1957).

Utilizing the concentrations for arsenic, copper and lead in Table 5, and assuming only the disposal of bottom ash (20% of the total coal ash quantity) at MISS, the potential concentrations of these metals in MISS soils was estimated. The estimated concentrations are reported in Table 7 as are the metal concentrations reported in the BRA (DOE 1993) which are provided for comparative purposes.

Table 7
Comparison of BRA Data to Potential Soil Concentrations From Disposal of MCW Coal Ash at MISS (mg/kg)

Constituent	BRA MISS Surficial Soils (0-2 ft)	BRA MISS Soils All Horizons	Potential From Coal Ash Disposal at MISS (1)
Arsenic	2.3 – 20.8	0.53 – 1060	0.1 – 167
Copper	15.2 – 173	3.0 – 224	0.3 – 296
Lead	36.3 – 399	2.2 – 580	0.3 – 157

Note: (1) Values are based on the following (See Appendix A for calculation details):

a. Ash disposal for 50 years of coal firing at present Stepan capacity
b. Firing of Eastern Coal with 15% ash content and a heating value equal to 13,000 Btu/lb
c. Ash quantity assumed to be only bottom ash (20% of total ash quantity)
d. Metal concentrations in bottom ash utilized from Table 3
e. Metal Concentration averaged over 10 ft depth for entire MISS site (11.7 acres)

As demonstrated in Table 7, the potential metal concentrations resulting from the ultimate disposal of coal ash are quite significant and are comparable to the values reported in the BRA. Further, it should be noted that the potential concentrations were averaged over a ten foot depth for the entire MISS site (11.7 acres). At smaller depths and smaller disposal areas, the calculated metal concentrations would be much higher. Thus, based on the past use of coal at MCW for energy purposes, it is not unexpected to see concentrations for arsenic, copper, and lead as reported in the BRA.

V. METALS AS A FUSRAP WASTE

As discussed above, it can be readily demonstrated that coal ash is the only probable significant source of arsenic, copper and lead. This situation poses a further question: could the ash (and contained metals) have migrated off the MCW site? Based on a review of the Stepan Chemical Company Docket Book papers, it is clear that process wastes have migrated offsite. Ash stored in open piles at the MCW would also be expected to have migrated offsite. The Docket papers, on reviewing background information related to early MCW operations, reported the following: "... the company occupied a relatively small area adjoining a large swampy area draining into and forming part of the natural watershed of the area." (It is expected that this refers to the present Sears site and Lodi Brook area). "As the company expanded and operations continued, much of the swampy area was filled by process residues containing approximately 1-2% thorium. ...Historically, but without documentation, additional large areas, which are now outside the company property, were used as dumping areas for process wastes." The Docket papers continue: "...waste residues containing thorium constitute an integral part of the ground area. The amount of thorium leaving a plant by mechanical, airborne or solvent action is not known. There is no doubt that some thorium has been transported by leaching action of rain and surface water to the Bergen County watershed."

There are also many examples of earth moving operations at the MCW site and wastes being moved from one location to another (especially during the land development operations of the 1960s). Thus, it is quite possible that material (ash and metals) from the 11.7 acre geographic area currently defined as MISS has migrated to the Sears property or elsewhere (e.g., Lodi Brook).

The issue then is: if these metals have migrated off the MISS site, are they FUSRAP waste and do they require remediation? When evaluating MISS as a source of offsite metals due to wind and rain activity, a key issue is whether the concentrations of these metals at MISS pose a risk to human health. If they do not, then the potential for risk from offsite concentrations (which should be less from wind and rain erosion effects) would be considered remote.

The risk potential from metals at the MISS was evaluated in the BRA. The potential for non-cancer health effects and increased cancer risk was evaluated in the BRA for two receptor populations at the MISS (employees and transients) that might be exposed to COCs in surficial soil (i.e., 0-2 feet). Potential exposure from inadvertent ingestion of soil and inhalation of respirable particulates originating in soil was evaluated based on both the mean and 95% upper confidence limit on the mean (UCL) inorganic COC concentrations in surficial soil. The exposure scenarios were considered relevant to both current and future conditions in the absence of remedial action. Based on the mean chemical concentrations, estimated cancer risks for both receptors were less than the USEPA acceptable risk range (10^{-6} to 10^{-4}) and hazard indices were less than the USEPA

acceptable level of 1.0. Based on the 95% UCL chemical concentrations estimated cancer risks were within the USEPA acceptable risk range and hazard indices were less than the USEPA acceptable level. Thus, even if it is possible that metals which existed on MISS could have been transported offsite, the concentrations offsite are not expected to exceed risk based limits.

VI. CONCLUSIONS

Based on the information presented above, it can be concluded that (1) the seven metals were not present in monazite sands processed at the MCW, (2) cobalt, nickel, selenium and vanadium should not be COCs for MISS soils, (3) no uranium was used at the site, (4) lithium process wastes are not the source of these metals, and (5) the principle source of arsenic, copper and lead is the coal combustion residue. The metals are not from operations intrinsic to thorium production; they are intrinsic to heat/power generation for the entire MCW complex over the first 50 or more years of the 20th century. Even if the ash (and contained metals) migrated off the MISS site, the metals offsite are not expected to be found at concentrations exceeding risk based limits. Thus, the seven metals should not be identified as meeting the criteria of FUSRAP waste.

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13. Memo from E.H. Nichols to D.H. Francis, "Thorium Process as of 1948 - Monazite Sand to Thorium Nitrate and Oxide", July 26, 1963
14. Aerial Photo of Stepan, dated 2/13/1928

APPENDIX A

CALCULATION – POTENTIAL METAL CONCENTRATIONS IN MISS SOILS DUE TO MCW COAL FIRING / ASH DISPOSAL

The following calculation estimates the potential concentrations of As, Cu, and Pb due to 50 years of boiler operation at MCW and ash disposal at the MISS.

Presently, boilers at Stepan operate at 53 MBtu/hr (Ref: John Gluchowski / Walter Hill) for heating and process operations. The present boilers were converted to gas in 1957. Energy use during peak operations at MCW was higher. However, assume the present energy use for this estimate. The following calculation estimates the coal bottom ash production for 50 years:

Assume Coal Heating Value = 13,000 Btu/lb. (Eastern Coal)
[Babcock & Wilcox 1972; Table 16, Eastern Coal]

Annual Fuel Use = (50,000,000 Btu/hr x 8,760 hr/year) / 13,000 Btu/lb
= 33.7×10^6 lb/year

Assume Ash Content = 15% = 5×10^6 lb. ash/year
[Hart 1978; page 39, Eastern Coal]

Assume fly ash dispersed as air pollutant and does not contribute to MISS concentrations,
Assume 20% of ash is bottom ash = 1×10^6 lb. Bottom ash/year
[Hart 1978; page 39, Eastern Coal]

In 50 years:
Bottom ash generated = 50×10^6 lb.

Assume ash spread over 11.7 acres (a very conservative assumption considering a lesser area will provide higher concentrations)

Ash Distribution = 50×10^6 lb. / (11.7 acres x 43,560 ft^2/acre)
= 98 lb.ash/ft^2

Assume fill depth on-site = 10 ft
[BNI 1992; page 3-55 to 3-65; Soil Borings, Ash and Undifferentiated Fill]
(Over the entire site, depth is much less; less depth = higher concentration. Therefore, this is a conservative value.)

Ash Concentration = (98 lb./ft^2) / (10 ft)
= 9.8 lb./ft^3

Assume Soil Density = 100 lb./ft^3 (in-place density)

Therefore,
Ash Concentration = (9.8 lb./ft^3) / (100 lb./ft^3)
= 0.098 lb. ash/lb. soil

Assume chemical constituents of bottom ash as follows [Hart 1978; Table 2]:

As = 0.98 – 1770 ppm
Cu = 2.80 – 3020 ppm
Pb = 3.10 – 1600 ppm

Thus, metal concentrations are:

As = (0.098) (0.98 to 1770) = 0.1 to 167 ppm
Cu = (0.098) (2.8 to 3020) = 0.3 to 296 ppm
Pb = (0.098) (3.1 to 1600) = 0.3 to 157 ppm

Compare the potential concentrations due to coal firing to the constituent concentration in MISS Site Soils documented in the BRA (DOE 1993) (mg/kg):

CHEMICAL	BRA MISS SURFICIAL SOILS (0-2 FT)	BRA MISS SOILS ALL HORIZONS	POTENTIAL CONSTITUENT CONCENTRATION FROM COAL FIRING
As	2.30 – 20.80	0.53 – 1060.00	0.10 – 167.00
Cu	15.20 – 17.30	3.00 – 224.00	0.30 – 296.00
Pb	36.30 –399.00	2.20 – 580.00	0.30 – 157.00

APPENDIX C
HISTORIC WESTERLY AND LODI BROOK DOCUMENTATION

April 6, 1940
833 feet

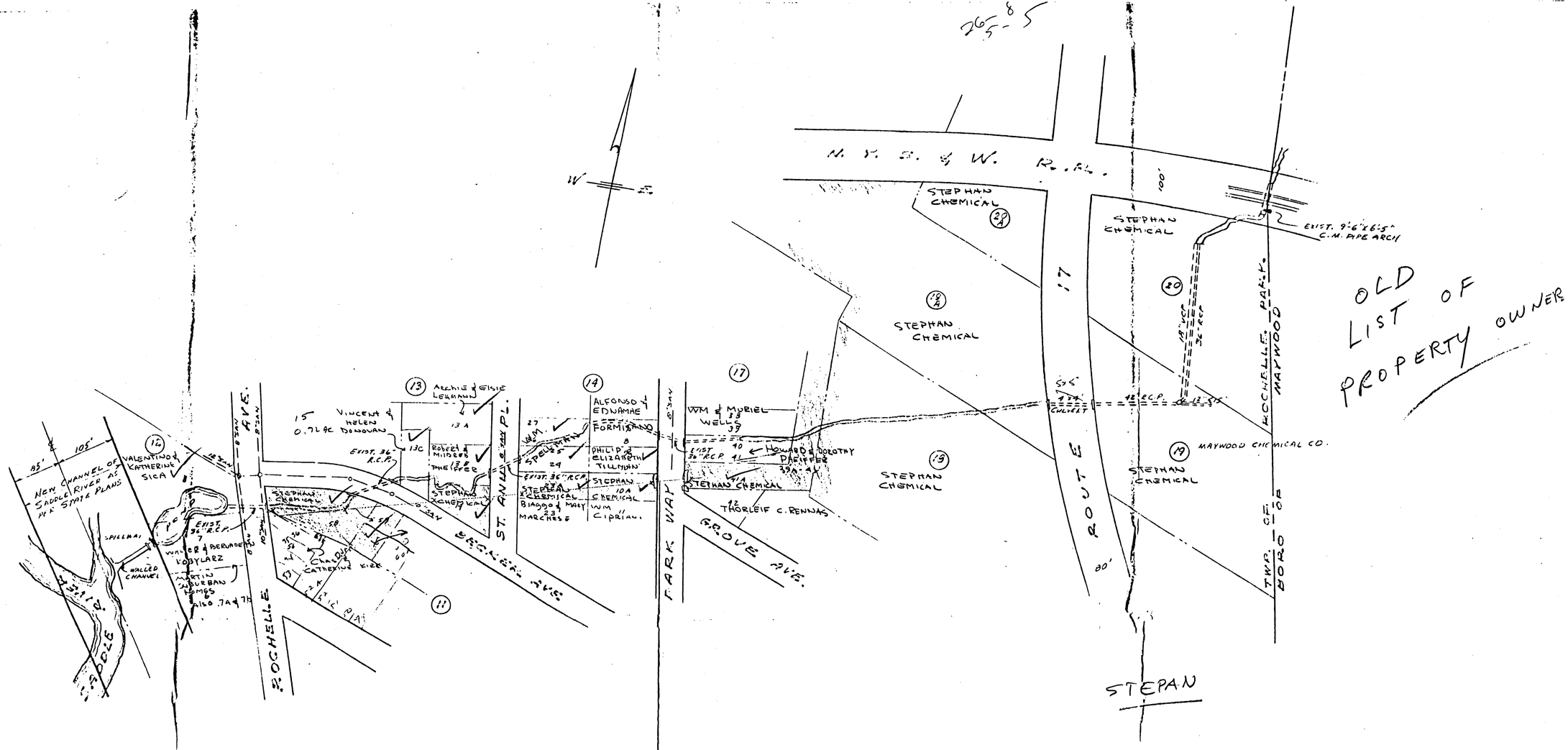
April 7, 1951
400 feet

April 12, 1961
400 feet

April 12, 1961
750 feet

March 25, 1974
400 feet

March 25, 1974
750 feet



OLD LIST OF PROPERTY OWNER

STEPAN

REV.	DATE	BY	CHKD.	DESCRIPTION

ENGINEERING DEPARTMEN
BERGEN COUNTY, NEW JERS

MAP IN VICINITY O
WESTERLY BRO
ROCHELLE PARK

ROY J. ELAM — COUNTY ENG

DRAWN BY V.K. — SCALE 1"=
CHECKED BY — DATE

JOB NO. — DWG. NO.

DATE OF SURVEY JUNE 19-1936
STA. 0+00 = 211+40
3-6-4
3-6

DATE OF SURVEY JUNE 22-1936

DATE OF SURVEY JUNE 23-1936

ROAD ELEV. 39.2
INTRADOS CLEARANCE LINE 39.9
ST. BANK
LT. BANK
SPILLWAY 35.7
CONC. WALL
CONC. WALL
36" Conc. Pipe
ROAD ELEV. 41.1
36" Conc. Pipe
ROAD ELEV. 41.7
36" Conc. Pipe
ROAD ELEV. 42.3
36" Conc. Pipe
ROAD ELEV. 44.0
36" Conc. Pipe
45.00
35.00
Left Bank
Right Bank
Water Line
C. L. STREAM
Road Elev 75.2
4'x4' Box Culvert
M.H.-18" Pipe
M.H.-36" Pipe
M.H.-18" Pipe
36" Conc. Lt. at Top of Conc. Wall Outlet of 3 Pipes
80.8
52.7
53.1
TOP OF BALLAST 58.5
CLEARANCE LINE 50.4
Conc. Headwall Elev 51.7
30" Corr. Iron Pipe
18" Pipe 36" Conc.
0.00764
PROFILE OF STREAM 3-6-4

21.4 DATUM 25.0 30.4 30.7 32.3 34.5 35.7 36.3 36.5 36.8 37.5 37.4 37.7 37.3 37.9 38.3 38.3 38.4 37.8 39.0 39.1 39.0 40.3 40.9 41.7 41.8 42.2 42.6 42.7 43.0 43.4 43.5 43.6 44.3 44.5 44.4 44.2 45.2 45.6 45.3 45.6 47.0 47.0 47.1 47.7

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00

Rach. Ave. 3+10 33.00
Becker Ave. 5+00
St. Ann Pl. 7+00
Parkway 9+00
Culvert 11+00
Route #17 19+20 53.00

SADDLE RIVER
STA. 0+00 = 211+40
3-6
POND
SPILLWAY
INTAKE
PUMP
PR. BLDG.
STA. 2+10+00
3-6
B.M.
+ IN TOP OF BLUESTONE WALL S.E. SIDE OF SMALL BRIDGE AT END OF POND
EL. 38.941
ROCHELLE AVE
N 12-19-00 W
MADISON AVE
STONEWALL
CONC. WALL ON BRIDGE
36" CONC. PIPE
STA. 5+00
BECKER AVE
ST. ANN PL.
GLOOSE PL.
PARK WAY
GROVE AVE
STA. 10+00
STA. 15+00
B.M.
AT ROUTE #2 N. END OF CONCR. HEADWALL ON CULVERT N.W. SIDE OF STATE HIGHWAY ROUTE #2
EL. 52.011
3-6-4
SUMP FROM MAYWOOD CHEMICAL CO.
PIPE GRAVITY FLOW
STA. 20+00
ROUTE Nº 17
STATE HIGHWAY
CONC. TUNNEL UNDER HIGHWAY MAYWOOD CHEM. CO.
CORNER OF WALL
CORNEE OF WALL
STA. 25+00
PARK
MAYWOOD
BOROUGH OF ROCHELLE PARK
TWP. OF ROCHELLE
N. Y. S. & W. R. R. Co.
STADIA STK.
30" CORR. IRON PIPE
348 C.F.
TOOTOR FALLS AVE
CENTRAL AVE
MATCH LINE SHEET 22
FOR DETAIL OF CULVERT SEE SHEET 27.
FOR DETAIL SKETCHES ON CULVERTS SEE SHEET Nº 27.
O NAIL AT ℄ MARKET STR.

W.P.A. NEW JERSEY — W.P.A. ADMIN.
DIVISION WOMEN'S & PROFESSIONAL PROJECTS
ELIZABETH C. D. VANN, STATE DIRECTOR
RIPARIAN & STREAM SURVEY OP 6-
COUNTY BERGEN PROJECT ST
STREAM Nº 3-6-4 NAME SADDLE RIV
DRAINAGE BASIN PASSAIC RIVE
SCALE-PLAN 1"=100'-PROFILE HOR. 1"=100' VER. 1"=4'
SHEET Nº 21 OF 27 FIELD BOOK 3-6
DRAWN BY R.L. CHECKED BY W.S. FI
DATE 9.15.36 APPROVED Frank R. Mc Sup
COUNTY FILE Nº HDQRS. FILE Nº

Arthur S. Hotchkiss
State Supervisor

APPENDIX D
WELL SEARCH INFORMATION (PARTIAL)

APPENDIX D
WELL SEARCH DATABASE
FUSRAP Maywood Superfund Site

Well Owner	Well Address	Total Depth (feet)	Length of Casing (feet)	Static Water Level (ft. below surface)	Use Code	Source of Info.
SCHOLTEN, HENRY	NA	100			D	DEP
INTERCHEMICAL CORP.	LODI BORO, BERGEN COUNTY	435	17	8.00	I	DEP
FRANK DINI CO.	SOUTH OF #17, WEST SIDE OF BLDG.	200	32	5.00	I	DEP
METAL FABRICATOR	S.E. CORNER OF BLDG, WOODLAND AND RTE. 17	103	20	6.00	I	DEP
NEWHOUSE, MARIE AND DA	26 PASSAIC STREET ROCHELLE PARK NJ	75	44	6.00	D	DEP
REISCH TRUCKING & TRANS. CO	ROUTE 17, LODI NJ	86	34	10.00	I	DEP
LODI REALTY CORP.	LODI BORO, BERGEN COUNTY	105	26	6.00	I	DEP
BRIZEK, JOSEPH	ROCHELLE PARK NJ	100	15	5.00	I	DEP
LANG DESIGN SERVICES	HACKENSACK NJ	150	13	30.00	I	DEP
LODI SHOPPING CENTER INC.	ESSEX ST. AND RTE. 17, LODI NJ	301	21	10.00	H	DEP
LODI SHOPPING CENTER INC.	ESSEX ST. AND ROUTE 17	300			D	DEP
LODI BOROUGH	LODI BORO, BERGEN COUNTY	403	48	1.00	P	DEP
LODI SHOPPING CENTER INC.	MODELLS SHOPPERS WORLD, RTE. 17, LODI NJ	300	22	2.00	I	DEP
AQUARIUM INC.	MAYWOOD NJ	300	22	6.50	I	DEP
ALESSO, FRANK AND JOSE	ROCHELLE PARK NJ	100	24	6.00	D	DEP
LAKE DEVELOPERS, INC.	ROUTE 46 AND SADDLE BROOK NJ	81	45	13.00	D	DEP
CHARLES F. FIELDS CO.	199 GARIBALDI AVE. LODI NJ	400	20	17.00	I	DEP
PUBLIC WORKS DEPT.	LODI BORO, BERGEN COUNTY	470	28	48.00	P	DEP
FAILLA, JAMES V	NA	120			D	DEP
BIGOSS, WILLIAM	NA	120			D	DEP
KOVACS SR., STEPHEN	NA	120			D	DEP
JOS MUSCARELLE INC	MAYWOOD NJ	400	32	10.00	I	DEP
WASHINE CHEMICAL CO.	NA	300			I	DEP
MENZER, HENRY	339 GOLF AVE., MAYWOOD NJ	170	34	34.00	D	DEP
ABRAMS, ARTHUR	MAYWOOD NJ	100	21	70.00	D	DEP
SNAPPY CARWASH	107 ESSEX ST., MAYWOOD NJ	196	40	14.00	I	DEP
KINGS CUSTOM MOLDING	194 DANIEL ST., HACKENSACK NJ	186	43	28.00	M	DEP
GULF OIL CO.	ROUTE 17 NORTH, MAYWOOD NJ	20	7	9.00	M	DEP
PLAYERS CLUB	HACKENSACK NJ	305	85	36.00	B	DEP
TEXACO	68 ESSEX STREET LODI, NJ	20	10		M	DEP

TEXACO	68 ESSEX STREET LODI, NJ	20	10		M	DEP
TEXACO	68 ESSEX STREET LODI, NJ	20	10		M	DEP
TEXACO	68 ESSEX STREET LODI, NJ	20	10		M	DEP
AMOCO OIL CO.	ESSEX AND SUMMIT ST., HACKENSACK NJ	10	2	5.00	M	DEP
SOLAR OIL CO.	ATI SERVICE STATION, 660 MAIN ST., LODI, NJ	18	3	8.70	M	DEP
SOLAR OIL CO.	ATI SERVICE STATION, 660 MAIN ST., LODI, NJ	14	4	6.30	M	DEP
SOLAR OIL CO.	ATI SERVICE STATION, 660 MAIN ST., LODI, NJ	17	3	5.80	M	DEP
SOLAR OIL CO.	ATI SERVICE STATION, 660 MAIN ST., LODI, NJ	12	2	5.20	M	DEP
MORTON THIOKOL, INC.	355 MCLEAN BLVD. PATERSON, NJ	18	15		L	DEP
HART, FRED C. ASSOC.	200 GREGG STREET , LODI NJ	24	5		M	DEP
HART, FRED C. ASSOC.	200 GREGG STREET , LODI NJ	16	5		M	DEP
HART, FRED C. ASSOC.	200 GREGG STREET , LODI NJ	23	5		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	41	33		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	38	35		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	36	33		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	11	6		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	45	38		M	DEP
KIN PROPERTIES	151 MAYWOOD AVE., MAYWOOD NJ (SEARS WAREHOUS	15	10		M	DEP
KIN PROPERTIES	151 MAYWOOD AVE., MAYWOOD NJ (SEARS WAREHOUS	50	42		M	DEP
US DEPT. OF ENERGY	MAYWOOD INTERIM STORAGE SITE	39	31		M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	11	6		M	DEP
LODI BOROUGH	KENNEDY PARK, LODI NJ	12			B	DEP
CURTISS-WRIGHT CORP.	NA	105			M	DEP
CURTISS-WRIGHT CORP.	NA	105			M	DEP
CURTISS-WRIGHT CORP.	NA	105			M	DEP
USX AGRI-CHEMICALS	NA	4			B	DEP
USX AGRI-CHEMICALS	NA	3			B	DEP
USX AGRI-CHEMICALS	NA	3			B	DEP
USX AGRI-CHEMICALS	NA	4			B	DEP
USX AGRI-CHEMICALS	NA	3			B	DEP
USX AGRI-CHEMICALS	NA	3			B	DEP
USX AGRI-CHEMICALS	NA	3			B	DEP
GRAMMATICO, EVELYN	26 GROVE ST. MAYWOOD, NJ	17	17	6.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ				M	DEP

NY S&W RAILROAD	NA	43	43	13.00	M	DEP
D.P.C. REALTY CO.	18 MILL STREET LODI NJ	15	4		M	DEP
D.P.C. REALTY CO.	18 MILL STREET LODI NJ	15	5		M	DEP
D.P.C. REALTY CO.	18 MILL STREET LODI NJ	15	5		M	DEP
FINE ORGANICS CORP.	LOT 10 BLOCK 81A	14		6.00	B	DEP
FINE ORGANICS CORP.	LOT 10 BLOCK 81A	16		6.20	B	DEP
FINE ORGANICS CORP.	LOT 10 BLOCK 81A	25	22		M	DEP
ACME QUALITY PRODUCT	205 S. NEWMAN ST., HACKENSACK NJ	8	3	3.50	B	DEP
FARM ROAD REALITY	207 WEST CENTRAL AVE. MAYWOOD, NJ	20	5		M	DEP
FARM ROAD REALITY	207 WEST CENTRAL AVE. MAYWOOD, NJ	20	5		M	DEP
FARM ROAD REALITY	207 WEST CENTRAL AVE. MAYWOOD, NJ	20	5		M	DEP
AMOCO OIL CO.	BEHIND 445 ROUTE 17 SOUTH HACKENSACK NJ	13	3	6.50	M	DEP
AMOCO OIL CO.	BEHIND 445 ROUTE 17 SOUTH HACKENSACK NJ	12	2	6.13	M	DEP
AMOCO OIL CO.	BEHIND 445 ROUTE 17 SOUTH HACKENSACK NJ	16	4	8.95	M	DEP
AMOCO OIL CO.	BEHIND 445 ROUTE 17 SOUTH HACKENSACK NJ	17	2	9.06	M	DEP
SHELL OIL COMPANY	ESSEX AND POLIFLY	17	2	10.86	M	DEP
D.P.C. REALTY CO.	18 MILL STREET LODI NJ	15	5		M	DEP
CROMAN DEVELOPMENT	HACKENSACK NJ	11	1		M	DEP
CROMAN DEVELOPMENT	HACKENSACK NJ	11	1		M	DEP
CROMAN DEVELOPMENT	HACKENSACK NJ	11	1		M	DEP
US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	16	16	13.40	M	DEP
US ACOE	ROCHELLE PARK NJ	26			B	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	15	7		M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	42	22		M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	100	70		M	DEP
BERGEN CABLE TECHNOLOGY	170 GREGG STREET	12	2	1.50	M	DEP
PERGAMENT, MURRAY	40 INDUSTRIAL RD., LODI NJ	15	5	7.00	M	DEP
199 REALTY CORP.	199 GARIBALDI AVE. LODI NJ	13		4.00	M	DEP
US ACOE	LODI BORO, BERGEN COUNTY	33			B	DEP
GETTY PETROLEUM CORP.	GARFIELD NJ				M	DEP
GETTY PETROLEUM CORP.	GARFIELD NJ				M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	10		4.60	M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	10		6.60	M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	10		4.80	M	DEP

CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	10		4.80	M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	10		4.70	M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	15		1.20	M	DEP
CONSOLIDATED EDISON	CURCIO SCRAP METAL, 416 LANZA AVE.,SADDLEBROOK	9		2.50	M	DEP
FLEXWRAP	40 META LANE LODI NJ	10	1	1.00	M	DEP
FLEXWRAP	40 META LANE LODI NJ	10	1	1.00	M	DEP
FLEXWRAP	40 META LANE LODI NJ	10	1	1.00	M	DEP
FLEXWRAP	40 META LANE LODI NJ	10	1	1.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	15	5	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	14	4	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	12	7	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	15	10	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	15	10	8.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	12	7	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
FINE ORGANICS CORP.	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	12	7	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	11	6	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	7	2		M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	9	4	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	12	7	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	12	7	6.00	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	10	5	5.90	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	14	4	5.00	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	10	4	5.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	15	10	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP

HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	9	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	18	12	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	18	12	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	18	12	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	19	13	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	15	10	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	15	10	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	20	15	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	11	6	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	11	6	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	11	6	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	4	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	4	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	10	5	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	13	3	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	17	12		M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	12	7		M	DEP
NJDOT	LODI BORO, BERGEN COUNTY	35	5		B	DEP
NJDOT	LODI BORO, BERGEN COUNTY	39	39		B	DEP
NJDOT	LODI BORO, BERGEN COUNTY	40	5	5.00	B	DEP
HOLOCARBON PRODUCTS	HACKENSACK NJ	17	2	3.00	M	DEP
HOLOCARBON PRODUCTS	HACKENSACK NJ	17	2	3.00	M	DEP
HOLOCARBON PRODUCTS	HACKENSACK NJ	17	2	3.00	M	DEP
KAY'S HOME CENTER	LODI BORO, BERGEN COUNTY	13	3	7.00	M	DEP
KAY'S HOME CENTER	LODI BORO, BERGEN COUNTY	12	2	7.00	M	DEP
KAY'S HOME CENTER	LODI BORO, BERGEN COUNTY	12	2	7.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	21	16	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	10	5	6.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	15			M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	10	5	6.00	M	DEP

HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	19	17	6.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	5.25	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	13	3	4.20	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	4.90	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	4.70	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	8.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	37	17	7.50	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	100	85	7.50	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	13	10	3.83	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	13	12	3.83	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	13	12	3.83	M	DEP
RAIA INDUSTRIES INC.	305 WEST FORT LEE ROAD, BOGOTA NJ	30	15	12.50	M	DEP
RAIA INDUSTRIES INC.	305 WEST FORT LEE ROAD, BOGOTA NJ	27	14	10.50	M	DEP
COLDELITE CORP.	LODI BORO, BERGEN COUNTY	10	2	0.50		DEP
D.P.C. REALTY CO.	18 MILL STREET LODI NJ	24	19	9.00	M	DEP
BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	13	5	9.00	M	DEP
BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	14	4	8.00	M	DEP
BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	14	4	5.00	M	DEP
MATHES DIV/NORAC CO.	169 KENNEDY DRIVE LODI NJ	19	9	5.50	M	DEP
MATHES DIV/NORAC CO.	169 KENNEDY DRIVE LODI NJ	14	4	5.00	M	DEP
MATHES DIV/NORAC CO.	169 KENNEDY DRIVE LODI NJ	14	4	5.50	M	DEP
IIY PROPERTIES	27 SOUTH HACKENSACK NJ	12	2	7.00	M	DEP
IIY PROPERTIES	27 SOUTH HACKENSACK NJ	12	2	7.00	M	DEP
IIY PROPERTIES	27 SOUTH HACKENSACK NJ	12	2	7.00	M	DEP
ABEX CORP.	FORMER ABEX SIGNAL STATION	4	2	6.00	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	12	3	6.50	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	13	3	8.00	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	16	4	6.33	M	DEP
MATTHEW RANKIN TRUST	9 BROOK AVE, MAYWOOD NJ	19	4	5.50	M	DEP
AMERADA HESS CORP.	MAYWOOD NJ	10		5.00	M	DEP
AMERADA HESS CORP.	MAYWOOD NJ	10		5.00	M	DEP
AMERADA HESS CORP.	MAYWOOD NJ	10		5.00	M	DEP
AMERADA HESS CORP.	MAYWOOD NJ	10		5.00	M	DEP
AMERADA HESS CORP.	MAYWOOD NJ	10		5.00	M	DEP

APPENDIX D
WELL SEARCH DATABASE
FUSRAP Maywood Superfund Site

HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	15	5	10.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	31	15	12.00	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	10	5	10.00	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	12	5	3.83	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	13	6	4.00	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	15	5	3.83	M	DEP
WABC SPORTS	LODI BORO, BERGEN COUNTY	14	7	3.16	M	DEP
KIELBASI, TED	MAYWOOD, NJ	20	10	13.00	M	DEP
UNITED TECHNOLOGIES	PEARL COURT AREA ADJACENT TO 200 GREGG ST., LOD	98	88	12.00	6	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	100	17	18.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	100	17	18.00	M	DEP
UNITED TECHNOLOGIES	TRUDY DR. ADJACENT TO 200 GREGG ST., LODI NJ	40	22	27.00	M	DEP
UNITED TECHNOLOGIES	TRUDY DRIVE, LODI NJ	215	200	20.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	12	2	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	12	2	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	10.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	10.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	10.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	12	2	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	7.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	4.90	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	13	3	4.20	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	8.70	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	4.70	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	5.25	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	37		7.50	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	100	85	7.50	M	DEP
CUMBERLAND FARMS, INC.	239 N/S RT17 MAYWOOD NJ	51	20	4.00	M	DEP
CUMBERLAND FARMS, INC.	239 N/S RT17 MAYWOOD NJ	13	4	6.00	M	DEP
SUN OIL CORP.	167 N/S RT17 MAYWOOD NJ	10	4	5.00	M	DEP
SUN OIL CORP.	167 N/S RT17 MAYWOOD NJ	47	30	5.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	10	3	4.00	M	DEP

KIN PROPERTIES	239 N/S RT17 MAYWOOD NJ	14	4	5.00	M	DEP
KIN PROPERTIES	239 N/S RT17 MAYWOOD NJ	8	3	3.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	15	5	7.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	15	5	6.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	10	5	6.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	13	3	6.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	15	5	6.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	37	27	4.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	35	26	2.50	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	27	17	2.50	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	38	28	1.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	33	23	1.00	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	33	23	4.50	M	DEP
KIN PROPERTIES	149-151 MAYWOOD AVE., MAYWOOD NJ	37	27	4.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	30	20	8.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	35	25	4.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	42	32	8.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	29	19	10.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	13	3	10.00	M	DEP
M.M. WEIL, TRUSTEE	29 ESSEX ST. MAYWOOD NJ	15	5	7.00	M	DEP
M.M. WEIL, TRUSTEE	29 ESSEX ST. MAYWOOD NJ	25	15	14.00	M	DEP
M.M. WEIL, TRUSTEE	29 ESSEX ST. MAYWOOD NJ	48	38	5.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	13	6	7.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	42	32	5.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	35	25	8.50	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	17	12	13.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	15	5	7.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	20	10	13.00	M	DEP
ESSSEX STREET PROPERTY	ROCHELLE PARK NJ	11	3	4.00	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	10	2	3.50	M	DEP
HERITAGE REMEDIATION	205 MAIN STREET LODI NJ	14	4	5.00	M	DEP
AIRCO GASES INC.	LODI BORO, BERGEN COUNTY	15	5	8.00	M	DEP
KINGCO ASSOCIATES	433 PASSAIC STREET, HACKENSACK NJ	15	5		M	DEP
KINGCO ASSOCIATES	433 PASSAIC STREET, HACKENSACK NJ	15	5		M	DEP

APPENDIX D
WELL SEARCH DATABASE
FUSRAP Maywood Superfund Site

KINGCO ASSOCIATES	433 PASSAIC STREET, HACKENSACK NJ	14	4		M	DEP
US DEPT. OF ENERGY	100 WEST HUNTER AVENUE MAYWOOD NJ	17	11		M	DEP
VISCONTI, NANCY ESTA	35 INDUSTRIAL AVE LODI NJ	10	3	4.00	M	DEP
VISCONTI, NANCY ESTA	35 INDUSTRIAL AVE LODI NJ	11	3	4.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	10	2	3.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	10	2	3.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	10	2	3.00	M	DEP
SWS REALTY ASSOCIATE	87 ROUTE 17 NORTH MAYWOOD NJ	45	20		M	DEP
COLLUCCI, AL	LODI BORO, BERGEN COUNTY	11	1	5.00	M	DEP
COLLUCCI, AL	LODI BORO, BERGEN COUNTY	14	4	5.00	M	DEP
COLLUCCI, AL	LODI BORO, BERGEN COUNTY	14	4	5.00	M	DEP
COLLUCCI, AL	LODI BORO, BERGEN COUNTY	11	1	4.00	M	DEP
ZUCKERBERG'S INDUSTRY	280 MIDLAND AVENUE SADDLE BROOK NJ	17	2	6.00	M	DEP
ZUCKERBERG'S INDUSTRY	280 MIDLAND AVENUE SADDLE BROOK NJ	17	2	6.00	M	DEP
ZUCKERBERG'S INDUSTRY	280 MIDLAND AVENUE SADDLE BROOK NJ	17	2	6.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP

UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.90	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.80	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.80	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.80	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.70	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	6	4.20	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	6	4.30	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	6	4.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	6	4.10	V	DEP

UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	43	20	43.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	40	20	4.80	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	40	20	4.80	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.90	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	9	4	4.80	V	DEP
UNITED TECHNOLOGIES	TRUDY DRIVE AND PEARL COURT	45	24	4.83	E	DEP
UNITED TECHNOLOGIES	TRUDY DRIVE AND PEARL COURT	40	22	4.83	E	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	47		4.00	E	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	40		5.17	E	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	41	21	3.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	50	25	3.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	41	21	3.00	M	DEP
US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	16	10	8.00	M	DEP
US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	29	22	8.00	M	DEP
US DEPT. OF ENERGY	100 NORTH HUNTER AVE., MAYWOOD NJ	13	7	8.00	M	DEP
HASCOLD REALTY	39 ROBINSON ROAD	10	1	2.00	M	DEP
HASCOLD REALTY	39 ROBINSON ROAD	12	2	3.00	M	DEP
MUSCARELLE, JOSEPH L	149 ENTIN ROAD	12	2	8.00	M	DEP

U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	15	5	7.00	M	DEP
U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	15	5	7.00	M	DEP
U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	15	5	7.00	M	DEP
U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	15	5	7.00	M	DEP
U-HAUL RENTAL CENTER	210 ROUTE 46 EAST SADDLEBROOK	15	5	7.00	M	DEP
SEARS ROEBUCK	MAYWOOD AVE MAYWOOD NJ	62	16	6.00	M	DEP
SEARS ROEBUCK	MAYWOOD AVE MAYWOOD NJ	62	16	5.10	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	11	6	10.50	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	15	8	11.75	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	12	5	10.50	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	15	5	10.50	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	62	21	9.66	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	62	26	9.41	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	O	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	V	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	5.00	V	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	62	16	9.50	T	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	16	4	7.75	T	DEP
269 MAIN STREET REALTY	ROUTE 46 AND SADDLE RIVER NJ			5.00	TB	DEP
SEARS ROEBUCK	MAYWOOD AVE MAYWOOD NJ	29	16	6.00	Z	DEP
SEARS ROEBUCK	MAYWOOD AVE MAYWOOD NJ	51	41	6.00	Z	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	32	25	9.41	Z	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	62	40	9.41	Z	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	39	29	9.66	Z	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	62	52	9.66	Z	DEP

HACKENSACK BOARD OF ED.	HACKENSACK HIGHSCHOOL	20	5	7.50	M	DEP
FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	19	2	5.00	M	DEP
FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	17	2	5.00	M	DEP
VISCONTI, NANCY ESTA	150 GREGG STREET	55	35	7.00	M	DEP
VISCONTI, NANCY ESTA	150 GREGG STREET	9	4	5.00	M	DEP
KINGCO ASSOCIATES	433 PASSAIC STREET, HACKENSACK NJ	20	5	11.50	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	15	5	6.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	14	4	6.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	15	5	6.00	M	DEP
VISCONTI, NANCY ESTA	35 INDUSTRIAL AVE LODI NJ	14	4	6.50	M	DEP
EXXON COMPANY, USA	460 NORTH MAIN STREET	25	5	12.00	M	DEP
EXXON COMPANY, USA	460 NORTH MAIN STREET	18	1	11.50	M	DEP
KLEIN, HARRY	60 INDUSTRIAL ROAD LODI NJ	15	3	5.00	M	DEP
KLEIN, HARRY	60 INDUSTRIAL ROAD LODI NJ	25			M	DEP
KLEIN, HARRY	60 INDUSTRIAL ROAD LODI NJ	15	3	5.00	M	DEP
KLEIN, HARRY	60 INDUSTRIAL ROAD LODI NJ	15	3	5.00	M	DEP
MATHES DIV/NORAC CO.	169 KENNEDY DRIVE LODI NJ	12	2	5.00	6	DEP
TURLICK, MARK	9 BROOK AVE, MAYWOOD NJ	10	3	5.00	M	DEP
TURLICK, MARK	9 BROOK AVE, MAYWOOD NJ	15	3	5.00	E	DEP
BASF CORPORATION	INTERCHEMICAL CORP SITE.	355			F	DEP
AMOCO OIL CO.	WISSE CT. AND MCARTHUR	25			M	DEP
SHELL OIL COMPANY	ESSEX AND POLIFLY - RIGHT OF WAY	30	10		M	DEP
UNITED TECHNOLOGIES	TWO FORTY ASSOCIATION PROPERTY LODI NJ	43	20	4.50	M	DEP
IIY PROPERTIES	Rt 17N & ESSEX ST.	12	2	3.50	M	DEP
IIY PROPERTIES	Rt 17N & ESSEX ST.	12	2	3.50	M	DEP
IIY PROPERTIES	Rt 17N & ESSEX ST.	12	2	3.00	B	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	15	10	12.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	25	20	12.50	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	29	24	11.50	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	10	5		Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	43		15.50	B	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	15	9	1.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	5	2	2.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	25	20	15.00	Z	DEP

NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	15	10	6.50	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	25	20	6.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	10	5	3.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	20	15	1.50	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	15	10	4.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	35	30	9.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	20	15	10.00	Z	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	36		5.50	M	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	25		18.50	B	DEP
PARWAY GARDEN ASSOC.	128 ROCHELLE AVE. ROCHELLE PARK NJ	20	10	13.00	M	DEP
PARWAY GARDEN ASSOC.	128 ROCHELLE AVE. ROCHELLE PARK NJ	20	10	13.00	M	DEP
SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	15	5	11.40	M	DEP
SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	15	5	8.50	M	DEP
SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	15	5	11.16	M	DEP
SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	16	6	3.83	M	DEP
SAFECO INSURANCE CO.	145 UNION STREET LODI NJ	14	4	5.83	M	DEP
GETTY PETROLEUM CORP.	MAIN ST. AND UNION ST.	8	1	4.50	M	DEP
GETTY PETROLEUM CORP.	MAIN ST. AND UNION ST.	10	2	6.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	14	7	9.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	14	4	12.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	18	6	12.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	15	5	10.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	15	5	10.00	M	DEP
NJDOT	LODI MAINTENANCE FACILITY GREGG ST. LODI	13	3	10.00	M	DEP
FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	12	2	4.00	M	DEP
FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	13	3	4.50	M	DEP
FRAPAUL CONSTRUCTION	124 ESSEX STREET ROCHELLE PARK NJ	12	2	4.50	M	DEP
PERGAMENT, MURRAY	40 INDUSTRIAL RD., LODI NJ	12	6		M	DEP
PERGAMENT, MURRAY	40 INDUSTRIAL RD., LODI NJ	20	10		M	DEP
PERGAMENT, MURRAY	40 INDUSTRIAL RD., LODI NJ	20	10		M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	39	19	8.00	M	DEP
BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	15	3	6.00	M	DEP
BERGEN PASSAIC TRANSPORT	53 CENTRAL AVE. ROCHELLE PARK NJ	15	3	6.00	M	DEP
ALFRED SANZARI ENT.	267 SOUTH SUMMIT ST., HACKENSACK NJ	13	2	6.00	M	DEP

NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	14	9	10.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	10	5	4.00	M	DEP
NJDOT	ROUTE 80 WESTBOUND			15.00	B	DEP
NJDOT	ROUTE 80 WESTBOUND			11.00	B	DEP
NJDOT	ROUTE 80 WESTBOUND	35	25	1.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	50	40	45.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	40	35	27.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	30	25	7.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	48	38	17.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	50	40	11.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	20	10	12.00	Z	DEP
NJDOT	ROUTE 80 WESTBOUND	32	22	30.00	Z	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	12	2	4.00	M	DEP
NJDOT	GREGG STREET LODI NJ	20	5	9.00	M	DEP
NJDOT	GREGG STREET LODI NJ	16	6	9.00	M	DEP
SBPC	CENTRAL AVENUE ROCHELLE PARK NJ	20	5	10.00	M	DEP
SBPC	CENTRAL AVENUE ROCHELLE PARK NJ	20	5	10.00	M	DEP
VISCONTI, NANCY ESTA	150 GREGG STREET	55	40	4.90	M	DEP
VISCONTI, NANCY ESTA	150 GREGG STREET	55	40	4.90	M	DEP
VISCONTI, NANCY ESTA	150 GREGG STREET	85	70	4.50	M	DEP
NJDOT	ROUTE 80 E.B. LOCAL SADDLEBROOK TWP NJ	23			B	DEP
FMRN Realty	80 HANCOCK STREET LODI NJ	12	2	3.50	M	DEP
ATLANTIC DETROIT	180 ROUTE 17 SOUTH, LODI NJ	13	3	4.00	M	DEP
SEARS ROEBUCK	200 ROUTE 17 SOUTH MAYWOOD NJ	12	2	2.50	M	DEP
SEARS ROEBUCK	200 ROUTE 17 SOUTH MAYWOOD NJ	12	2	2.50	M	DEP
SEARS ROEBUCK	200 ROUTE 17 SOUTH MAYWOOD NJ	12	2	2.50	M	DEP
SEARS ROEBUCK	200 ROUTE 17 SOUTH MAYWOOD NJ	12	2	2.50	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	14	6	7.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	15	5	7.00	M	DEP
STEPAN COMPANY	100 WEST HUNTER AVENUE MAYWOOD NJ	15	5	7.00	M	DEP
VORNADO REALTY TRUST	ROUTE 17 LODI NJ	35		7.00	B	DEP
ZEICHMEISTER, WILLIAM	100 WEST MAGNOLIA AVE. MAYWOOD NJ	11	2	4.00	M	DEP
UNITED TECHNOLOGIES	200 GREGG STREET , LODI NJ	40	20	19.00	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	14	4	8.00	M	DEP

NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	20	5	9.90	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	14	4	7.40	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	15	3	6.40	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	15	5	6.00	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	25	20	5.00	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	27	22	4.50	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	30	25	10.65	M	DEP
NAPP TECHNOLOGIES INC.	199 MAIN STREET LODI NJ	25	20		M	DEP
NJDOT	GREGG STREET LODI NJ	20	10	11.00	M	DEP
NJDOT	GREGG STREET LODI NJ	18	8	11.00	M	DEP
AIR-WIN	10 DELL GLEN AVE. LODI NJ	20	5	15.00	M	DEP
MASTER ETCHING CORP.		400			I	DEP
Notes:						
Information provided in accordance with Appendix B (N.J.A.C. 7:26E-3.7(e).						

5 mile

#4376

MALCOLM PIRNIE

MALCOLM PIRNIE, INC.
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

April 26, 2002

NJDEP Bureau of Water Allocation
401 East State Street
Trenton, New Jersey 08625
Attn: Linda Belkin

Re: Request for ½ mile and 5 mile well searches.

Dear Ms. Belkin:

Malcolm Pirnie, Inc. is interested in having three ½ mile manual well searches for Location A through C indicated below. We are also requesting a 5 mile computer printout for Location D to include all monitoring wells, domestic wells, public supply wells, irrigation wells and/or other water allocation permit-users.

For the ½ mile searches the locations are as follow:

Location A (MISS):	74	04'	22"	40	53'	56"
Location B (SCANEL Property):	74	03'	53"	40	53'	17"
Location C (DMV):	74	04'	42"	40	53'	04"
Location D (5 mile radius search):	74	04'	20"	40	53'	53"

Enclosed you will find the above locations displayed in red on the accompanying topographic maps.

Please find enclosed our check in the amount of $395.00 ($345 + $50) to cover the cost of the three ½ mile manual well searches for locations A through C and the computer printout of all water allocation permit users within a 5 mile radius of Location D.

Very truly yours,

George A. Markt

MALCOLM PIRNIE, INC.

104 CORPORATE PARK DR. BOX 751 WHITE PLAINS, NY 10602-0751 914-694-2100 fax 914-694-9286 http://www.pirnie.com

KEY FOR KNOWN-CONTAMINATED SITE LIST CASES

The Contaminated Site List contains the following fields:

SITE #:	Site number assigned by Bureau of Water Allocation for map identification purposes only
NAME:	Name of site
ADDRESS:	Street Address
MUN:	Municipality name
COUNTY:	County Name
CSL #:	Comprehensive Site List number assigned by the Department to each site
CASE #:	Number assigned by the specific Site Remediation Bureau working on the case
LAT:	Latitude of site
LON:	Longitude of site
DISTANCE:	Distance in miles from center of circle
CONTACT:	Department of Environmental Protection lead agency

The data in this listing is from the Department of Environmental Protection's known contaminated case file. The actual transfer date is printed on the left side of the enclosed map. As the identification (and in some instances, creation) of hazardous waste sites is an on-going process, it should be emphasized that this information is not intended to be a complete survey of hazardous waste sites in the area. Locational accuracy varies, sites are located by several different methods including GPS, survey, address matching and zip code centroid. Recognizing the fact that this list may contain errors and omissions, it is advisable to use this resource as a guide and to verify all information.

If you have any questions regarding a specific case site please call or write to the lead contact agency. Agency codes are listed below:

BAC:	Bureau of Applicability and Compliance
BC:	Bureau of Construction
BEECRA:	Bureau of Environmental Evaluation, Clean-up and Responsible Assessment
BER:	Bureau of Emergency Response
BFO:	Bureau of Field Operations
BFCM:	Bureau of Federal Case Management
BSCM:	Bureau of State Case Management
BSM:	Bureau of Site Management
BUST:	Bureau of Underground Storage Tanks
CEHA:	County Environmental Health Act

SITE REMEDIATION PROGRAM QUESTIONS SHOULD BE DIRECTED TO:

GENERAL INFORMATION: (609) 292-9120

DESCRIPTION OF WATER WITHDRAWAL POINTS

The Water Withdrawal Points listing contains the following fields:

CAPACITY:	The pump capacity in gallons per minute
COUNTY:	County the withdrawal point is in
DEPTH:	Depth of the well or pond
DISTANCE:	Distance in miles from center of circle
GEO1:	The ground or surface water source
GEO2:	A secondary source of the water
LAT:	Latitude of the withdrawal point
LLACC:	Accuracy of the latitude and longitude estimates
LOCID:	The local identification of the withdrawal point, or a continuation of the SOURCEID field for surface water
LON:	Longitude of the withdrawal point
MUN:	The municipality the withdrawal point is in
NAME:	Name of the permit, certificate, or registration holder
NUMBER:	Water Allocation Permit, Agricultural Certification, or Registration number
SOURCEID:	The well permit number or other identifier for the water withdrawal

The listing that you have requested includes most wells and surface intakes that are in the Water Allocation Permits, Water Use Registrations, and representative sources from most of the Agricultural Certificates. Recognizing the fact that the list will contain errors and omissions, it is advisable to use this resource as a guide and to verify all data. We try to maintain an accurate database; however, we can not yet guarantee reliability. If you spot any errors we would be very grateful to hear about them. Please call or write to us in reference to the "Radius Program" at:

NJDEP
Water Supply Element
Bureau of Water Allocation
P.O. BOX 426
Trenton, New Jersey 08625-0426

(609)292-2957

Thank you.

Please see the attached sheets for definitions of the codes used in the Water Withdrawal Points listing.

COUNTY:

01 - Atlantic	15 - Gloucester	29 - Ocean
03 - Bergen	17 - Hudson	31 - Passaic
05 - Burlington	19 - Hunterdon	33 - Salem
07 - Camden	21 - Mercer	35 - Somerset
09 - Cape May	23 - Middlesex	37 - Sussex
11 - Cumberland	25 - Monmouth	39 - Union
13 - Essex	27 - Morris	41 - Warren

GEO:

RECENT	
Surficial Deposits	GRS
PLEISTOCENE	
Glacial Undifferentiated	GQGU
Stratified Drift	GQSD
Terminal Moraine	GQTM
Continuous Till	GQCT
Discontinuous Till	GQDT
Morainic Deposits	GQM
Illinoian Morainic Deposits	GQIM
Lake Bottom Sediment	GQL
Deltaic Deposits	GQD
Illinoian Deltaic Deposits	GQID
Fluvial over Lacustrine Deposits	GQFL
Fluvial Deposits	GQF
Illinoian Fluvial Deposits	GQIF
Ice Contact Sediment	GQIC
Till of Illinoian Age	GQIT
Till of Jersean Age	GQJT
Sand and Gravel of Jersean Age	GQJS
Bridgeton	GQBS
Cape May	GQCM
Holly Beach Mbr.	GQCHB
Estuarine Sand	GQES
Van Sciver Lake Beds	GQVSL
Spring Lake Beds	GQSL
Pennsauken	GQPS
TERTIARY-MIOCENE	
Beacon Hill	GTBH
Cohansey	GTCH
Kirkwood-Cohansey	GTCK
Kirkwood	GTKW
Upper Kirkwood Sand	GTKSU
Rio Grande	GTKRG
Atlantic City 800' Sands	GTKW8
Upper Sand Unit (800' Sands)	GTKWU
Lower Sand Unit (800' Sands)	GTKWL
Piney Point Aquifer	GTPP
TERTIARY-OIGOCENE	
Old Church-Piney Point	GIKOCPP
TERITARY-EOCENE	
Shark River Marl-Piney Point	GTSRPP
Manasquan	GTMQ

TERITARY-PALEOCENE	
Vincentown Sand	GTVT
Hornerstown	GTHT
CRETACEOUS	
Red Bank	GKRB
Navesink	GKNS
Mount Laurel	GKML
Wenonah	GKWE
Wenonah & Mount Laurel Aquifer	GKMW
Marshalltown	GKMT
Englishtown	GKET
Upper Sand	GKETU
Lower Sand	GKETL
Woodbury	GKWB
Merchantville	GKMV
Magothy	GKM
Old Bridge	GKROB
Upper Aquifer PRM	GKMU
Raritan	GKR
Sayreville Sand	GKRSS
Farrington	GKRF
Middle Aquifer PRM	GKRM
Raritan/Magothy	GKMR
Potomac	GKP
Lower Aquifer PRM	GKPL
TRIASSIC	
Brunswick Group	GTRB
Boonton Formation	GTRBB
Hook Mountain Basalt	GTRBHM
Towaco Formation	GTRBT
Preakness Basalt	GTRBPR
Feltville Formation	GTRBF
Orange Mountain Basalt	GTRBOM
Passaic Formation	GTRBP
Lockatong Formation	GTRL
Stockton Formation	GTRS
Basalt	GTRBS
Diabase	GTRDB
Conglomerate	GTRCG
DEVONIAN	
Undifferentiated	GD
DEVONIAN-Green Pond Mountain Region	
Devonian Green Pond Mountain Undifferentiated	GDGPU
Skunnemunk Conglomerate	GDSC
Bellvale Sandstone	GDB
Cornwall Shale	GDC
Kanouse Sandstone	GDK
Esopus Formation	GDGPE

Connelly Conglomerate	GDC
DEVONIAN-Valley and Ridge	
Devonian Valley & Ridge Undifferentiated	GDVRU
Marcellus Shale	GDM
Buttermilk Falls Limestone	GDBF
Schohane Formation	GDS
Esopus Formation	GDVRE
Oriskany Group	
Ridgely Sandstone	GDORS
Shriver Chert	GDOS
Glenerie Formation	GDOG
Helderburg Group	
Port Ewen Shale	GDHPE
Minisk Limestone	GDHM
New Scotland Formation	GDHNS
Cosymans Formation	GDHC
Rondout Formation	GDR
SILURIAN-Green Pond Mountain	
Silvrian Green Pond Mountain Undifferentiated	GSGPU
Berkshire Valley Formation	GSBV
Poxono Island Formation	GSPIGP
Longwood Shale	GSLS
High Falls	GSHF
Green Pond Conglomerate	GSGP
Silurian-Valley and Ridge	
Silvrian Valley & Ridge Undifferentiated	GSVRU
Decker	GSDK
Bossardville Limestone	GSBD
Poxono Island	GSPIVR
Bloomsburg Red Beds	GSBRB
Shawangunk Formation	GSSG
ORDOVICIAN	
Beemerville Intrusive Complex	GOBI
Martinsburg Formation	GOMB
Jacksonburg Formation	GOJB
Jutland Klippe	GOJK
Kittatinny Super Group	GOK
Beakmantown Group	
Outleaunee Formation	GOKO
Harmonyvale Mbr.	GOKOH
Beaver Run Mbr.	GOKOB
Epler	GOKE
Rickenbach	GOKR

CAMBRO ORDOVICIAN	
Kittatinny Formation	GCOK
CAMBRIAN	
Allentown Formation	GCKA
Upper Mbr.	GCKU
Limeport Mbr.	GCKLP
Leithsville Formation	GCKL
Walkill Mbr.	GCKLW
Hamburg Mbr.	GCKLH
Califon Mbr.	GCKLC
Hardyston Quantzite	GCH
PRECAMBRIAN	
Chestnut Hill Formation	GPCCH
Byram Intrusive Suite	GPCBI
Lake Hopatcong Intrusive Suite	GPCHI
Mount Eve Granite	GPCME
Franklin Marble	GPCFM
Wildcat Marble	GPCFW
Losee Metamorphic Suite	GPCLM
Granite	GPCGR
Gneiss	GPCGN
Undifferentiated	GPC
Undifferentiated Metasedimentary	GPCUM
Franklin Lms	GPCFL
UNCERTAIN AGE (Pre-Silurian)	
Manhattan Schist	GMS
Wissahickon Formation	GWF
Serpentinite	GSER
Chickies Quartzite	GCQ
DELAWARE RIVER BASIN	
Unknown or Non-Specific	SD
Alloways Creek	SDALL
Alexsocken Creek	SDALE
Assiscunk Creek	SDASC
Assunpink Creek	SDASP
Big Timber Creek	SDBIG
Blacks Creek	SDBLA
Cooper's Creek	SDCOO
Crafts Creek	SDCRA
Crosswicks Creek	SDCRO
Delaware River	SDDEL
Flat Brook	SDFLA
Hakihokake Creek	SDHAK
Harihokake Creek	SDHAR
Jacob's Creek	SDJAC
Lockatong Creek	SDLOC
Lopatcong Creek	SDLOP
Mantua Creek	SDMNT

Musconetcong River	SDMUS
Nichisakawick Creek	SDNIC
Oldman's Creek	SDOLD
Paulins Kill	SDPAU
Pennsauken Creek	SDPEN
Pequest River	SDPST
Pohatcong Creek	SDPOH
Raccoon Creek	SDRAC
Rancocas Creek	SDRAN
Salem River	SDSAL
Wickecheoke Creek	SDWIC
RARITAN RIVER BASIN	
Unknown or Non-Specific	SR
Lawrence Brook	SRLAW
Lower Raritan	SRLOW
Millstone River	SRMIL
North Branch Raritan	SRNBR
South Branch Raritan	SRSBR
South River	SRSRV
PASSAIC RIVER BASIN	
Unknown or Non-Specific	SP
Canoe Brook	SPCAN
Lower Mid-Passaic River	SPLMP
Lower Passaic	SPLOW
Passaic River	SPPAS
Peckman River	SPPEC
Pequannock River	SPPNK
Pompton River	SPPOM
Ramapo River	SPRAM
Rockaway River	SPROC
Saddle River	SPSAD
Upper Mid-Passaic River	SPUMP
Upper Passaic River	SPUPP
Wanaque River	SPWAN
Whippany River	SPWHI
ATLANTIC COASTAL BASIN	
Unknown or Non-Specific	SC
Atlantic County Coastal	SCATL
Cape May County Coastal	SCCAP
Cedar Creek	SCCED
Great Egg Harbor River	SCGRE
Manasquan River	SCMSQ
Metedeconk River	SCMET
Monmouth County Coastal	SCMON
Mullica River	SCMUL
Navesink River	SCNAV
Ocean County Coastal	SCOCE
Raritan Bay	SCRAR
Shark River	SCSHA
Shrewsbury River	SCSHR

Toms River	SCTOM
Tuckahoe River	SCTUC
HUDSON RIVER BASIN	
Unknown or Non-Specific	SH
Hudson River	SHHUD
Papakating Creek	SHPAP
Pochuck Creek	SHPOC
Wallkill River	SHWAL
HACKENSACK RIVER BASIN	
Unknown or Non-Specific	SK
Hackensack River	SKHAC
RAHWAY RIVER BASIN	
Unknown or Non-Specific	SY
Rahway River	SYRAH
ELIZABETH RIVER BASIN	
Unknown or Non-Specific	SE
Elizabeth River	SEELI
DELAWARE BAY BASIN	
Unknown or Non-Specific	SB
Cohansey River	SBCOH
Maurice River	SBMAU
Stow Creek	SBSTO

LLACC:

G - GPS located
S - accurate to +- 1 second
F - accurate to +- 5 seconds
T - accurate to +- 10 seconds
M - accurate to +- 1 minute
U - accuracy unknown

MUN:

ATLANTIC COUNTY (01)

01 - Absecon City	02 - Atlantic City
03 - Brigantine City	04 - Buena Boro
05 - Buena Vista Twp.	06 - Corbin City
07 - Egg Harbor City	08 - Egg Harbor Twp.
09 - Estell Manor City	10 - Folsom Boro
11 - Galloway Twp.	12 - Hamilton Twp.
13 - Hammonton Town	14 - Linwood City
15 - Longport Boro	16 - Margate City
17 - Mullica Twp.	18 - Northfield City
19 - Pleasantville City	20 - Port Republic City
21 - Somers Point City	22 - Ventnor City
23 - Weymouth Twp.	

BERGEN COUNTY (03)

01 - Allendale Boro	02 - Alpine Boro
03 - Bergenfield Boro	04 - Bogota Boro
05 - Carlstadt Boro	06 - Cliffside Park Bo

07 - Closter Boro
08 - Cresskill Boro
09 - Demarest Boro
10 - Dumont Boro
12 - East Rutherford Boro
13 - Edgewater Boro
11 - Elmwood Park Boro
14 - Emerson Boro
15 - Englewood City
16 - Englewood Cliffs Boro
17 - Fair Lawn Boro
18 - Fairview Boro
19 - Fort Lee Boro
20 - Franklin Lakes Boro
21 - Garfield Boro
22 - Glen Rock Boro
23 - Hackensack City
24 - Harrington Park Boro
25 - Hasbrouck Heights Boro
26 - Haworth Boro
27 - Hillsdale Boro
28 - Hohokus Boro
29 - Leonia Boro
30 - Little Ferry Boro
31 - Lodi Boro
32 - Lyndhurst Twp.
33 - Mahwah Twp.
34 - Maywood Boro
35 - Midland Park Boro
36 - Montvale Boro
37 - Moonachie Boro
38 - New Milford Boro
39 - North Arlington Boro
40 - Northvale Boro
41 - Norwood Boro
42 - Oakland Boro
43 - Old Tappan Boro
44 - Oradell Boro
45 - Palisades Park Boro
46 - Paramus Boro
47 - Park Ridge Boro
48 - Ramsey Boro
49 - Ridgefield Boro
50 - Ridgefield Park Villa
51 - Ridgewood Village
52 - River Edge Boro
53 - River Vale Twp.
54 - Rochelle Park Twp.
55 - Rockleigh Boro
56 - Rutherford Boro
57 - Saddle Brook Twp.
58 - Saddle River Boro
59 - South Hackensack Twp.
60 - Teaneck Twp.
61 - Tenafly Boro
62 - Teterboro Boro
63 - Upper Saddle River Boro
64 - Waldwick Boro
65 - Wallington Boro
66 - Washington Twp.
67 - Westwood Boro
68 - Wood-Ridge Boro
69 - Woodcliff Lake Boro
70 - Wyckoff Twp.

BURLINGTON COUNTY (05)

01 - Bass River Twp.
02 - Beverly City
03 - Bordentown City
04 - Bordentown Twp.
05 - Burlington City
06 - Burlington Twp.
07 - Chesterfield Twp.
08 - Cinnaminson Twp.
09 - Delanco Twp.
10 - Delran Twp.
11 - Eastampton Twp.
12 - Edgewater Park Twp.
13 - Evesham Twp.
14 - Fieldsboro Boro
15 - Florence Twp.
16 - Hainesport Twp.
17 - Lumberton Twp.
18 - Mansfield Twp.
19 - Maple Shade Twp.
20 - Medford Lakes Boro
21 - Medford Twp.
22 - Moorestown Twp.
23 - Mount Holly Twp.
24 - Mount Laurel Twp.
25 - New Hanover Twp.
26 - North Hanover Twp.
27 - Palmyra Boro
28 - Pemberton Boro
29 - Pemberton Twp.
30 - Riverside Twp.
31 - Riverton Boro
32 - Shamong Twp.
33 - Southampton Twp.
34 - Springfield Twp.
35 - Tabernacle Twp.
36 - Washington Twp.
37 - Westampton Twp.
38 - Willingboro Twp.

39 - Woodland Twp.
40 - Wrightstown

CAMDEN COUNTY (07)

01 - Audubon Boro
02 - Audubon Park Boro
03 - Barrington Boro
04 - Bellmawr Boro
05 - Berlin Boro
06 - Berlin Twp.
07 - Brooklawn Boro
08 - Camden City
09 - Cherry Hill Twp.
10 - Chesilhurst Boro
11 - Clementon Boro
12 - Collingswood Boro
13 - Gibbsboro Boro
14 - Gloucester City
15 - Gloucester Twp.
18 - Haddon Heights Boro
16 - Haddon Twp.
17 - Haddonfield Boro
19 - Hi-Nella Boro
20 - Laurel Springs Boro
21 - Lawnside Boro
22 - Lindenwold Boro
23 - Magnolia Boro
24 - Merchantville Boro
25 - Mount Ephraim Boro
26 - Oaklyn Boro
27 - Pennsauken Twp.
28 - Pine Hill Boro
29 - Pine Valley Boro
30 - Runnemede Boro
31 - Somerdale Boro
32 - Stratford Boro
33 - Tavistock Boro
34 - Voorhees Twp.
35 - Waterford Twp.
36 - Winslow Twp.
37 - Woodlynne Boro

CAPE MAY COUNTY (09)

01 - Avalon Boro
02 - Cape May City
03 - Cape May Point Boro
04 - Dennis Twp.
05 - Lower Twp.
06 - Middle Twp.
07 - North Wildwood City
08 - Ocean City
09 - Sea Isle City
10 - Stone Harbor Boro
11 - Upper Twp.
12 - West Cape May Boro
13 - West Wildwood Boro
14 - Wildwood City
15 - Wildwood Crest Boro
16 - Woodbine Boro

CUMBERLAND COUNTY (11)

01 - Bridgeton City
02 - Commercial Twp.
03 - Deerfield Twp.
04 - Downe Twp.
05 - Fairfield Twp.
06 - Greenwich Twp.
07 - Hopewell Twp.
08 - Lawrence Twp.
09 - Maurice River Twp.
10 - Millville City
11 - Shiloh Boro
12 - Stow Creek Twp.
13 - Upper Deerfield Twp.
14 - Vineland City

ESSEX COUNTY (13)

01 - Belleville Town
02 - Bloomfield Town
03 - Caldwell Boro
04 - Cedar Grove Twp.
05 - East Orange City
06 - Essex Fells Boro
07 - Fairfield Boro
08 - Glen Ridge Boro
09 - Irvington Town
10 - Livingston Twp.
11 - Maplewood Twp.
12 - Millburn Twp.
13 - Montclair Town
14 - Newark City
15 - North Caldwell Boro
16 - Nutley Town
17 - Orange City
18 - Roseland Boro
19 - South Orange Village
20 - Verona Boro

21 - West Caldwell Boro

22 - West Orange Town

GLOUCESTER COUNTY (15)

01 - Clayton Boro
02 - Deptford Twp.
03 - East Greenwich Twp.
04 - Elk Twp.
05 - Franklin Twp.
06 - Glassboro Boro
07 - Greenwich Twp.
08 - Harrison Twp.
09 - Logan Twp.
10 - Mantua Twp.
11 - Monroe Twp.
12 - National Park Boro
13 - Newfield Boro
14 - Paulsboro Boro
15 - Pitman Boro
16 - South Harrison Twp.
17 - Swedesboro Boro
18 - Washington Twp.
19 - Wenonah Boro
20 - West Deptford Twp.
21 - Westville Boro
22 - Woodbury City
23 - Woodbury Heights Boro
24 - Woolwich Twp.

HUDSON COUNTY (17)

01 - Bayonne City
02 - East Newark Boro
03 - Guttenberg Town
04 - Harrison Town
05 - Hoboken City
06 - Jersey City
07 - Kearny Town
08 - North Bergen Twp.
09 - Secaucus Twp.
10 - Union City
11 - Weehawken Twp.
12 - West New York Town

HUNTERDON COUNTY (19)

01 - Alexandria Twp.
02 - Bethlehem Twp.
03 - Bloomsbury Boro
04 - Califon Boro
05 - Clinton Town
06 - Clinton Twp.
07 - Delaware Twp.
08 - East Amwell Twp.
09 - Flemington Boro
10 - Franklin Twp.
11 - Frenchtown Boro
12 - Glen Gardner Boro
13 - Hampton Boro
14 - High Bridge Boro
15 - Holland Twp.
16 - Kingwood Twp.
17 - Lambertville City
18 - Lebanon Boro
19 - Lebanon Twp.
20 - Milford Boro
21 - Raritan Twp.
22 - Readington Twp.
23 - Stockton Boro
24 - Tewksbury Twp.
25 - Union Twp.
26 - West Amwell Twp.

MERCER COUNTY (21)

01 - East Windsor Twp.
02 - Ewing Twp.
03 - Hamilton Twp.
04 - Hightstown Boro
05 - Hopewell Boro
06 - Hopewell Twp.
07 - Lawrence Twp.
08 - Pennington Boro
09 - Princeton Boro
10 - Princeton Twp.
11 - Trenton City
12 - Washington Twp.
13 - West Windsor Twp.

MIDDLESEX COUNTY (23)

01 - Carteret Boro
02 - Cranbury Twp.
03 - Dunellen Boro
04 - East Brunswick Twp.
05 - Edison Twp.
06 - Helmetta Boro

07 - Highland Park Boro
10 - Metuchen Boro
12 - Milltown Boro
14 - New Brunswick City
09 - Old Bridge Twp.
17 - Piscataway Twp.
19 - Sayreville Boro
21 - South Brunswick Twp.
23 - South River Boro
25 - Woodbridge Twp.

08 - Jamesburg Boro
11 - Middlesex Boro
13 - Monroe Twp.
15 - North Brunswick Twp.
16 - Perth Amboy City
18 - Plainsboro Twp.
20 - South Amboy City
22 - South Plainfield Boro
24 - Spotswood Boro

MONMOUTH COUNTY (25)

30 - Aberdeen Twp.
02 - Allentown Boro
04 - Atlantic Highlands Boro
06 - Belmar Boro
08 - Brielle Boro
10 - Deal Boro
12 - Englishtown Boro
14 - Farmingdale Boro
16 - Freehold Twp.
17 - Highland Boro
19 - Howell Twp.
21 - Keansburg Boro
23 - Little Silver Boro
25 - Long Branch City
27 - Manasquan Boro
29 - Matawan Boro
32 - Millstone Twp.
35 - Neptune City Boro
37 - Ocean Twp.
40 - Red Bank Boro
42 - Rumson Boro
44 - Sea Girt Boro
46 - Shrewsbury Twp.
48 - Spring Lake Boro
36 - Tinton Falls Boro
51 - Upper Freehold Twp.
53 - West Long Branch Twp.

01 - Allenhurst Boro
03 - Asbury Park City
05 - Avon-By-The-Sea Boro
07 - Bradley Beach Boro
09 - Colts Neck Twp.
11 - Eatontown Boro
13 - Fair Haven Boro
15 - Freehold Boro
39 - Hazlet Twp.
18 - Holmdel Boro
20 - Interlaken Boro
22 - Keyport Boro
24 - Loch Arbour Villa
26 - Manalapan Twp.
28 - Marlboro Twp.
31 - Middletown Twp.
33 - Monmouth Beach Boro
34 - Neptune Twp.
38 - Oceanport Boro
41 - Roosevelt Boro
43 - Sea Bright Boro
45 - Shrewsbury Boro
47 - South Belmar Boro
49 - Spring Lake Heights Bo
50 - Union Beach Boro
52 - Wall Twp.

MORRIS COUNTY (27)

01 - Boonton Town
03 - Butler Boro
05 - Chatham Twp.
07 - Chester Twp.
09 - Dover Town
11 - Florham Park Boro
13 - Harding Twp.
15 - Kinnelon Boro
17 - Madison Boro
19 - Mendham Twp.
21 - Montville Twp.
22 - Morris Twp.

02 - Boonton Twp.
04 - Chatham Boro
06 - Chester Boro
08 - Denville Twp.
10 - East Hanover Twp.
12 - Hanover Twp.
14 - Jefferson Twp.
16 - Lincoln Park Boro
18 - Mendham Boro
20 - Mine Hill Twp.
23 - Morris Plains Boro
24 - Morristown Town

26 - Mount Arlington Boro
25 - Mountain Lakes Boro
29 - Parsippany Troy-Hills Twp.
31 - Pequannock Twp.
33 - Riverdale Boro
35 - Rockaway Twp.
37 - Victory Gardens Boro
39 - Wharton Boro

27 - Mount Olive Twp.
28 - Netcong Boro
30 - Passaic Twp.
32 - Randolph Twp.
34 - Rockaway Boro
36 - Roxbury Twp.
38 - Washington Twp.

OCEAN COUNTY (29)

01 - Barnegat Light Boro
02 - Bay Head Boro
04 - Beachwood Boro
06 - Brick Twp.
08 - Eagleswood Twp.
10 - Island Heights Boro
12 - Lacey Twp.
14 - Lakewood Twp.
16 - Little Egg Harbor Twp.
18 - Manchester Twp.
21 - Ocean Gate Boro
22 - Pine Beach Boro
25 - Point Pleasant Beach Boro
26 - Seaside Heights Boro
28 - Ship Bottom Boro
30 - Stafford Twp.
32 - Tuckerton Boro

33 - Barnegat Twp.
03 - Beach Haven Boro
05 - Berkeley Twp.
07 - Dover Twp.
09 - Harvey Cedars Boro
11 - Jackson Twp.
13 - Lakehurst Boro
15 - Lavalette Boro
17 - Long Beach Twp.
19 - Mantaloking Boro
20 - Ocean Twp.
23 - Plumsted Twp.
24 - Point Pleasant Boro
27 - Seaside Park Boro
29 - South Toms River Boro
31 - Surf City Boro

PASSAIC COUNTY (31)

01 - Bloomingdale Boro
03 - Haledon Boro
05 - Little Falls Twp.
07 - Passaic City
09 - Pompton Lakes Boro
11 - Ringwood Boro
13 - Wanaque Boro
15 - West Milford Twp.

02 - Clifton City
04 - Hawthorne Boro
06 - North Haledon Boro
08 - Paterson City
10 - Prospect Park Boro
12 - Totowa Boro
14 - Wayne Twp.
16 - West Paterson Boro

SALEM COUNTY (33)

01 - Alloway Twp.
02 - Elmer Boro
04 - Lower Alloways Creek Twp.
06 - Oldmans Twp.
08 - Pennsville Twp.
10 - Pittsgrove Twp.
12 - Salem City
15 - Woodstown Boro

13 - Carney's Point Twp.
03 - Elsinboro Twp.
05 - Mannington Twp.
07 - Penns Grove Boro
09 - Pilesgrove Twp.
11 - Quinton Twp.
14 - Upper Pittsgrove Twp.

SOMERSET COUNTY (35)

01 - Bedminster Twp.
03 - Bernardsville Boro
05 - Branchburg Twp.
07 - Far Hills Boro

02 - Bernards Twp.
04 - Bound Brook Boro
06 - Bridgewater Twp.
08 - Franklin Twp.

09 - Green Brook Twp.
11 - Manville Boro
13 - Montgomery Twp.
15 - Peapack-Gladstone Boro
17 - Rocky Hill Boro
19 - South Bound Brook Boro
21 - Watchung Boro

10 - Hillsborough Twp.
12 - Millstone Boro
14 - North Plainfield Bor
16 - Raritan Boro
18 - Somerville Boro
20 - Warren Twp.

SUSSEX COUNTY (37)

01 - Andover Boro
03 - Branchville Boro
05 - Frankford Twp.
07 - Fredon Twp.
09 - Hamburg Boro
11 - Hardyston Twp.
13 - Lafayette Twp.
15 - Newton Town
17 - Sandyston Twp.
19 - Stanhope Boro
21 - Sussex Boro
23 - Walpack Twp.

02 - Andover Twp.
04 - Byram Twp.
06 - Franklin Boro
08 - Green Twp.
10 - Hampton Twp.
12 - Hopatcong Boro
14 - Montague Twp.
16 - Ogdensburg Boro
18 - Sparta Twp.
20 - Stillwater Twp.
22 - Vernon Twp.
24 - Wantage Twp.

UNION COUNTY (39)

01 - Berkeley Heights Twp.
03 - Cranford Twp.
05 - Fanwood Boro
07 - Hillside Twp.
09 - Linden City
11 - New Providence Boro
13 - Rahway City
15 - Roselle Park Boro
17 - Springfield Twp.
19 - Union Twp.
21 - Winfield Twp.

02 - Clark Twp.
04 - Elizabeth City
06 - Garwood Boro
08 - Kenilworth Boro
10 - Mountainside Boro
12 - Plainfield City
14 - Roselle Boro
16 - Scotch Plains Twp.
18 - Summit City
20 - Westfield Town

WARREN COUNTY (41)

01 - Allamuchy Twp.
03 - Belvidere Town
05 - Franklin Twp.
07 - Greenwich Twp.
09 - Hardwick Twp.
11 - Hope Twp.
13 - Knowlton Twp.
15 - Lopatcong Twp.
17 - Oxford Twp.
19 - Phillipsburg Town
21 - Washington Boro
23 - White Twp.

02 - Alpha Boro
04 - Blairstown Twp.
06 - Frelinghuysen Twp.
08 - Hackettstown Town
10 - Harmony Twp.
12 - Independence Twp.
14 - Liberty Twp.
16 - Mansfield Twp.
18 - Pahaquarry Twp.
20 - Pohatcong Twp.
22 - Washington Twp.

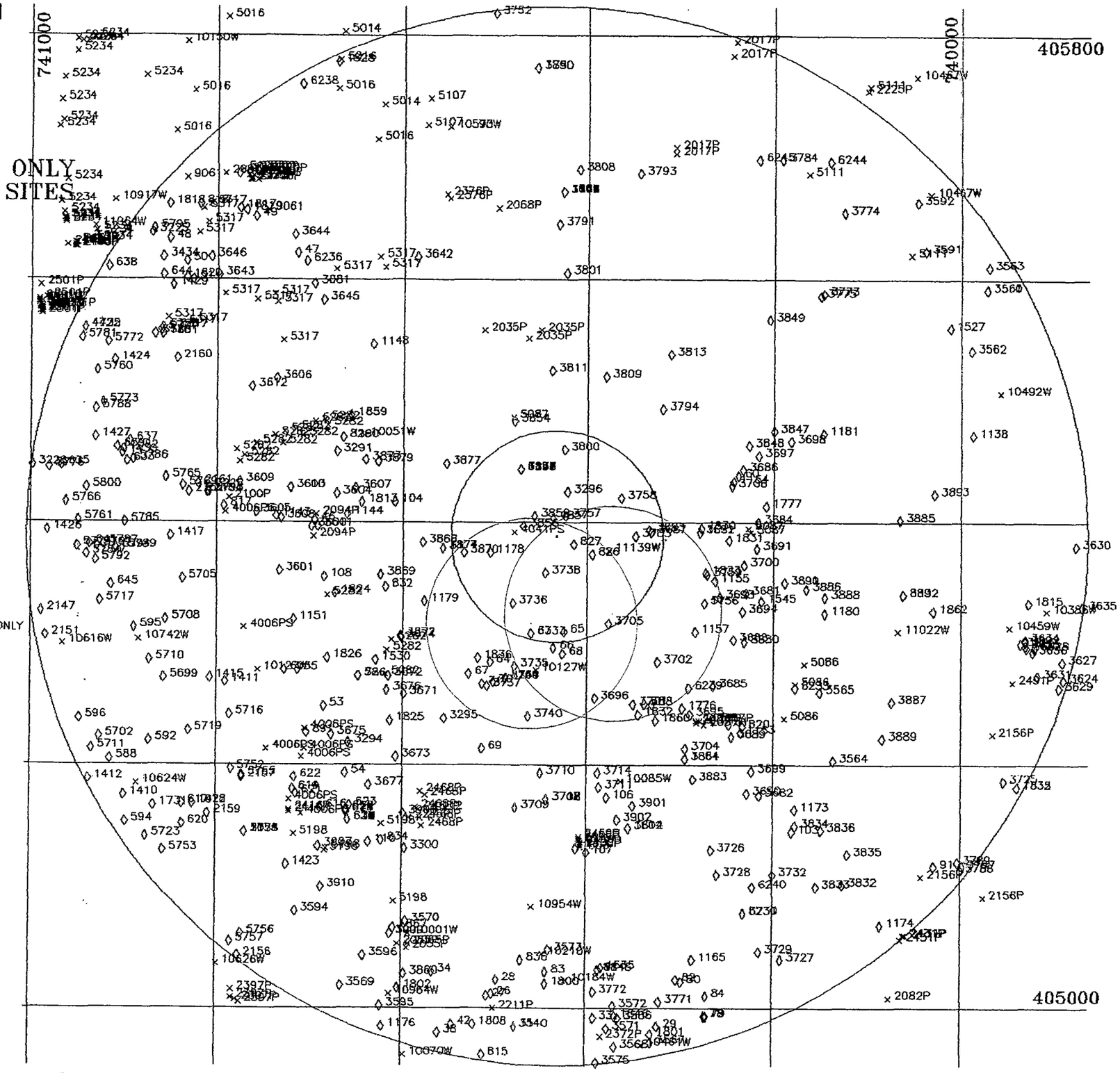
SUBJECT TO REVISION

100,000 GPD WATER WITHDRAWAL POINTS ONLY AND CONTAMINATED SITES WITHIN 5.0 MILES OF:

LATITUDE 405353
LONGITUDE 740420

DRAFT

SCALE: 1:63,360
(1 Inch = 1 Mile)



× 100,000 GPD WATER WITHDRAWAL POINTS ONLY
◊ CONTAMINATED SITES
1 MILE AND 5 MILE RADII INDICATED

CONTAMINATED SITE LIST
AS OF 03/21/95

PLOT PRODUCED BY:

NJDEP
WATER SUPPLY ELEMENT
BUREAU OF WATER ALLOCATION
CN-426
TRENTON, NJ 08625

DATE: 05/11/02

SUBJECT TO REVISION

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 405353 LAT. 740420 LON. (IN ORDER BY PERMIT NUMBER) - 05/11/02

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GED1	GED2	CAPACITY
10001W	SUN CHEMICAL CORP.	4640765	WELL #1	405037	740555	M	4.0	03	05	150	GTRB		150
	SUN CHEMICAL CORP.	4640764	WELL #2	405037	740555	M	4.0	03	05	280	GTRB		200
10051W	GRANT CHEMICAL COMPANY	2604140	#1	405443	740625	T	2.1	03	11	300			300
10070W	HELEN PROPERTIES INC.	2602962	#1	404937	740558	T	5.1	03	12	300	GTRB		225
10085W	TAKASAGO INT. USA/FLAVOR DIV.	2603466	#1	405152	740338	T	2.4	03	62	445	GTRB		210
10127W	GIBRALTAR PLASTICS CORPORATION	2602901	WELL 3	405247	740433	M	1.3	03	31	400	GTRBP		110
	GIBRALTAR PLASTICS CORPORATION	UNK-PRE 1947	WELL 1	405247	740733	U	3.1	03	31	300	GTRBP		125
10150W	FAIR LAWN MEMORIAL CEMETERY	2305707	#1	405757	740620	T	5.8	03	17	300	GTRB		150
10184W	WORLD PLASTIC EXTRUDERS INC.	2603991	#1	405014	740413	T	4.2	03	37	200	GTRB		100
10210W	THUMANN INC.	2604987	#1	405027	740428	T	3.9	03	05	300	GTRB		250
10386W	GOODREN PRODUCTS CORP.	2600791	WELL 1	405316	735904	T	4.7	03	15	354	GTRB		100
10459W	ALF REALTY ASSOC C/O BELLOCK	2602742	WELL 2	405308	735928	T	4.3	03	60	145			100
10461W	CARLTON-COOKE PLATING CORP.	2602470	WELL 1	404942	740324		4.9	03	05	439	GTRB		70
10467W	WHITE BEECHES G. & C. CLUB	2304280	WELL 1	405740	740029	T	5.5	03	26	171	GRTB		250
	WHITE BEECHES G. & C. CLUB	2304307	WELL 2	405642	740020	T	4.8	03	26	403	GRTB		200
10492W	KNICKERBOCKER COUNTRY CLUB	2603422	WELL 1	405504	735934	T	4.4	03	61	363	GTRB		224
10573W	BERGEN CO. COMMUNITY COLLEGE	4300101		405715	740530	F	4.0	03	46	200	GTRB		180
10590W	BERGEN CO. DIV. OF PARKS	4300100	WELL 1	405715	740530	F	4.0	03	46	210	GTRB		275
10616W	INTERNATIONAL VEILING CORP.	2600902	WELL	405300	740939	T	4.8	31	02	307			120
10624W	SWEPCO TUBE CORP.	2605011	1	405151	740851	S	4.6	31	02	300			200
10626W	FALSTROM COMPANY, INC.	2601494	1	405022	740759	T	5.1	31	07	300	GTRB		145
10742W	ALFRED HELLER HEAT TREATING CO	UNKNOWN	002	405302	740850	T	4.1	31	02		GTRB		150
	ALFRED HELLER HEAT TREATING CO	2604290	001	405302	740850	T	4.1	31	02	300	GTRB		200
10917W	STEAM LEASING ASSOCIATES	2313895	PW-2	405639	740906	T	5.2	03	17	310	GTRBP		200
10954W	DIAMOND CHEMICAL CO. INC.	2604914	WELL 1	405050	740435		3.5	03	56	305	GTRBP		70
10964W	US INK/SUN CHEMICAL	2602984	WELL 1	405007	740607	T	4.6	03	12	300	GTRBP		120
11022W	HOLY NAME HOSPITAL	2650507	DW-1	405306	740040	T	3.3	03	60	61	GTRB		60
	HOLY NAME HOSPITAL	2650508	DW-2	405306	740040	T	3.3	03	60	61	GTRB		60
	HOLY NAME HOSPITAL	2651082	BW-1	405306	740040	T	3.3	03	60	80	GTRB		60
	HOLY NAME HOSPITAL	2650896	BW-2	405306	740040	T	3.3	03	60	81	GTRB		60
11064W	RENCO FINISHING COMPANY	2306893	PW-1	405626	740919	T	5.3	03	17	400	GTRBP		200
11139W	MALT PRODUCTS CORPORATION	2605847	WELL 1	405346	740346	T	0.5	03	34	315	GTRBP		80
2017P	HACKENSACK GOLF CLUB	2302297	1	405757	740225	S	5.0	03	44	532	GTRB		150
	HACKENSACK GOLF CLUB	2305058	2	405702	740304	S	3.8	03	44	320	GTRB		60
	HACKENSACK GOLF CLUB	LOWER LAKE	1	405705	740304	F	3.8	03	44		GTRB		300
	HACKENSACK GOLF CLUB	UPPER LAKE	2	405750	740227	F	4.8	03	44		GTRB		300
2035P	ARCOLA COUNTRY CLUB	4600126	3	405535	740507	S	2.1	03	46	200	GTRBP		160
	ARCOLA COUNTRY CLUB	2603872	4	405531	740438	S	1.9	03	46	208	GTRBP		125
	ARCOLA COUNTRY CLUB	POND	2	405535	740430	U	2.0	03	46	15	GTRBP		200
2047P	KRAFTS FOODS NORTH AMERICA,INC	2301907	1	405652	740755	T	4.6	03	17	301	GTRB		370
2055P	NOVUS FINE CHEMICALS, LLC	4600080	2	405032	740555	F	4.1	03	05	250	GTRBP		75
	NOVUS FINE CHEMICALS, LLC	2600005	4	405032	740602	F	4.1	03	05	526	GTRB		135
	NOVUS FINE CHEMICALS, LLC	2604277	5	405030	740556	F	4.1	03	05	430	GTRB		55
2057P	SPINNERIN YARN CO., INC.	4600177	0	405221	740250	U	2.2	03	59	404	GTRB		65
	SPINNERIN YARN CO., INC.	4600174	1	405222	740248	U	2.2	03	59	230	GTRB		120
	SPINNERIN YARN CO., INC.	4600083	2	405222	740240	U	2.3	03	59	435	GTRB		200
	SPINNERIN YARN CO., INC.	2603018	3	405222	740250	U	2.2	03	59	400	GTRB		50
	SPINNERIN YARN CO., INC.	4600176	4	405220	740245	U	2.3	03	59	400	GTRB		140
	SPINNERIN YARN CO., INC.	2611599	5	405222	740248	U	2.2	03	59	455	GTRB		
2068P	RIDGEWOOD COUNTRY CLUB	4300032	1 (CH)	405635	740458	T	3.1	03	46	306	GTRB		120
	RIDGEWOOD COUNTRY CLUB	4300033	2(EAST)	405635	740458	T	3.1	03	46	275	GTRB		275
	RIDGEWOOD COUNTRY CLUB	2303832	3(WEST)	405635	740458	T	3.1	03	46	500	GTRB		250
	RIDGEWOOD COUNTRY CLUB	POND	POND	405635	740458	T	3.1	03	46	8	GTRB		1300
2082P	SIMKINS INDUSTRIES/LOWE PAPER	4600095	2	405005	740045	F	5.4	03	49	484	GTRDB		50
	SIMKINS INDUSTRIES/LOWE PAPER	4600096	3	405005	740045	F	5.4	03	49	482	GTRDB		75

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GED1	GED2	CAPACITY
	SIMKINS INDUSTRIES/LOWE PAPER	4600097	4	405005	740045	F	5.4	03	49	597	GTRDB		100
	SIMKINS INDUSTRIES/LOWE PAPER	4600098	5	405005	740045	F	5.4	03	49	500	GTRDB		80
	SIMKINS INDUSTRIES/LOWE PAPER	4600099	6	405005	740045	F	5.4	03	49	600	GTRDB		50
2094P	D.A.K. MANUFACTURING CORP.	2600466	1	405404	740655	F	2.3	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	4600210	2	405404	740655	U	2.3	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	4600211	3	405404	740655	U	2.3	03	11		GTRB		
	D.A.K. MANUFACTURING CORP.	2605037	4	405353	740657	F	2.3	03	11	250	GTRB		60
2100P	MARCAL PAPER MILLS, INC.	4600008	1	405412	740752	F	3.1	03	11	308	GTRB		150
	MARCAL PAPER MILLS, INC.	4600009	2	405412	740752	F	3.1	03	11	330	GTRB		280
	MARCAL PAPER MILLS, INC.	4600010	3	405412	740752	F	3.1	03	11	325	GTRB		250
	MARCAL PAPER MILLS, INC.	4600011	4	405412	740752	F	3.1	03	11	282	GTRB		80
	MARCAL PAPER MILLS, INC.	4600012	5	405412	740752	F	3.1	03	11		GTRB		125
	MARCAL PAPER MILLS, INC.	4600013	6	405412	740752	F	3.1	03	11		GTRB		300
2156P	BERGEN COUNTY DEPT. OF PARKS	POND	1	405055	735945	F	5.3	03	60	13	GOSD		750
	BERGEN COUNTY DEPT. OF PARKS	2604559	WELL 1	405215	735939	F	4.5	03	29	430	GTRB		250
	BERGEN COUNTY DEPT. OF PARKS	2604300	WELL 2	405105	740025	F	4.7	03	45	485	GTRB		125
2211P	HENKEL PROCESS CHEM	4600125	1CANCELLED	405000	740500		4.5	03	05	170	GOSD		600
2225P	UNITED WATER NEW JERSEY INC.	2307621	HAWORTH 1	405733	740100	F	5.1	03	26	350	GTRB		100
	UNITED WATER NEW JERSEY INC.	2307664	HAWORTH 2	405733	740100	F	5.1	03	26	350	GTRB		100
2246P	PARMALAT NORTHEAST	2604169	1	405134	740555	U	3.0	03	65	650	GTRB		200
	PARMALAT NORTHEAST	2304250	2	405134	740555	U	3.0	03	65	300	GTRB		185
2370P	FISHER SCIENTIFIC CHEMICAL DIV	2605038	PW2	405653	740730	U	4.4	03	17	335	GTRB		60
	FISHER SCIENTIFIC CHEMICAL DIV	TRENCH	IT-1	405651	740733	U	4.4	03	17	25	GRS		30
	FISHER SCIENTIFIC CHEMICAL DIV	2308701	PW-4	405649	740738	U	4.4	03	17	400	GTRB		60
	FISHER SCIENTIFIC CHEMICAL DIV	2308700	PW-5	405653	740742	U	4.5	03	17	350	GTRB		60
	FISHER SCIENTIFIC CHEMICAL DIV	TRENCH	IT-2	405649	740734	U	4.4	03	17	25	GRS		30
	FISHER SCIENTIFIC CHEMICAL DIV	2314311	TPW-1R	405654	740737	U	4.5	03	17	17	GRS		2
	FISHER SCIENTIFIC CHEMICAL DIV	2314020	TPW-2	405654	740735	U	4.5	03	17	12	GRS		3
	FISHER SCIENTIFIC CHEMICAL DIV	2314021	TPW-3	405653	740737	U	4.5	03	17	12	GRS		1
	FISHER SCIENTIFIC CHEMICAL DIV	2314023	TPW-4	405651	740737	U	4.5	03	17	12	GRS		2
	FISHER SCIENTIFIC CHEMICAL DIV	2314018	TPW-5	405651	740740	U	4.5	03	17	12	GRS		2
	FISHER SCIENTIFIC CHEMICAL DIV	2314019	TPW-6	405650	740738	U	4.4	03	17	12	GRS		1
	FISHER SCIENTIFIC CHEMICAL DIV	2314017	TPW-7	405649	740739	U	4.4	03	17	12	GRS		2
2372P	AUSTIN NICHOLS & CO. INC.	2602067	1	404946	740350		4.7	03	05	303	GTRB		90
	AUSTIN NICHOLS & CO. INC.	2602933	2	404946	740350		4.7	03	05	393	GTRB		50
	AUSTIN NICHOLS & CO. INC.	2603053	3	404946	740350		4.7	03	05	378	GTRB		55
2376P	PARAMUS GOLF AND COUNTRY CLUB	4300096	2	405640	740530	F	3.4	03	46	200	GTRB		200
	PARAMUS GOLF AND COUNTRY CLUB	STORAGE POND		405640	740530	F	3.4	03	46	10	GOSD		1200
	PARAMUS GOLF AND COUNTRY CLUB	4300095	1	405642	740532	F	3.4	03	46	150	GTRB		30
2397P	SANDY ALEXANDER INC	2607737	1	405005	740749	S	5.3	31	02	400	GTRB		150
	SANDY ALEXANDER INC	2608396	4	405009	740749	S	5.3	31	02	400	GTRB		50
	SANDY ALEXANDER INC	2608398	2	405003	740744	S	5.3	31	02	400	GTRB		0
	SANDY ALEXANDER INC	2608397	3	405004	740746	S	5.3	31	02	400	GTRB		0
2416P	DYE-TEX CORP.	4600217	WELL NO 1	405137	740712	F	3.6	31	07	220	GTRB		250
	DYE-TEX CORP.	4600218	WELL NO 2	405138	740712	F	3.6	31	07	300	GTRB		350
2431P	PFISTER CHEMICAL, INC.	2600007	PW-2	405036	740035	U	5.0	3	49	358	GTRB		100
	PFISTER CHEMICAL, INC.	2600011	PW-3	405036	740036	U	5.0	3	49	327	GTRB		100
	PFISTER CHEMICAL, INC.	OVERPECK CREEK		405034	740038	U	5.0	3	49		SK		700
2459P	ALLIED SIGNAL, INC.	2635951	GWE 8	405121	740404	F	2.9	03	62	29	GOGU		
	ALLIED SIGNAL, INC.	2635952	GWE 9	405123	740405	F	2.9	03	62	265	GOGU		
	ALLIED SIGNAL, INC.	2635953	GWE 10	405124	740405	F	2.9	03	62	28	GOGU		
	ALLIED SIGNAL, INC.	2635954	GWE 11	405125	740405	F	2.8	03	62	26	GOGU		
	ALLIED SIGNAL, INC.	2635955	GWE 12	405120	740404	F	2.9	03	62	28.5	GOGU		
	ALLIED SIGNAL, INC.	2635956	GWE 13	405121	740404	F	2.9	03	62	28	GOGU		
	ALLIED SIGNAL, INC.	2635957	GWE 14	405123	740405	F	2.9	03	62	29	GOGU		
	ALLIED SIGNAL, INC.	2634958	GWE 15	405124	740405	F	2.9	03	62	28	GOGU		

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	ALLIED SIGNAL, INC.	2635959	GWE 16	405120	740404	F	2.9	03	62	28	GQBU		
	ALLIED SIGNAL, INC.	2535960	GWE 17	405122	740404	F	2.9	03	62	28	GQBU		
	ALLIED SIGNAL, INC.	2635961	GWE 18	405121	740404	F	2.9	03	62	27.5	GQBU		
	ALLIED SIGNAL, INC.	PROPOSED	GWE1-GWE7	405121	740404		2.9	03	62	25	GQBU		
2463P	UNITED TECHNOLOGIES CORP.	2313294	X02-84	405618	740932	U	5.3	31	04	43.5	GQBU		10
	UNITED TECHNOLOGIES CORP.	2313289	XR1-92	405617	740937	U	5.4	31	04	92	GTRB		5
	UNITED TECHNOLOGIES CORP.	2313293	XR4-84	405616	740932	U	5.3	31	04	49.6	GTRB		70
	UNITED TECHNOLOGIES CORP.	2313276	X04-84	405616	740931	U	5.3	31	04	38.5	GQBU		15
	UNITED TECHNOLOGIES CORP.	2313290	XR2-92	405616	740931	U	5.3	31	04	72.6	GTRB		10
	UNITED TECHNOLOGIES CORP.	2313294	X02-92	405617	740932	U	5.3	31	04	35.0	GQBU		60
	UNITED TECHNOLOGIES CORP.	2313291	XR3-92	405618	740932	U	5.3	31	04	87.7	GTRB		10
	UNITED TECHNOLOGIES CORP.	2313292	XR7-93	405618	740931	U	5.3	31	04	74	GTRB		50
2468P	CURTISS-WRIGHT CORPORATION	2635338	PW-1	405145	740545	S	2.7	03	68	200	GTRB		30
	CURTISS-WRIGHT CORPORATION	2635339	PW-2	405147	740548	S	2.7	03	68	180	GTRB		100
	CURTISS-WRIGHT CORPORATION	2635342	PW-3	405138	740549	S	2.9	03	68	240	GTRB		25
	CURTISS-WRIGHT CORPORATION	2635341	PW-4	405134	740548	S	3.0	03	68	300	GTRB		20
	CURTISS-WRIGHT CORPORATION	2635340	PW-5	405130	740547	S	3.0	03	68	200	GTRB		80
	CURTISS-WRIGHT CORPORATION	2642263	RW-8	405139	740551	S	2.9	03	68	102	GTRB		45
2491P	DECOR INC.	2600828	WELL 2	405241	735926	T	4.5	03	15	200	GTRBP		140
	DECOR INC.	WELL 1	INACTIVE	405241	735926	U	4.5	03	15	200	GTRB		120
2501P	PUBLIC SERVICE ELECTRIC & GAS	2656081	RW1-1	405543	740953	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656082	RW1-2	405549	740953	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2649218	RW1-3	405544	740953	U	5.3	31	08	85	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656083	RW1-4	405544	740954	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656084	RW1-5	405545	740953	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656085	RW1-6	405545	740953	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656086	RW1-7	405546	740953	U	5.3	31	08	60	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656075	RW2-2	405546	740954	U	5.3	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656076	RW2-3	405557	740954	U	5.4	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656077	RW2-4	405547	740954	U	5.3	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2605678	RW2-5	405547	740954	U	5.3	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656079	RW2-6	405548	740955	U	5.4	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2656080	RW2-7	405548	740955	U	5.4	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2647474	RW3-1	405548	740955	U	5.4	31	08	70	GTRBP		10
	PUBLIC SERVICE ELECTRIC & GAS	2647472	RW3-2	405549	740955	U	5.4	31	08	71	GTRBP		10
	PUBLIC SERVICE ELECTRIC & GAS	2656091	RW3-3	405549	740955	U	5.4	31	08	73	GTRBP		10
	PUBLIC SERVICE ELECTRIC & GAS	2656092	RW3-4	405550	740955	U	5.4	31	08	73	GTRBP		10
	PUBLIC SERVICE ELECTRIC & GAS	2649222	RW4-3	405551	740950	U	5.3	31	08	38	GTRBP		3
	PUBLIC SERVICE ELECTRIC & GAS	3649220	RW4-4	405551	740950	U	5.3	31	08	35	GTRBP		3
	PUBLIC SERVICE ELECTRIC & GAS	2657628	RW4-1 R	405546	740946	U	5.2	31	08	33			3
	PUBLIC SERVICE ELECTRIC & GAS	2657491	RW2-1R	405546	740946	U	5.2	31	08	65	GTRBP		4
	PUBLIC SERVICE ELECTRIC & GAS	2657630	RW4-5R	405546	740946	U	5.2	31	08	33	GTRBP		3
4006PS	DUNDEE WATER POWER & LAND CO.	DUNDEE LK/G.S.	G.S. PAPER	405308	740742	T	3.1	03	21		SPPAS		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	WHIPPANY	405208	740727	T	3.4	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	CHELTON CO	405208	740702	T	3.1	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	OKONITE CO	405143	740712	T	3.5	31	07		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE LK/MARC	MARCAL CO.	405405	740754	T	3.1	03	11		SPPAS		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	PASSAIC IN	405218	740702	T	3.0	31	02		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	TUCK IND.	405136	740704	T	3.5	31	07		SP		
	DUNDEE WATER POWER & LAND CO.	DUNDEE CAN	PANTASOTE	405204	740704	T	3.2	31	02		SP		
4041PS	STEPAN CHEMICAL COMPANY	SADDLE RIVER		405335	740447		0.4	03	54		SPSAD		2000
5014	RIDGEWOOD VILLAGE WATER SUPPLY	4300013	GROVE ST.	405802	740638	G	5.2	03	51	298	GTRB		200
	RIDGEWOOD VILLAGE WATER SUPPLY	2304170	STEVENS	405726	740613	G	4.4	03	51	300	GTRB		225
5016	RIDGEWOOD VILLAGE	2301443	MAIN	405713	740827	G	5.3	03	22	300	GTRB		350
	RIDGEWOOD VILLAGE	2301770	PROSPECT	405748	740641	G	4.9	03	22	300	GTRB		400
	RIDGEWOOD VILLAGE	2302227	AKERMAN	405734	740642	G	4.7	03	22	303.	GTRB		250

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	RIDGEWOOD VILLAGE	2301835	GLEN ROCK	405809	740753	G	5.8	03	22	300	GTRB		150
	RIDGEWOOD VILLAGE	2304171	LEIGH	405709	740617	G	4.1	03	22	300	GTRB		125
	RIDGEWOOD VILLAGE	2304172	BROOK	405733	740815		5.4	03	22	300	GTRB		125
5086	UNITED WATER NEW JERSEY	4600065	2	405223	740153	G	2.7	03	04	550	GTRB		180
	UNITED WATER NEW JERSEY	4600066	3	405250	740140	G	2.6	03	04	350	GTRB		175
	UNITED WATER NEW JERSEY	4600067	4	405240	740146	G	2.6	03	04	235	GTRB		
5087	UNITED WATER NEW JERSEY	2600914	1	405357	740216		1.8	03	23	168	GQBD		1550
	UNITED WATER NEW JERSEY	2601034	2	405356	740215		1.8	03	23	190	GQBD		1400
	UNITED WATER NEW JERSEY	2603017	ROCHELLE P	405452	740448	G	1.2	03	54	473	GTRB		200
5107	UNITED WATER NEW JERSEY	2304260	PARAMUS 1	405716	740545		4.1	03	46	28	GQBD		200
	UNITED WATER NEW JERSEY	2305502	PARAMUS 2	405716	740545		4.1	03	46	388	GTRB		150
	UNITED WATER NEW JERSEY	2305450	DUNDERHOOK	405454	740744		4.6	03	46	353	GTRB		200
	UNITED WATER NEW JERSEY	SADDLE RIVER		405729	740543		4.3	03	46		SPSAD		
5111	UNITED WATER NEW JERSEY	2304815	24RW (HAWT	405612	740032	T	4.3	03	26	403	GTREP		160
	UNITED WATER NEW JERSEY	HACKENSACK RIV		405735	740059	T	5.2	03	38		SKHAC		
	UNITED WATER NEW JERSEY	HIRSCHFIELD BR		405652	740138	T	4.2	03	38		SKHAC		
5198	WALLINGTON WATER DEPARTMENT	2603933	DUL	405053	740605	G	3.8	03	65	400	GTRB		140
	WALLINGTON WATER DEPARTMENT	2603934	MAIN AVE	405131	740613	G	3.2	03	65	400	GTRB		150
	WALLINGTON WATER DEPARTMENT	2603027	LESTER ST	405126	740709	G	3.7	03	65	400	GTRB		130
	WALLINGTON WATER DEPARTMENT	4600075	8	405119	740648	G	3.7	03	65	503	GTRB		80
	WALLINGTON WATER DEPARTMENT	4600074	5	405118	740649	G	3.7	03	65	506	GTRB		150
5234	HAWTHORNE BOROUGH	4300056	1	405757	740928	G	6.5	31	04	293	GTRB		175
	HAWTHORNE BOROUGH	4300057	3	405752	740931	G	6.4	31	04	300	GTRB		150
	HAWTHORNE BOROUGH	4300058	4	405758	740931	G	6.5	31	04	315	GTRB		250
	HAWTHORNE BOROUGH	4300059	5	405757	740924	G	6.4	31	04	300	GTRB		180
	HAWTHORNE BOROUGH	4300060	6	405759	740920	G	6.4	31	04	485	GTRB		250
	HAWTHORNE BOROUGH	4300061	3	405628	740938	G	5.5	31	04	300	GTRB		100
	HAWTHORNE BOROUGH	4300062	4	405629	740938	G	5.5	31	04	300	GTRB		75
	HAWTHORNE BOROUGH	4300063	5	405630	740938	G	5.5	31	04	285	GTRB		210
	HAWTHORNE BOROUGH	4300064	6	405630	740938	G	5.5	31	04	388	GTRB		150
	HAWTHORNE BOROUGH	4300065	7	405630	740939	G	5.5	31	04	369	GTRB		140
	HAWTHORNE BOROUGH	4300066	8	405633	740939	G	5.6	31	04	416	GTRB		210
	HAWTHORNE BOROUGH	4300067	10	405624	740918	G	5.2	31	04	300	GTRB		200
	HAWTHORNE BOROUGH	4300068	11	405622	740917	G	5.2	31	04	300	GTRB		400
	HAWTHORNE BOROUGH	4300069	12	405619	740918	G	5.2	31	04	300	GTRB		400
	HAWTHORNE BOROUGH	2303100	UTTER AVE	405740	740846	G	5.8	31	04	300	GTRB		175
	HAWTHORNE BOROUGH	2303099	GRAND AVE	405718	740940	G	6.1	31	04	300	GTRB		125
	HAWTHORNE BOROUGH	2303101	BAMFORD AV	405715	740942	F	6.1	31	04	300	GTRB		300
	HAWTHORNE BOROUGH	2304139	CEDAR AVE	405649	740937	G	5.7	31	04	400	GTRB		300
	HAWTHORNE BOROUGH	2304691	FIRST ST.	405739	740939	G	6.4	31	04	400	GTRB		200
	HAWTHORNE BOROUGH	2305139	MAITLAND	405638	740941	G	5.6	31	04	400	GTRB		200
	HAWTHORNE BOROUGH	4300086	REA AVE.	405728	740941	G	6.2	31	04	400	GTRB		200
5282	GARFIELD WATER DEPARTMENT	4600113	1	405439	740717	G	2.7	03	11	404	GTRB		100
	GARFIELD WATER DEPARTMENT	4600114	2	405445	740716	G	2.8	03	11	358	GTRB		125
	GARFIELD WATER DEPARTMENT	4600118	10	405451	740650	G	2.5	03	11	350	GTRB		150
	GARFIELD WATER DEPARTMENT	4600119	11	405448	740648	G	2.4	03	11	353	GTRB		190
	GARFIELD WATER DEPARTMENT	4600120	12	405443	740722	G	2.8	03	11	350	GTRB		140
	GARFIELD WATER DEPARTMENT	4600121	14	405439	740734	G	3.0	03	11	485	GTRB		140
	GARFIELD WATER DEPARTMENT	4600122	16	405436	740747	G	3.1	03	11	400	GTRB		60
	GARFIELD WATER DEPARTMENT	4600123	17	405433	740742	G	3.0	03	11	353	GTRB		110
	GARFIELD WATER DEPARTMENT	4600124	1	405430	740745	T	3.1	03	11	300	GTRB		150
	GARFIELD WATER DEPARTMENT	2604016	1A	405302	740607	G	1.8	03	21	400	GTRB		300
	GARFIELD WATER DEPARTMENT	2604063	2	405257	740610	G	1.9	03	21	475	GTRB		150
	GARFIELD WATER DEPARTMENT	2604103	6	405245	740611	G	2.1	03	21	300	GTRB		150
	GARFIELD WATER DEPARTMENT	2604064	8C	405324	740648	G	2.2	03	21	405	GTRB		400
	GARFIELD WATER DEPARTMENT	4600115	4	405446	740709	G	2.7	03	11	353	GTRB		80

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	GARFIELD WATER DEPARTMENT	4600116	5	405443	740704	G	2.6	03	11	353	GTRB		275
	GARFIELD WATER DEPARTMENT	4600117	8	405450	740656	G	2.5	03	11	354	GTRB		165
5317	FAIR LAWN BOROUGH	4600147	2	405553	740723	G	3.5	03	17	300	GTRBP		80
	FAIR LAWN BOROUGH	4600151	7	405550	740734	G	3.6	03	17	458	GTRBP		200
	FAIR LAWN BOROUGH	4600152	8	405530	740717	G	3.2	03	17	430	GTRBP		200
	FAIR LAWN BOROUGH	4600153	9	405553	740755	G	3.9	03	17	404	GTRBP		115
	FAIR LAWN BOROUGH	2600465	16	405536	740829	G	4.1	03	17	413	GTRBP		250
	FAIR LAWN BOROUGH	2601032	17	405541	740832	G	4.2	03	17	350	GTRBP		200
	FAIR LAWN BOROUGH	2601197	19	405538	740823	G	4.1	03	17	400	GTRBP		400
	FAIR LAWN BOROUGH	2300380	14	405623	740812	F	4.4	03	17	400	GTRBP		100
	FAIR LAWN BOROUGH	2600393	15	405539	740816	G	4.0	03	17	402	GTRBP		200
	FAIR LAWN BOROUGH	2300249	10	405637	740804	G	4.5	03	17	300	GTRBP		75
	FAIR LAWN BOROUGH	2300250	11	405635	740809	G	4.6	03	17	400	GTRBP		75
	FAIR LAWN BOROUGH	2307538	25	405606	740612	G	3.0	03	17	370	GTRBP		200
	FAIR LAWN BOROUGH	2307539	26	405611	740615	G	3.1	03	17	400	GTRBP		100
	FAIR LAWN BOROUGH	2307541	28	405605	740643	G	3.3	03	17	355	GTRBP		250
	FAIR LAWN BOROUGH	4600219	5	405549	740721	G	3.4	03	17	300	GTRBP		150
	FAIR LAWN BOROUGH	2300251	12	405628	740806	G	4.4	03	17	400	GTRBP		70

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SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
26	ARSYNCO INCORPORATED	FOOT OF 13TH ST	CARLSTADT BOROUGH	BERGEN	NJD044688935	E93024	405007	740501	4.4	BEECRA
27	COSAN CHEMICAL CORPORATION	400 14TH ST	CARLSTADT BOROUGH	BERGEN	NJD064332273	E84419	405006	740504	4.4	BEECRA
28	DIAMOND SHAMROCK CORPORATION	BERRY AVE	CARLSTADT BOROUGH	BERGEN	NJD002012219	E88949	405014	74045B	4.2	BEECRA
29	FRED HEINZELMAN & SONS INCORPORATED	790 WASHINGTON AVE	CARLSTADT BOROUGH	BERGEN	NJD002013043	9406155	404951	740314	4.7	BEECRA
33	PUR ALL PAINT PRODUCTS COMPANY INC	700 GOTHAM PWY	CARLSTADT BOROUGH	BERGEN	NJD001221355	E87333	404955	740355	4.6	BEECRA
34	SEDIVER INCORPORATED	320 13TH ST	CARLSTADT BOROUGH	BERGEN	NJD046353185	9406144	405018	740540	4.3	BEECRA
35	STERLING REGAL INCORPORATED	75 BROAD ST	CARLSTADT BOROUGH	BERGEN	NJD986569523	E88C47	404951	740446	4.6	BEECRA
38	BECTON DICKINSON & COMPANY	STANLEY ST	EAST RUTHERFORD BOROUGH	BERGEN	NJD000304782	E87577	404948	740536	4.8	BEECRA
42	MONSEY PRODUCTS COMPANY	425 CENTRAL AVE	EAST RUTHERFORD BOROUGH	BERGEN	NJD087077517	E86549	[illegible]	[illegible]	4.7	BEECRA
46	POWER CONVERSION INCORPORATED	495 BOULEVARD	ELMWOOD PARK BOROUGH	BERGEN	NJD054060884	E86312	405401	740656	2.3	BEECRA
47	COLE ENGINEERING INCORPORATED	13-00 PLAZA RD	FAIR LAWN BOROUGH	BERGEN	NJD982727620	E87352	405613	740708	3.6	BEECRA
48	ENGINE REBUILDERS	18-02 RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJD001636943	E89395	405620	740831	4.6	BEECRA
49	FISHER SCIENTIFIC COMPANY	1 REAGENT LN	FAIR LAWN BOROUGH	BERGEN	NJD004362059	E85823	405631	740735	4.1	BEECRA
50	SANDOZ CHEMICAL CORPORATION	FAIR LAWN AVE & 3RD ST	FAIR LAWN BOROUGH	BERGEN	NJD001213453	E92455	405609	740820	4.4	BEECRA
51	WARREN BRONZE & ALUMINUM CORPORATION	13-28 2ND ST	FAIR LAWN BOROUGH	BERGEN	NJL000035931	E93267	405600	740816	4.2	BEECRA
52	CROWN LEISURE PRODUCTS INCORPORATED	141 LANZA AVE BLDG 16 & 20	GARFIELD CITY	BERGEN	NJL500009230	9402114	405244	740628	2.3	BEECRA
53	KALAMA CHEMICAL CORPORATION	290 RIVER DR	GARFIELD CITY	BERGEN	NJD002005148	E86B73	405229	740650	2.7	BEECRA
54	LITHO PREP SERVICES INCORPORATED	218 RIVER DR	GARFIELD CITY	BERGEN	NJL500019385	E91468	405156	740636	3.0	BEECRA
55	PRESTO LOCK INCORPORATED	100 OUTWATER LN	GARFIELD CITY	BERGEN	NJD056302128	E90108	405247	740707	2.7	BEECRA
56	ABEX CORPORATION	205 SOUTH NEWMAN ST	HACKENSACK CITY	BERGEN	NJX000296409	E87342	405230	740323	1.8	BEECRA
57	CORPORATE WOODWORKING INCORPORATED	204 RAILROAD AVE	HACKENSACK CITY	BERGEN	NJL500007786	E90383	405320	740245	1.5	BEECRA
58	FORD FASTENERS INCORPORATED	110 SOUTH NEWMAN ST	HACKENSACK CITY	BERGEN	NJD001819523	E88A84	405230	740318	1.8	BEECRA
59	HACKENSACK BOLT & NUT COMPANY INC	145 BONHOMME AVE	HACKENSACK CITY	BERGEN	NJD001397595	E87609	405222	740239	2.3	BEECRA
60	HALOCARBON PRODUCTS CORPORATION	82 BERLEWS CT	HACKENSACK CITY	BERGEN	NJD002027514	E89928	405423	740223	1.8	BEECRA
61	PSE&G HACKENSACK CITY	214 HUDSON ST	HACKENSACK CITY	BERGEN	NJD980533566	E91458	405220	740229	2.4	BEECRA
62	R A HAMILTON CORPORATION	9 BERGEN TPKE	LITTLE FERRY BOROUGH	BERGEN	NJD986602050	E94051	405047	740219	4.0	BEECRA
63	AIRCO GASES INCORPORATED	60 HANCOCK ST	LODI BOROUGH	BERGEN	NJD045661204	0220114	405305	740436	0.9	BEECRA
64	HEXCEL CORP INDUSTRIAL CHEMICALS GROUP	205 MAIN ST	LODI BOROUGH	BERGEN	NJD985584134	E86009	405251	740503	1.3	BEECRA
65	INMONT CORPORATION	200 GREGG ST	LODI BOROUGH	BERGEN	NJD001288711	E85564	405306	740415	0.9	BEECRA
66	KOHL & MADDEN PRINTING INK CORPORATION	130 GREGG ST	LODI BOROUGH	BERGEN	NJD046351340	E90717	405258	740422	1.1	BEECRA
67	MARK TEX CORPORATION	55 ARNOT ST	LODI BOROUGH	BERGEN	NJD000307603	E87647	405245	740517	1.5	BEECRA
68	META LANE FILL CONTAMINATION	40 META LN	LODI BOROUGH	BERGEN	NJD980772792	E88A19	405255	740416	1.1	BEECRA
69	NORAC COMPANY INCORPORATED	169 KENNEDY DR	LODI BOROUGH	BERGEN	NJD011404035	E92754	405208	740508	2.1	BEECRA
70	RENNIE MANUFACTURING &METAL FINISHING CO	10 TO 14 RENNIE PL	LODI BOROUGH	BERGEN	NJD986596914	E88262	405241	740501	1.5	BEECRA
71	RICH ART COLOR COMPANY	139 TO 161 MAIN ST	LODI BOROUGH	BERGEN	NJL500038070	E93027	405240	740508	1.6	BEECRA
78	A&S MANUFACTURING INCORPORATED	8 EMPIRE BLVD	MOONACHIE BOROUGH	BERGEN	NJD011289410	E88B14	404956	740244	4.7	BEECRA
79	ADMIRAL CFC INTERNATIONAL	8 EMPIRE BLVD	MOONACHIE BOROUGH	BERGEN	NJD001689645	E89650	404956	740243	4.7	BEECRA
80	CREST FOAM CORPORATION	100 CAROL PL	MOONACHIE BOROUGH	BERGEN	NJD000307199	E86A72	405013	740259	4.4	BEECRA
81	ESSELTE PENDAFLEX CORPORATION	10 CAESAR PL	MOONACHIE BOROUGH	BERGEN	NJD064329436	921264	405019	740352	4.1	BEECRA
82	MELNOR INDUSTRIES INCORPORATED	1 CAROL PL	MOONACHIE BOROUGH	BERGEN	NJD010951523	E92141	405014	740302	4.3	BEECRA
83	PHOTOGRAVURE & COLOR COMPANY	GRAND ST & BARRETT AVE	MOONACHIE BOROUGH	BERGEN	NJD059620435	E92583	405018	740426	4.1	BEECRA
84	SAFER TEXTILES PROCESSING	7 CAPITOL DR	MOONACHIE BOROUGH	BERGEN	NJL500028501	E86419	405006	740243	4.6	BEECRA
91	OLIN HUNT SPECIALTY PRODUCTS	201 ROOSEVELT ST	PALISADES PARK BOROUGH	BERGEN	NJD001318294	E89171	405110	740017	4.7	BEECRA
103	ALFORD INDUSTRIES INCORPORATED	INDUSTRIAL AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJD054055256	E89937	405127	740148	3.6	BEECRA
104	FEIN INCORPORATED	74 & 106 KENNY PL	SADDLE BROOK TOWNSHIP	BERGEN	NJD041443649	E92364	405410	740605	1.6	BEECRA
106	BENDIX CORPORATION	RTE 46	TETERBORO BOROUGH	BERGEN	NJD078714433	E86914	405144	740347	2.5	BEECRA
107	SUMITOMO MACHINERY CORP OF AMERICA	7 MALCOLM AVE	TETERBORO BOROUGH	BERGEN	NJD002994507	E88737	405117	740400	3.0	BEECRA
108	WELLA CORPORATION	125 NORTH ST	TETERBORO BOROUGH	BERGEN	NJD982539027	E88879	405333	740650	2.2	BEECRA
109	HEMPELS COATINGS USA INCORPORATED	CURIE AVE & LUCIA PL	WALLINGTON BOROUGH	BERGEN	NJD001283944	0044976	405037	740607	4.1	BEECRA
110	NORTH JERSEY PAINT COMPANY	32 ORCHARD ST	WALLINGTON BOROUGH	BERGEN	NJL500045216	E94570	405122	740621	3.4	BEECRA
112	CURTISS WRIGHT CORPORATION	1 PASSAIC AVE	WOOD-RIDGE BOROUGH	BERGEN	NJD002013522	E84205	405138	740538	2.8	BEECRA
588	CONTINENTAL CHEMICAL COMPANY	270 CLIFTON BLVD	CLIFTON CITY	PASSAIC	NJD002152254	E84064	405203	740908	4.7	BEECRA
592	FRITZSCHE DODGE & OLCOTT INCORPORATED	85 3RD ST	CLIFTON CITY	PASSAIC	NJD002155067	E90B46	405212	740843	4.3	BEECRA
594	HOWE RICHARDSON SCALE COMPANY	680 VAN HOUTEN AVE	CLIFTON CITY	PASSAIC	NJD002192623	E90280	405132	740858	4.9	BEECRA
595	KEYSTONE CAMERA CORPORATION	450 TO 474 GETTY AVE	CLIFTON CITY	PASSAIC	NJD091858928	E85761	405308	740853	4.1	BEECRA

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
596	NATIONAL STANDARD COMPANY	714 TO 716 CLIFTON AVE	CLIFTON CITY	PASSAIC	NJD000550137	E87528	405223	740928	4.8	BEECRA
603	UNIVERSAL METAL CHAIN INCORPORATED	2 ACKERMAN AVE	CLIFTON CITY	PASSAIC	NJD982188641	E86715	405247	740716	2.9	BEECRA
610	ALPHA OMEGA	130 8TH ST	PASSAIC CITY	PASSAIC	NJD980784128	E88121	405138	740635	3.2	BEECRA
611	ALO TEXTILE	122 8TH ST	PASSAIC CITY	PASSAIC	NJL500001706	E88122	405137	740635	3.3	BEECRA
612	APEX ELECTRONICS	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500002407	E88109	405133	740634	3.3	BEECRA
613	BOUQUET PRINTERS	130 8TH ST	PASSAIC CITY	PASSAIC	NJL500004965	E88123	405138	740635	3.2	BEECRA
614	CHEMFIRST CORPORATION	122 8TH ST	PASSAIC CITY	PASSAIC	NJD072721780	E88124	405148	740710	3.4	BEECRA
615	FOTO CHEMICAL SYSTEMS INCORPORATED	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500012117	E88112	405133	740634	3.3	BEECRA
616	INTERSTATE FOAM PROCESSORS INCORPORATED	125 SOUTH ST	PASSAIC CITY	PASSAIC	NJL500016316	E89166	405139	740652	3.4	BEECRA
617	J L PRESCOTT COMPANY	27 8TH ST	PASSAIC CITY	PASSAIC	NJD002180040	E87807	405141	740822	4.3	BEECRA
618	KAY VE PREPACKAGING	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500017926	E88113	405133	740634	3.3	BEECRA
619	LITTON SYSTEMS INC HEWITT ROBINS DIV	270 PASSAIC AVE	PASSAIC CITY	PASSAIC	NJD002202356	E90867	405148	740710	3.4	BEECRA
620	MELARD MANUFACTURING CORPORATION	153 LINDEN ST	PASSAIC CITY	PASSAIC	NJD001897248	E94039	405131	740822	4.5	BEECRA
621	OKONITE COMPANY	CANAL & JEFFERSON STS	PASSAIC CITY	PASSAIC	NJD002190155	E89536	405146	740708	3.5	BEECRA
622	PANYASOTE INCORPORATED	26 JEFFERSON RD	PASSAIC CITY	PASSAIC	NJD030239826	E93209	405154	740709	3.4	BEECRA
623	PENN MANUFACTURING	118 9TH ST	PASSAIC CITY	PASSAIC	NJL500024500	E88125	405140	740633	3.2	BEECRA
624	PIERSON INDUSTRIES	100 8TH ST	PASSAIC CITY	PASSAIC	NJD982281404	E88110	405133	740634	3.3	BEECRA
625	PRETTY PLEAT	122 8TH ST	PASSAIC CITY	PASSAIC	NJL500025614	E88126	405137	740635	3.3	BEECRA
626	PROVINCETOWN HANDPRINTS	130 8TH ST	PASSAIC CITY	PASSAIC	NJL500025945	E88127	405138	740635	3.2	BEECRA
627	TEMPRANG KNITTING	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500031539	E88116	405133	740634	3.3	BEECRA
628	TUFFWEAR	122 8TH ST	PASSAIC CITY	PASSAIC	NJL500032826	E88128	405137	740635	3.3	BEECRA
629	UNITED CONDENSER CORP FILM CAPACITOR	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500033212	E88117	405133	740634	3.3	BEECRA
630	VENUS OPTICAL CASE CORPORATION	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500033808	E88118	405133	740634	3.3	BEECRA
631	WEAREST SIL TEX MILLS LIMITED	100 8TH ST	PASSAIC CITY	PASSAIC	NJL500034442	E88119	405133	740634	3.3	BEECRA
633	AMTECH INCORPORATED	845 25TH ST E	PATERSON CITY	PASSAIC	NJD002151496	E88028	405430	740858	4.1	BEECRA
635	BORIS KROLL JACQUARD LOOMS INCORPORATED	66 GRAY ST	PATERSON CITY	PASSAIC	NJL500004940	E91273	405428	740940	4.7	BEECRA
637	N C AUTOMATED INCORPORATED	785 27TH ST E	PATERSON CITY	PASSAIC	NJL500022165	E91489	405440	740856	4.1	BEECRA
638	PUREX CORPORATION PLANT 11	2 WOOD ST	PATERSON CITY	PASSAIC	NJD045056066	E85527	405606	740910	4.9	BEECRA
639	REGAL BELOIT CORPORATION	954 25TH ST E	PATERSON CITY	PASSAIC	NJL500027156	E88822	405437	740904	4.2	BEECRA
641	SEALY MATTRESS COMPANY OF NJ	196 RAILWAY AVE W	PATERSON CITY	PASSAIC	NJL500029004	E86242	405349	740922	4.4	BEECRA
644	VIVITONE INCORPORATED	110 27TH ST E	PATERSON CITY	PASSAIC	NJD002173813	E93574	405602	740835	4.5	BEECRA
645	WESTWOOD LIGHTING GROUP INCORPORATED	177 TO 185 GENESEE AVE	PATERSON CITY	PASSAIC	NJD067507368	E88244	405329	740908	4.2	BEECRA
786	GARFIELD CITY FIRE HOUSE 3	38 WILLARD ST	GARFIELD CITY	BERGEN	NJL000064659	NJL000064659	405244	740629	2.3	BER-I
815	UNIVERSAL OIL PRODUCTS INCORPORATED	RTE 17 & PATERSON PLANK RD	EAST RUTHERFORD BOROUGH	BERGEN	NJD002005106	NJD002005106	404937	740507	4.9	BFCM
816	L J & M LAPLACE CHEMICAL COMPANY	LELIAARTS LN	ELMWOOD PARK BOROUGH	BERGEN	NJD001382373	NJD001382373	405442	740638	2.2	BFCM
817	MARCAL PAPER MILLS INCORPORATED	1 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJD001318112	9305123	405408	740755	3.1	BFCM
818	FAIR LAWN WELLFIELD CONTAMINATION	HENDERSON BLVD & WESTMORELAND AVE	FAIR LAWN BOROUGH	BERGEN	NJD980654107	NJD980654107	405637	740811	4.6	BFCM
819	SANDVIK INCORPORATED	17-02 NEVINS RD	FAIR LAWN BOROUGH	BERGEN	NJD046351268	NJD046351268	405652	740746	4.6	BFCM
820	HACKENSACK COAL GAS (PSE&G)	HUDSON & WATER STS	HACKENSACK CITY	BERGEN	NJD981083066	NJD981083066	405219	740220	2.5	BFCM
823	AMOCO SERVICE STATION LODI BOROUGH	RTE 46 & SAVOIE ST	LODI BOROUGH	BERGEN	NJL600012371	0018182	405243	740453	1.4	BFCM
824	UNITED PIECE DYE WORKS	40 TO 49 ARNOT ST	LODI BOROUGH	BERGEN	NJD982720401	NJL000044362	405243	740453	1.4	BFCM
826	MAYWOOD CHEMICAL	WEST HUNTER AVE	MAYWOOD BOROUGH	BERGEN	NJD980529762	NJD980529762	405344	740357	0.4	BFCM
827	STEPAN COMPANY	100 WEST HUNTER AVE	MAYWOOD BOROUGH	BERGEN	NJD002011294	NJD002011294	405349	740409	0.2	BFCM
832	CURCIO SCRAP METAL INCORPORATED	416 LANZA AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD011717584	NJD011717584	405328	740611	1.7	BFCM
833	THOMAS JEFFERSON JUNIOR HIGH SCHOOL	TEANECK RD	TEANECK TOWNSHIP	BERGEN	NJL600114722	931093	405324	740037	3.3	BFCM
834	GARFIELD MOLDING COMPANY INCORPORATED	10 MIDLAND AVE	WALLINGTON BOROUGH	BERGEN	NJD001270263	NJD001270263	405123	740613	3.3	BFCM
836	VENTRON VELSICOL	1 ETHEL BLVD	WOOD-RIDGE BOROUGH	BERGEN	NJD980529879	NJD980529879	405024	740442	4.0	BFCM
891	ROUTE 21	RTE 21	NEWARK CITY	ESSEX	NJL000010553	NJL000010553	405216	740701	3.0	BFCM
1078	ARVIND AUTO SERVICE INCORPORATED	452 PAULISON AVE	PASSAIC CITY	PASSAIC	NJL000061911	931231	405141	740815	4.3	BFCM
1079	DRY CLEANING & LAUNDRY	343 11TH ST	PATERSON CITY	PASSAIC	NJL000069740	9310100	405127	740741	4.0	BFCM
1082	SHELL SERVICE STATION PATERSON CITY	246 MARKET ST & RR AVES	PATERSON CITY	PASSAIC	NJD986594372	9409148	405436	740900	4.2	BFCM
1138	FOSTER VILLAGE SHOPPING CENTER	415 TO 507 SOUTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJL600187678	NJL600187678-001	405443	735952	4.0	BFCM-6
1140	STERLING REGAL INCORPORATED	75 BROAD ST	CARLSTADT BOROUGH	BERGEN	NJD986569523	E88C47	404951	740446	4.6	BFCM-6
1143	ALLSTATE AIR CONDITIONING COMPANY	206 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJL600228282	0033185	405403	740721	2.6	BFCM-6
1144	CUSTOM CHEMICALS COMPANY	30 PAUL KOHNER PL	ELMWOOD PARK BOROUGH	BERGEN	NJD093846301	E90834	405404	740635	2.0	BFCM-6
1148	PARKWAY FRIENDLY SERVICE INCORPORATED	30-09 BROADWAY	FAIR LAWN BOROUGH	BERGEN	NJL600001378	9503153	405529	740618	2.5	BFCM-6

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
1151	ACME & DORF METAL DOOR CORPORATION	181 TO 183 LANZA AVE	GARFIELD CITY	BERGEN	NJL000039669	940140	405312	740710	2.6	BFCM-6
1153	240 RIVER STREET SOUTH	240 RIVER ST S	HACKENSACK CITY	BERGEN	NJL600193163	NJL600193163-001	405216	740221	2.5	BFCM-6
1154	EXXON SERVICE STATION HACKENSACK CITY	141 JOHNSON AVE	HACKENSACK CITY	BERGEN	NJL600128300	0200170	405420	740226	1.7	BFCM-6
1155	JOHNSON SERVICE CENTER	112 PASSAIC ST	HACKENSACK CITY	BERGEN	NJL600168041	0266213	405331	740238	1.5	BFCM-6
1156	OLYMPIAN ENERGY OF NJ INCORPORATED	400 TO 414 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600021828	931052	405320	740245	1.5	BFCM-6
1157	ROTOTECH CORPORATION	130 GAMEWELL ST	HACKENSACK CITY	BERGEN	NJL500028253	E90306	405306	740251	1.6	BFCM-6
1161	AMOCO SERVICE STATION LODI BOROUGH	RTE 46 E & CLARK ST	LODI BOROUGH	BERGEN	NJL600026678	0040781	405243	740453	1.4	BFCM-6
1165	MOONACHIE ROAD PUMP STATION	121 MOONACHIE RD	MOONACHIE BOROUGH	BERGEN	NJL000065490	950589	405024	740252	4.2	BFCM-6
1169	PRESTIGE MERCEDES	405 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD986593606	0031727	405643	740416	3.3	BFCM-6
1173	ADVERTISERS SERVICE GROUP	65 RAILROAD AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL000057448	0234272	405138	740146	3.4	BFCM-6
1174	RIDGEFIELD PARK MOTOR LODGE	RTE 46 E	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600136840	0211141	405041	740051	4.8	BFCM-6
1175	CITGO SERVICE STATION ROCHELLE PARK TWP	88 ESSEX ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600188924	940795	405426	740443	0.7	BFCM-6
1176	RIDGE SERVICE	54 UNION AVE	RUTHERFORD BOROUGH	BERGEN	NJL000056820	950664	404951	740612	4.9	BFCM-6
1177	EXXON SERVICE STATION SADDLE BROOK TWP	319 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJD039399464	0063865-BAC	405347	740534	1.1	BFCM-6
1178	GULF SERVICE STATION SADDLE BROOK TWP	131 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL600031876	9503112	405345	740503	0.6	BFCM-6
1179	SADDLE BROOK MOVING CENTER	210 RTE 46 E	SADDLE BROOK TOWNSHIP	BERGEN	NJD986585552	0032762	405321	740546	1.4	BFCM-6
1180	EMERSON SCHOOL 3	433 NORTH ST	TEANECK TOWNSHIP	BERGEN	NJL600114672	931046	405315	740127	2.6	BFCM-6
1181	SUPER VALUE OIL COMPANY	1617 RIVER RD	TEANECK TOWNSHIP	BERGEN	NJL600044820	0069195	405444	740128	2.7	BFCM-6
1410	CARDINAL GLOVE COMPANY INCORPORATED	1 LISBON ST	CLIFTON CITY	PASSAIC	NJD002167302	E88A70	405145	740859	4.7	BFCM-6
1411	CLIFTON FIRE DEPARTMENT ENGINE 3	180 MAHAR AVE	CLIFTON CITY	PASSAIC	NJD982730293	9407127	405241	740754	3.4	BFCM-6
1412	DIKEMAN LAMINATING CORPORATION	181 SARGEANT AVE	CLIFTON CITY	PASSAIC	NJD002457570	940206	405153	740922	5.0	BFCM-6
1415	GULF SERVICE STATION CLIFTON CITY	532 LEXINGTON AVE	CLIFTON CITY	PASSAIC	NJL600244479	0019109	405243	740604	3.5	BFCM-6
1417	SERVICE STATION CLIFTON CITY	387 CROOKS AVE	CLIFTON CITY	PASSAIC	NJL800113532	0057477	405353	740830	3.6	BFCM-6
1422	ARVIND AUTO SERVICE INCORPORATED	452 PAULISON AVE	PASSAIC CITY	PASSAIC	NJL000061911	931231	405141	740815	4.3	BFCM-6
1423	A CAPONE SANITATION INCORPORATED	178 RIVER ST	PATERSON CITY	PASSAIC	NJL600199178	941157	405111	740714	4.0	BFCM-6
1424	HENRYS BOILER & PRESSING EQUIPMENT	375 11TH AVE	PATERSON CITY	PASSAIC	NJD011618451	9407143	405520	740906	4.5	BFCM-6
1425	PATERSON CITY DEPARTMENT OF PUBLIC WORKS	402 16TH ST E	PATERSON CITY	PASSAIC	NJD980771836	940794	405536	740925	4.9	BFCM-6
1426	SERVICE STATION PATERSON CITY	828 MAIN ST	PATERSON CITY	PASSAIC	NJL600056352	940641	405356	740949	4.8	BFCM-6
1427	SHELL SERVICE STATION PATERSON CITY	10 18TH AVE	PATERSON CITY	PASSAIC	NJD986594364	0047171	405442	740918	4.4	BFCM-6
1429	TPD COMPANY INCORPORATED	451 5TH AVE	PATERSON CITY	PASSAIC	NJD982530750	E90A29	405557	740829	4.3	BFCM-6
1430	WILKINSON COMPANY	128 9TH AVE	PATERSON CITY	PASSAIC	NJL600152953	0231879	405434	740901	4.2	BFCM-6
1527	29 HARING STREET	29 HARING ST	BERGENFIELD BOROUGH	BERGEN	NJL000070375	9402102	405536	740007	4.2	BFD-CA
1530	SKETCHLEY SERVICES	163 SCHLEY ST	GARFIELD CITY	BERGEN	NJD980780944	920188	405252	740617	2.1	BFD-CA
1531	ROUTE POWER MATE COMPANY	514 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJD001820206	930668	405355	740248	1.3	BFD-CA
1532	OVERPECK PARK LANDFILL	FORT LEE RD	LEONIA BOROUGH	BERGEN	NJD980505606	930263	405149	735923	4.9	BFD-CA
1535	CAESAR PALACE PUMP STATION	CAESAR PL & MOONACHIE AVE	MOONACHIE BOROUGH	BERGEN	NJL600127146	0198705	405020	740350	4.1	BFD-CA
1537	NORTHVALE BOROUGH LANDFILL	103 STONEHURST CT	NORTHVALE BOROUGH	BERGEN	NJL900000811	930384	405643	740416	3.3	BFD-CA
1545	TEANECK TOWNSHIP POMANDER WALK SLF	POMANDER WALK	TEANECK TOWNSHIP	BERGEN	NJL900001462	9303204	405321	740208	2.0	BFD-CA
1731	SWEPCO TUBE	1 CLIFTON BLVD	CLIFTON CITY	PASSAIC	NJD002188597	920185	405140	740840	4.6	BFD-CA
1775	162 LODI STREET	162 LODI ST	HACKENSACK CITY	BERGEN	NJL600162028	E93381	405228	740259	2.0	BFD-IN
1777	BERGEN COUNTY VOCATIONAL SCHOOLS	200 HACKENSACK AVE	HACKENSACK CITY	BERGEN	NJD025728155	0141310	405408	740205	2.0	BFD-IN
1800	TECHNICAL OIL PRODUCTS INCORPORATED	150 GRAND ST	CARLSTADT BOROUGH	BERGEN	NJD002172682	930622154406	405012	740426	4.2	BFD-N
1801	WHITE ROSE DAIRY	30 COMMERCE RD	CARLSTADT BOROUGH	BERGEN	NJL800048449	940401105306	404947	740318	4.8	BFD-N
1802	311 GROVE STREET	311 GROVE ST	EAST RUTHERFORD BOROUGH	BERGEN	NJL000061234	NJL000061234	405010	740602	4.5	BFD-N
1808	MATHESON GAS PRODUCTS	932 PATERSON PLANK RD	EAST RUTHERFORD BOROUGH	BERGEN	NJD042793976	9503174	404952	740513	4.7	BFD-N
1813	AETNA CHEMICAL CORPORATION	WALLACE ST	ELMWOOD PARK BOROUGH	BERGEN	NJD001471374	9010256P02M	405410	740626	1.9	BFD-N
1814	EMPIRE OVERALL DRY CLEANERS INC	18 STEFANIC AVENUE	ELMWOOD PARK BOROUGH	BERGEN	NJD011220423	930927	405129	740333	2.8	BFD-N
1815	KAR KRAFT	188 FOREST AVE	ENGLEWOOD CITY	BERGEN	NJL000052910	9002271158	405320	735916	4.5	BFD-N
1817	EASTMAN KODAK PROCESSING LAB	16-31 RTE 208	FAIR LAWN BOROUGH	BERGEN	NJD986603082	900712SP01M	405635	740745	4.3	BFD-N
1818	EINSON FREEMAN & DETROY CORPORATION	20-10 MAPLE AVE	FAIR LAWN BOROUGH	BERGEN	NJD052092616	921265	405637	740831	4.8	BFD-N
1819	KODALUX PROCESSING SERVICE	16-31 RTE 208	FAIR LAWN BOROUGH	BERGEN	NJD011256914	930820133705	405634	740741	4.3	BFD-N
1820	TOPPS CLEANERS & LAUNDERERS	22-02 FAIRLAWN AVE	FAIR LAWN BOROUGH	BERGEN	NJD046346870	NJD046346870	405601	740820	4.3	BFD-N
1824	18 LAUREL STREET	18 LAUREL ST	GARFIELD CITY	BERGEN	NJL000050054	931005	405325	740643	2.2	BFD-N
1825	EC ELECTROPLATING	125 CLARK ST	GARFIELD CITY	BERGEN	NJD002006773	931013110216	405222	740608	2.3	BFD-N
1826	MELTZER & SONS	118 TO 120 OUTWATER LN	GARFIELD CITY	BERGEN	NJL840000426	9007131216M	405253	740648	2.4	BFD-N
1828	RIDGEWOOD POLICE FIRING RANGE	561 PROSPECT ST	GLEN ROCK BOROUGH	BERGEN	NJL000062307	930959	405747	740642	4.9	BFD-N

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
1830	192 EUCLID AVENUE	192 EUCLID AVE	HACKENSACK CITY	BERGEN	NJL000055857	9301261522M	405357	740247	1.4	BFD-N
1831	ODYSSEY BODY WORKS INCORPORATED	161 LINDEN ST	HACKENSACK CITY	BERGEN	NJD089747166	9308116	405351	740229	1.6	BFD-N
1832	POLYCAST TECHNOLOGY CORPORATION	215 SOUTH NEWMAN ST	HACKENSACK CITY	BERGEN	NJD010970846	940608133216	405225	740327	1.9	BFD-N
1833	SHELL SERVICE STATION HACKENSACK CITY	160 PASSAIC ST	HACKENSACK CITY	BERGEN	NJD986593333	930503SP01M	405335	740244	1.4	BFD-N
1835	LEONIA OIL SPILL	BERGEN BLVD	LEONIA BOROUGH	BERGEN	NJL000010207	921016SP01M	405149	735923	4.9	BFD-N
1836	DUKES AUTO SALVAGE	99 DELL GLEN AVE	LODI BOROUGH	BERGEN	NJD986570455	9311104	405253	740511	1.4	BFD-N
1845	ESSELTE PENDAFLEX CORPORATION	10 CAESAR PL	MOONACHIE BOROUGH	BERGEN	NJD064329436	921264	405019	740352	4.1	BFD-N
1846	TECHBESTOS INCORPORATED	131 WEST COMMERCIAL AVE	MOONACHIE BOROUGH	BERGEN	NJD001522689	930353	404956	740341	4.6	BFD-N
1849	9 FOREST AVENUE	9 FOREST AVE	PARAMUS BOROUGH	BERGEN	NJL800092520	930208100931M	405643	740416	3.3	BFD-N
1850	AMOCO SERVICE STATION PARAMUS BOROUGH	640 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000529412	9402180819M	405744	740433	4.4	BFD-N
1851	B&R MOTORS EXPRESS	845 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJL800010910	930922083852	405643	740416	3.3	BFD-N
1857	DIXO COMPANY INCORPORATED	158 CENTRAL AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJD002009850	9307194	405402	740422	0.2	BFD-N
1859	LA CENA FOODS	4 ROSOL LN	SADDLE BROOK TOWNSHIP	BERGEN	NJL000052191	930104	405453	740633	2.3	BFD-N
1860	11 ROMANELLI AVENUE	11 ROMANELLI AVE	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJL000047027	931096	405222	740316	2.0	BFD-N
1861	DR MADIS LABORATORIES INCORPORATED	375 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD002012599	940817154019	405203	740257	2.4	BFD-N
1862	CEDARS BAKERY MIDDLE EASTERN FOODS	953 TEANECK RD	TEANECK TOWNSHIP	BERGEN	NJL840001077	NJL840001077	405316	740018	3.6	BFD-N
1863	EXXON STORAGE FACILITY	MALCOLM AVE	TETERBORO BOROUGH	BERGEN	NJD981131675	921136	405119	740407	3.0	BFD-N
1867	H & S CHEMICAL COMPANY INCORPORATED	52 VAN DYKE ST	WALLINGTON BOROUGH	BERGEN	NJD002008118	9309280743	405040	740605	4.0	BFD-N
2147	KRAFT GENERAL FOODS	203 KULLER RD	CLIFTON CITY	PASSAIC	NJC876022351	9212171350	405316	740953	4.9	BFD-N
2151	VAR CHEM PRODUCTS INCORPORATED	300 KULLER RD	CLIFTON CITY	PASSAIC	NJD064307994	9406170	405304	740950	4.9	BFD-N
2156	110 BROOK AVENUE	110 BROOK AVE	PASSAIC CITY	PASSAIC	NJL000066977	9306080857N	405026	740745	5.0	BFD-N
2157	59 CENTRAL AVENUE	59 CENTRAL AVE	PASSAIC CITY	PASSAIC	NJL800011926	9403178	405154	740743	3.7	BFD-N
2158	ACME ENGRAVING COMPANY INCORPORATED	19 TO 37 DELAWARE AVE	PASSAIC CITY	PASSAIC	NJD002151504	0201881	405127	740741	4.0	BFD-N
2159	TRI STATE ASSOCIATES	376 PAULISON AVE	PASSAIC CITY	PASSAIC	NJL600168892	0267609	405136	740805	4.2	BFD-N
2160	CPM INDUSTRIAL COMPLEX	27 33RD ST E	PATERSON CITY	PASSAIC	NJD055099113	9306295P01	405521	740826	4.0	BFD-N
2161	CYGNUS INCORPORATED	510 41ST ST E	PATERSON CITY	PASSAIC	NJX000279802	NJL000066126	405419	740812	3.4	BFD-N
2162	HETERENE CHEMICAL COMPANY INCORPORATED	792 21ST AVE	PATERSON CITY	PASSAIC	NJD986592335	930716123226	405415	740818	3.5	BFD-N
2164	TEN HOEVE BROTHERS INCORPORATED	359 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJD002446607	9306161415N	405415	740806	3.3	BFD-N
3081	BORDEN CHEMICAL PRINTING INK DIVISION	8-10 22ND ST	FAIR LAWN BOROUGH	BERGEN	NJD001374883	NJD001374883	405558	740657	3.3	BSCM
3225	KIRKER CHEMICAL COMPANY	1 EAST 11TH ST	PATERSON CITY	PASSAIC	NJD002180834	NJD002180834	405623	740842	4.8	BSCM
3226	MORTON CHEMICAL DIVISION MORTON THIOKOL	335 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJD051274348	NJD051274348	405417	740805	3.3	BSCM
3228	PRATT GABRIEL	204 21ST AVE	PATERSON CITY	PASSAIC	NJD980760250	910903	405428	740959	5.0	BSCM
3290	GRANT INDUSTRIES INCORPORATED	125 MAIN AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD085505196	921098-I	405442	740639	2.2	BSM
3291	STOR DYNAMICS	99 MAIN AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD002998052	NJD002998052	405435	740642	2.2	BSM
3294	AMOCO SERVICE STATION GARFIELD CITY	45 MONROE ST	GARFIELD CITY	BERGEN	NJL000063271	9303251418M	405211	740634	2.8	BSM
3295	LODI MUNICIPAL WELLFIELD CONTAMINATION	VARIOUS LOCATIONS WITHIN BOROUGH	LODI BOROUGH	BERGEN	NJD980769301	M058	405223	740533	2.0	BSM
3296	MAGNOLIA AVENUE GROUND WATER CONTAM	MAGNOLIA AVE	MAYWOOD BOROUGH	BERGEN	NJD982273583	NJD982273583	405415	740413	0.4	BSM
3300	INDUSTRIAL LATEX	350 MT PLEASANT AVE	WALLINGTON BOROUGH	BERGEN	NJD981178411	930561	405119	740558	3.3	BSM
3434	PAPERBOARD SPECIALTIES INCORPORATED	177 TO 302 3RD AVE	PATERSON CITY	PASSAIC	NJD147427843	920835	405611	740835	4.6	BSM
3560	GETTY SERVICE STATION BERGENFIELD BORO	125 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJC876015041	0137351	405555	735943	4.7	BUST
3561	ROCKLAND COACHES INCORPORATED	126 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJL600046064	0071183	405555	735943	4.7	BUST
3562	ROOFERS SUPPLIES INCORPORATED	30 COLUMBIA AVE	BERGENFIELD BOROUGH	BERGEN	NJL600072334	0114888	405525	735953	4.3	BUST
3563	SHELL SERVICE STATION BERGENFIELD BORO	218 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJD980772859	0032339	405606	735942	4.8	BUST
3564	MOBIL SERVICE STATION BOGOTA BOROUGH	51 QUEEN ANNE RD	BOGOTA BOROUGH	BERGEN	NJD986604239	0072245	405202	740121	3.4	BUST
3565	SUNOCO SERVICE STATION BOGOTA BOROUGH	330 PALISADE AVE	BOGOTA BOROUGH	BERGEN	NJL600240600	0102322	405236	740130	2.9	BUST
3566	COMMERCE ROAD REALTORS ASSOCIATION	171 COMMERCE RD	CARLSTADT BOROUGH	BERGEN	NJL600119465	0188391	404955	740339	4.6	BUST
3567	CONTINENTAL BAKING COMPANY	720 WASHINGTON PL	CARLSTADT BOROUGH	BERGEN	NJL600018976	0025760	404943	740318	4.9	BUST
3568	GENERAL FOAM CORPORATION	109 KERO RD	CARLSTADT BOROUGH	BERGEN	NJD044132116	0050942	404941	740341	4.9	BUST
3569	JAKE & TOMS MEADOWLAND SERVICE	204 WASHINGTON AVE	CARLSTADT BOROUGH	BERGEN	NJC876028077	0263513	405011	740638	4.7	BUST
3570	RICHARD BARIS PROPERTIES	555 INDUSTRIAL RD	CARLSTADT BOROUGH	BERGEN	NJD982536732	0273710	405043	740557	3.9	BUST
3571	ROADWAY EXPRESS INCORPORATED	650 COMMERCIAL AVE	CARLSTADT BOROUGH	BERGEN	NJD981561251	0006013	404950	740346	4.7	BUST
3572	RYDER TRUCK RENTAL INCORPORATED	125 COMMERCIAL AVE	CARLSTADT BOROUGH	BERGEN	NJD064336233	0025175	405001	740342	4.5	BUST
3573	ST JOHNSBURY TRUCKING COMPANY INC	50 MOONACHIE AVE	CARLSTADT BOROUGH	BERGEN	NJD055720775	0025715	405029	740424	3.9	BUST
3575	TUNNEL BARREL & DRUM COMPANY INC	85 TRIANGLE BLVD	CARLSTADT BOROUGH	BERGEN	NJD001601152	0111269	404933	740353	5.0	BUST
3591	DUMONT BOROUGH DEPT OF PUBLIC WORKS	FOOT OF ALLADIN AVE	DUMONT BOROUGH	BERGEN	NJD986582880	0026606	405614	740023	4.4	BUST
3592	P & M FRIENDLY SERVICE INCORPORATED	387 NEW MILFORD AVE	DUMONT BOROUGH	BERGEN	NJD986603736	0040745	405638	740028	4.6	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3594	DELSACO FOODS CORP ORVAL KENT FOODS	164 MADISON ST	EAST RUTHERFORD BOROUGH	BERGEN	NJD054050141	0157962	405048	740708	4.3	BUST
3595	LUX HOLDING CORPORATION	1 MAPLE ST	EAST RUTHERFORD BOROUGH	BERGEN	NJL600193221	NJL600193221-001	405001	740613	4.7	BUST
3596	NJ BELL TELEPHONE EAST RUTHERFORD BORO	85 WILLOW ST	EAST RUTHERFORD BOROUGH	BERGEN	NJD980651947	0080462	405026	740624	4.4	BUST
3600	BRUCES AUTO CLINIC INCORPORATED	348 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJL600007314	0011189	405358	740658	2.3	BUST
3601	ELMWOOD PARK FRIENDLY SERVICE	RTE 46 & ROOSEVELT AVE	ELMWOOD PARK BOROUGH	BERGEN	NJL600058440	0092289	405336	740719	2.6	BUST
3602	EMPIRE OVERALL DRY CLEANERS INC	18 STEFANIC AVENUE	ELMWOOD PARK BOROUGH	BERGEN	NJD011220423	930927	405129	740333	2.8	BUST
3603	EXXON SERVICE STATION EDGEWATER BOROUGH	210 RTE 46 & MILL ST	ELMWOOD PARK BOROUGH	BERGEN	NJD982189144	0078294	405417	740712	2.6	BUST
3604	K&M CERTIFIED AUTOMOTIVE	257 MOLNAR DR	ELMWOOD PARK BOROUGH	BERGEN	NJD986577054	0187103	405414	740642	2.1	BUST
3605	LARKINS FRIENDLY SERVICE INCORPORATED	129 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJL600034920	0054083	405405	740734	2.8	BUST
3606	MERIT SERVICE STATION ELMWOOD PARK BORO	121 BROADWAY	ELMWOOD PARK BOROUGH	BERGEN	NJD982186090	0091000	405511	740721	3.0	BUST
3607	MOBIL SERVICE STATION ELMWOOD PARK	300 MOLNAR DR	ELMWOOD PARK BOROUGH	BERGEN	NJD986605301	0072308	405417	740630	2.0	BUST
3608	SERVICE STATION ELMWOOD PARK BOROUGH	226 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJD011220928	0004781	405402	740718	2.6	BUST
3609	SUNOCO SERVICE STATION ELMWOOD PARK	RIVER DR & LEE ST	ELMWOOD PARK BOROUGH	BERGEN	NJD000693648	0164081	405420	740745	3.0	BUST
3610	SUNOCO SERVICE STATION ELMWOOD PARK BORO	RTE 46 E & ROOSEVELT AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD000693630	0164513	405417	740712	2.6	BUST
3611	TEXACO SERVICE STATION ELMWOOD PARK BORO	357 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJD986580819	0110819	405359	740654	2.2	BUST
3612	TEXACO SERVICE STATION ELMWOOD PARK BORO	39 BROADWAY	ELMWOOD PARK BOROUGH	BERGEN	NJL600190979	NJL600190979-001	405507	740737	3.2	BUST
3622	EXXON SERVICE STATION ENGLEWOOD CITY	119 RTE 4 W	ENGLEWOOD CITY	BERGEN	NJD982744203	0089779	405301	735918	4.5	BUST
3623	EXXON SERVICE STATION ENGLEWOOD CITY	120 RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD982744211	0089346	405259	735918	4.5	BUST
3624	EXXON SERVICE STATION ENGLEWOOD CITY	476 GRAND AVE	ENGLEWOOD CITY	BERGEN	NJD986598712	0089742	405242	735853	5.0	BUST
3626	GETTY SERVICE STATION ENGLEWOOD CITY	134 RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD986586170	0014645	405300	735921	4.5	BUST
3627	LUCAS AEROSPACE INC PRODUCTS SUPPORT	30 VAN NOSTRAND AVE	ENGLEWOOD CITY	BERGEN	NJD037138211	0043661	405251	735854	4.9	BUST
3628	MOBIL SERVICE STATION ENGLEWOOD CITY	101 RTE 4	ENGLEWOOD CITY	BERGEN	NJD986609055	0072281	405258	735912	4.6	BUST
3629	MOBIL SERVICE STATION ENGLEWOOD CITY	501 GRAND AVE	ENGLEWOOD CITY	BERGEN	NJD986609048	0072272	405238	735856	4.9	BUST
3630	MOBIL SERVICE STATION ENGLEWOOD CITY	9 BENNETT RD & LAFAYETTE AVE	ENGLEWOOD CITY	BERGEN	NJD986609014	0254540	405348	735845	4.9	BUST
3631	ROYAL GLASS CORPORATION	500 NORDHOFF PL	ENGLEWOOD CITY	BERGEN	NJD001672419	0184818	405244	735910	4.7	BUST
3633	SUNOCO SERVICE STATION ENGLEWOOD CITY	100 RTE 4 S	ENGLEWOOD CITY	BERGEN	NJD000693663	0164397	405258	735917	4.5	BUST
3634	SUNOCO SERVICE STATION ENGLEWOOD CITY	137 RTE 4 N	ENGLEWOOD CITY	BERGEN	NJD000693671	0148070	405302	735918	4.5	BUST
3635	TARANTO BUG COMPANY CORPORATION	170 SOUTH DEAN ST	ENGLEWOOD CITY	BERGEN	NJL600015598	0023393	405318	735841	5.0	BUST
3636	TEXACO SERVICE STATION ENGLEWOOD CITY	RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD981172869	0110531	405256	735913	4.6	BUST
3642	AUTO SUMSER INCORPORATED	7-06 SADDLE RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600058168	0091910	405611	740551	3.0	BUST
3643	BERDAN HOLDING COMPANY	11 TO 12 RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600179030	0059961	405602	740759	4.0	BUST
3644	EXXON SERVICE STATION FAIR LAWN BOROUGH	20-22 PLAZA RD & FAIRLAWN AVE	FAIR LAWN BOROUGH	BERGEN	NJD986589166	0070760	405622	740710	3.8	BUST
3645	EXXON SERVICE STATION FAIR LAWN BOROUGH	PLAZA RD & MORLOT AVE	FAIR LAWN BOROUGH	BERGEN	NJL000064642	NJL600220487-001	405550	740651	3.1	BUST
3646	STATE TIRE AUTOMATIVE DISCOUNT CENTER	15-10 RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600010128	0206938	405611	740804	4.2	BUST
3671	CANGIALOSI BROTHERS	66 IRVING PL	GARFIELD CITY	BERGEN	NJD986612190	0138882	405235	740559	2.1	BUST
3672	GARFIELD CITY GARAGE	413 MIDLAND AVE	GARFIELD CITY	BERGEN	NJL600009914	0015068	405244	740609	2.1	BUST
3673	GARFIELD INDUSTRIAL COMPLEX	174 PASSAIC ST	GARFIELD CITY	BERGEN	NJL600182562	0158871	405204	740604	2.6	BUST
3674	GETTY SERVICE STATION GARFIELD CITY	606 MIDLAND AVE	GARFIELD CITY	BERGEN	NJD986587665	0017444	405303	740601	1.8	BUST
3675	KAYTORS GARAGE	379 RIVER DR	GARFIELD CITY	BERGEN	NJL600118129	NJL600220602-001	405215	740645	2.8	BUST
3676	MIDLAND AUTO ELECTRIC INCORPORATED	386 MIDLAND AVE	GARFIELD CITY	BERGEN	NJL600017396	0026426	405237	740610	2.2	BUST
3677	SHELL SERVICE STATION GARFIELD CITY	MIDLAND AVE & RIVER DR	GARFIELD CITY	BERGEN	NJD986593309	0047389	405150	740621	2.9	BUST
3680	111 MIDTOWN ASSOCIATION	111 MIDTOWN BRIDGE APPROACH	HACKENSACK CITY	BERGEN	NJL800147589	0307514	405301	740219	2.0	BUST
3681	ALL BRANDS AUTO SALES INCORPORATED	400 RIVER ST	HACKENSACK CITY	BERGEN	NJD982181174	0012133	405325	740218	1.9	BUST
3682	ALTERMAN TRANSPORT LINES INCORPORATED	450 TO 510 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600068662	0109497	405145	740209	3.1	BUST
3683	AVALON CONDOMINIUM ASSOCIATION	446 PASSAIC ST	HACKENSACK CITY	BERGEN	NJL000040154	NJL600157918-001	405356	740320	0.9	BUST
3684	BERGEN BUTCHER SERVICE	154 HACKENSACK AVE	HACKENSACK CITY	BERGEN	NJL600251409	0115959	405360	740210	1.9	BUST
3685	BERGEN COUNTY ADMINISTRATION BUILDING	40 HUDSON ST	HACKENSACK CITY	BERGEN	NJL600209522	0116769	405239	740239	2.0	BUST
3686	BERGEN COUNTY POLICE DEPARTMENT	66 ZABRISKIE ST	HACKENSACK CITY	BERGEN	NJL600073548	0116859	405426	740220	1.9	BUST
3687	CHEVRON SERVICE STATION HACKENSACK CITY	433 PASSAIC ST	HACKENSACK CITY	BERGEN	NJD986614634	0001694	405355	740319	0.9	BUST
3688	CIRCLE TIRE SERVICE INCORPORATED	200 RIVER ST	HACKENSACK CITY	BERGEN	NJL600174015	0030403	405302	740226	1.9	BUST
3689	CITIZENS FIRST NATIONAL BANK	260 HUDSON ST	HACKENSACK CITY	BERGEN	NJL600157762	941131	405214	740227	2.5	BUST
3690	EXXON SERVICE STATION HACKENSACK CITY	495 HUDSON ST	HACKENSACK CITY	BERGEN	NJP000790071	0070797	405146	740217	3.0	BUST
3691	FAIRLEIGH DICKINSON UNIVERSITY	10 WOODRIDGE AVE	HACKENSACK CITY	BERGEN	NJD982270555	NJL600190334-001	405347	740211	1.9	BUST
3692	FUJI COLOR COMPANY	514 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJD982179590	0217839	405355	740248	1.3	BUST
3693	HACKENSACK CITY ADMINISTRATION BUILDING	360 UNION ST	HACKENSACK CITY	BERGEN	NJL800139784	0135524	405323	740235	1.6	BUST
3694	HACKENSACK FORD SALES	320 RIVER ST	HACKENSACK CITY	BERGEN	NJD011292125	0117867	405316	740220	1.9	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3695	LOUS SERVICENTER	137 SOUTH STATE ST	HACKENSACK CITY	BERGEN	NJL600071724	0113989	405225	740254	2.1	BUST
3696	METSEL HARDWARE	267 SOUTH SUMMIT AVE	HACKENSACK CITY	BERGEN	NJL600193[illegible]	[illegible]	405233	740355	1.6	BUST
3697	MOBIL SERVICE STATION HACKENSACK CITY	27 RTE 4 E	HACKENSACK CITY	BERGEN	NJD986604338	0072344	405433	740210	2.0	BUST
3698	PIE NATIONWIDE INCORPORATED	101 COMMERCE WAY	HACKENSACK CITY	BERGEN	NJL600024269	0037091	405440	740149	2.4	BUST
3699	R A HAMILTON CORPORATION	409 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600013296	0019532	405157	740214	2.9	BUST
3700	RICHARD CATENA ACURA	520 RIVER ST	HACKENSACK CITY	BERGEN	NJC876014499	NJL800025058-001	405339	740219	1.8	BUST
3701	RICHEN COMPANY	185 TO 195 KENNETH ST	HACKENSACK CITY	BERGEN	NJL600177943	0033914	405230	740330	1.7	BUST
3702	SHELL SERVICE STATION HACKENSACK CITY	POLIFLY RD & ESSEX ST	HACKENSACK CITY	BERGEN	NJD986593341	0032348	405251	740315	1.5	BUST
3703	SUBURBAN TERRACE CONDOMINIUM ASSOC INC	400 ESPLANADE	HACKENSACK CITY	BERGEN	NJL600137179	0211574	405353	740329	0.7	BUST
3704	SUNOCO SERVICE STATION HACKENSACK CITY	318 HUYLER ST	HACKENSACK CITY	BERGEN	NJL600010102	0015310	405208	740257	2.3	BUST
3705	TEXACO SERVICE STATION HACKENSACK CITY	483 ESSEX ST	HACKENSACK CITY	BERGEN	NJL800050155	0118109	405310	740346	1.0	BUST
3706	TONYS AUTO SERVICE CENTER	119 JOHNSON AVE	HACKENSACK CITY	BERGEN	NJL600146104	0223058	405418	740227	1.7	BUST
3708	AMOCO SERVICE STATION HASBROUCK HEIGHTS	426 BOULEVARD & WILLIAMS ST	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJC876018235	0018191	405143	740426	2.5	BUST
3709	EXXON SERVICE STATION HASBROUCK HEIGHTS	180 BOULEVARD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD054058243	0081353	405139	740446	2.6	BUST
3710	EXXON SERVICE STATION HASBROUCK HEIGHTS	321 BOULEVARD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986599249	0078285	405156	740430	2.2	BUST
3711	EXXON SERVICE STATION HASBROUCK HEIGHTS	423 RTE 17 S	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD982744187	0081416	405149	740352	2.4	BUST
3712	EXXON SERVICE STATION HASBROUCK HEIGHTS	RTE 17 N	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986608693	0078005	405143	740426	2.5	BUST
3713	HASBROUCK HEIGHTS DEPT OF PUBLIC WORKS	PLANT RD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJL800004061	NJL800004061-001	405143	740426	2.5	BUST
3714	MARTHA LAPP	500 WILLIAMS AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJL600125140	0196149	405156	740353	2.3	BUST
3715	MERIT SERVICE STATION HASBROUCK HEIGHTS	RTE 17	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD982186132	0091163	405143	740426	2.5	BUST
3716	SHELL SERVICE STATION HASBROUCK HEIGHTS	300 BLVD & CENTRAL AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986585958	0047757	405143	740426	2.5	BUST
3717	SHELL SERVICE STATION HASBROUCK HEIGHTS	RTE 17 & FRANKLIN AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986588365	0034968	405143	740426	2.5	BUST
3718	SHELL SERVICE STATION HASBROUCK HEIGHTS	RTE 17 S & HENRY ST	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986593374	0047009	405143	740426	2.5	BUST
3725	GULF SERVICE STATION LEONIA BORO(FORMER)	350 GRAND AVE	LEONIA BOROUGH	BERGEN	NJD986614441	0074072	405152	735932	4.8	BUST
3726	EXXON SERVICE STATION LITTLE FERRY BORO	319 RTE 46 E	LITTLE FERRY BOROUGH	BERGEN	NJD981131584	0257399	405118	740240	3.3	BUST
3727	GATES CONSTRUCTION CORPORATION	208 GATES RD	LITTLE FERRY BOROUGH	BERGEN	NJL600018501	0028235	405024	740155	4.5	BUST
3728	GULF SERVICE STATION LITTLE FERRY BORO	252 LIBERTY ST	LITTLE FERRY BOROUGH	BERGEN	NJL600041206	0063614	405106	740236	3.5	BUST
3729	LITTLE FERRY BOROUGH DPW GARAGE	MEHRHOF RD & CRESCENT ST	LITTLE FERRY BOROUGH	BERGEN	NJL800065492	0112277	405028	740209	4.4	BUST
3730	MOBIL SERVICE STATION LITTLE FERRY BORO	270 RTE 46	LITTLE FERRY BOROUGH	BERGEN	NJD986614402	0073271	405047	740219	4.0	BUST
3731	SHELL SERVICE STATION LITTLE FERRY BORO	RTE 46 E & FREDERICK ST	LITTLE FERRY BOROUGH	BERGEN	NJD986594299	0047766	405047	740219	4.0	BUST
3732	WALKER POROSWALL PIPE COMPANY	110 BERGEN TPKE	LITTLE FERRY BOROUGH	BERGEN	NJD002011286	0088455	405106	740200	3.8	BUST
3733	AIRCO GASES INCORPORATED	80 HANCOCK ST	LODI BOROUGH	BERGEN	NJD045661204	0220114	405305	740436	0.9	BUST
3734	AMOCO SERVICE STATION LODI BOROUGH	RTE 46 & SAVOIE ST	LODI BOROUGH	BERGEN	NJL600012371	0018182	405243	740453	1.4	BUST
3735	CITGO SERVICE STATION LODI BOROUGH	120 RTE 46 E	LODI BOROUGH	BERGEN	NJL600061592	0098238	405249	740447	1.3	BUST
3736	EXXON SERVICE STATION LODI BOROUGH	460 N MAIN ST	LODI BOROUGH	BERGEN	NJD986585032	0089652	405320	740448	0.8	BUST
3737	GETTY SERVICE STATION LODI BOROUGH	MAIN & UNION STS	LODI BOROUGH	BERGEN	NJD000289132	0016201	405239	740505	1.6	BUST
3738	HESS SERVICE STATION LODI BOROUGH	110 ESSEX ST	LODI BOROUGH	BERGEN	NJL600043350	0066891	405335	740427	0.4	BUST
3739	HESS SERVICE STATION LODI BOROUGH	RTE 46 E	LODI BOROUGH	BERGEN	NJL600043210	0066738	405243	740453	1.4	BUST
3740	MENDON LEASING COMPANY	224 UNION ST	LODI BOROUGH	BERGEN	NJL000061473	0028895	405224	740438	1.7	BUST
3741	SUNOCO SERVICE STATION LODI BOROUGH	RTE 17 N	LODI BOROUGH	BERGEN	NJL600165641	0261470	405243	740453	1.4	BUST
3752	H & K BUS TRANSPORTATION	145 RAMAPO VALLEY RD	MAHWAH TOWNSHIP	BERGEN	NJD980653992	0108858	405811	740500	5.0	BUST
3757	9 BROOK AVENUE	9 BROOK AVE	MAYWOOD BOROUGH	BERGEN	NJL600190045	NJL600190045-001	405403	740414	0.2	BUST
3758	MAYWOOD AUTO	14 PLEASANT AVE E	MAYWOOD BOROUGH	BERGEN	NJL800052136	0266664	405412	740338	0.7	BUST
3759	SUNOCO SERVICE STATION MAYWOOD BOROUGH	147 W PASSAIC ST	MAYWOOD BOROUGH	BERGEN	NJD986568350	0015400	405334	740243	1.5	BUST
3771	PILOT FREIGHT CARRIERS INCORPORATED	28 MOONACHIE BLVD	MOONACHIE BOROUGH	BERGEN	NJD070572474	0106210	405003	740313	4.5	BUST
3772	PRESIDENT CONTAINER	200 WEST COMMERCIAL AVE	MOONACHIE BOROUGH	BERGEN	NJD986591980	0138044	405008	740355	4.3	BUST
3773	KIRKS AUTO REPAIR	201 HENLEY AVE	NEW MILFORD BOROUGH	BERGEN	NJL600020358	0031376	405553	740128	3.4	BUST
3774	NEW MILFORD HIGH SCHOOL	RIVER RD	NEW MILFORD BOROUGH	BERGEN	NJD981131782	0129224	405633	740115	4.1	BUST
3775	SHELL SERVICE STATION NEW MILFORD BORO	722 RIVER RD	NEW MILFORD BOROUGH	BERGEN	NJD986581577	0013691	405552	740130	3.4	BUST
3784	EXXON SERVICE STATION ORADELL BOROUGH	280 KINDERKAMACK RD	ORADELL BOROUGH	BERGEN	NJD986598720	0089715	405659	740155	4.1	BUST
3786	EXXON SERVICE STATION PALISADES PARK	386 GRAND AVE	PALISADES PARK BOROUGH	BERGEN	NJL600174106	0089733	405108	740000	4.9	BUST
3787	LANDY BROTHERS OLDS INCORPORATED	425 GRAND AVE	PALISADES PARK BOROUGH	BERGEN	NJL600163588	0257853	405110	735959	4.9	BUST
3789	TELEDYNE FARRIS ENGINEERING	400 COMMERCIAL AVE	PALISADES PARK BOROUGH	BERGEN	NJD048401442	0184692	405112	740002	4.9	BUST
3790	AMOCO SERVICE STATION PARAMUS BOROUGH	640 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000529412	9402180819M	405744	740433	4.4	BUST
3791	EMIL BUEHLER TRUST	303 TO 317 RTE 17	PARAMUS BOROUGH	BERGEN	NJL600117212	0185114	405627	740419	2.9	BUST
3793	EXXON SERVICE STATION PARAMUS BOROUGH	169 MIDLAND AVE E	PARAMUS BOROUGH	BERGEN	NJD986599447	0089472	405652	740327	3.5	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3794	EXXON SERVICE STATION PARAMUS BOROUGH	214 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD000321414	0070986	405456	740312	1.6	BUST
3795	GARDEN STATE PARKWAY MILE MARKER 164 4	GS PWY MM 164.4	PARAMUS BOROUGH	BERGEN	NJL600204606	0197670	405643	740416	3.3	BUST
3796	GARDEN STATE PARKWAY MILE MARKER 164 7	GS PWY MM 164.7	PARAMUS BOROUGH	BERGEN	NJL600204614	0197689	405643	740416	3.3	BUST
3797	GARDEN STATE PLAZA	RTE 4 & 17 BLDG D	PARAMUS BOROUGH	BERGEN	NJD044832251	0199830	405643	740416	3.3	BUST
3798	GETTY SERVICE STATION PARAMUS BOROUGH	357 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJX000292078	0017435	405643	740416	3.3	BUST
3799	GETTY SERVICE STATION PARAMUS BOROUGH	639 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD986566640	0017138	405643	740416	3.3	BUST
3800	LAIDLAW TRANSIT INCORPORATED	15 PLEASANT AVE	PARAMUS BOROUGH	BERGEN	NJL800004053	0073181	405436	740415	0.8	BUST
3801	MALCOLM KONNER CHEVROLET CORPORATION	194 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD011591260	9405100	405603	740414	2.5	BUST
3802	MOBIL SERVICE STATION PARAMUS BOROUGH	RTE 17 S & GERTRUDE AVE	PARAMUS BOROUGH	BERGEN	NJD986586857	0092748	405643	740416	3.3	BUST
3803	RM OIL CORPORATION	516 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJL600106199	0169897	405643	740416	3.3	BUST
3804	SHELL SERVICE STATION PARAMUS BOROUGH	220 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD986594307	NJD986594307-001	405643	740416	3.3	BUST
3805	SHELL SERVICE STATION PARAMUS BOROUGH	612 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000583831	0013529	405643	740416	3.3	BUST
3806	SUNOCO SERVICE STATION PARAMUS BOROUGH	321 RTE 4 W	PARAMUS BOROUGH	BERGEN	NJD000704460	0164603	405643	740416	3.3	BUST
3807	SUNOCO SERVICE STATION PARAMUS BOROUGH	335 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD000693838	0164135	405643	740416	3.3	BUST
3808	SUNOCO SERVICE STATION PARAMUS BOROUGH	50 MIDLAND AVE	PARAMUS BOROUGH	BERGEN	NJD000693820	0148728	405654	740406	3.5	BUST
3809	TRIMECH CORPORATION	106 PROSPECT ST	PARAMUS BOROUGH	BERGEN	NJL600233157	0000659	405512	740348	1.6	BUST
3810	VALUE SERVICE STATION PARAMUS BOROUGH	253 RTE 4	PARAMUS BOROUGH	BERGEN	NJD982186223	0091037	405643	740416	3.3	BUST
3811	VALUE SERVICE STATION PARAMUS BOROUGH	80 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD982186280	NJD982186280	405515	740423	1.6	BUST
3812	VALUE SERVICE STATION PARAMUS BOROUGH	620 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD982186264	0091253	405643	740416	3.3	BUST
3813	VAN SAUN PARK	FOREST & HOLWAND AVES	PARAMUS BOROUGH	BERGEN	NJL600073399	0116543	405523	740307	2.0	BUST
3832	KNAPPS EXPRESS INCORPORATED	37 EMERSON ST	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600039721	0061580	405101	740115	4.3	BUST
3833	MOBIL SERVICE STATION RIDGEFIELD PARK	210 RTE 46 & MAIN ST	RIDGEFIELD PARK VILLAGE	BERGEN	NJD986604353	0098058	405100	740132	4.1	BUST
3834	PAQUET REALTY	16 INDUSTRIAL AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600250591	0261155	405130	740146	3.5	BUST
3835	SUPER VALUE	RTE 46 & RIDGEFIELD AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600003644	0005348	405116	740112	4.1	BUST
3836	TEXACO SERVICE STATION RIDGEFIELD PARK	PARK & MAIN STS	RIDGEFIELD PARK VILLAGE	BERGEN	NJD000552372	0126579	405128	740129	3.7	BUST
3847	AMOCO SERVICE STATION RIVER EDGE BOROUGH	525 HACKENSACK AVE	RIVER EDGE BOROUGH	BERGEN	NJL000040519	0011657	405445	740200	2.3	BUST
3848	EXXON SERVICE STATION RIVER EDGE BOROUGH	2 RTE 4 W	RIVER EDGE BOROUGH	BERGEN	NJD981140460	0089337	405438	740216	2.0	BUST
3849	SHELL SERVICE STATION RIVER EDGE BOROUGH	584 KINDERKAMACK RD	RIVER EDGE BOROUGH	BERGEN	NJD986594562	0047568	405540	740203	2.9	BUST
3852	BERGEN PASSAIC TRANSPORT SERVICE	53 CENTRAL AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJD986582187	0051996	405403	740434	0.3	BUST
3853	FRAPAUL CONSTRUCTION COMPANY	124 ESSEX ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJD008913550	NJD008913550-001	405426	740443	0.7	BUST
3854	KC AUTOMOTIVE	200 PASSAIC ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600199897	0042969	405450	740447	1.2	BUST
3855	NJ BELL TELEPHONE ROCHELLE PARK TOWNSHIP	CENTRAL & ROCHELLE AVES (MANHOLE 306)	ROCHELLE PARK TOWNSHIP	BERGEN	NJP000302208	NJL600194377-001	405426	740443	0.7	BUST
3856	PARKWAY GARDEN ASSOCIATES	128 ROCHELLE AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600106595	0170408	405358	740441	0.3	BUST
3860	EXXON SERVICE STATION ELMWOOD PARK BORO	370 PATERSON AVE	RUTHERFORD BOROUGH	BERGEN	NJD986598621	0077943	405017	740558	4.4	BUST
3868	AMOCO SERVICE STATION SADDLE BROOK TWP	387 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL600009112	0013970	405350	740547	1.3	BUST
3869	AZCO STEEL CORPORATION	100 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJX000264010	0190965	405334	740614	1.7	BUST
3870	BAKIR AUTO CENTER	230 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL000049486	0061599	405345	740520	0.9	BUST
3871	BERGEN COUNTY PARK COMMISSION PEHLE PARK	SADDLE RIVER RD	SADDLE BROOK TOWNSHIP	BERGEN	NJD981554769	0116534	405426	740443	0.7	BUST
3872	CITGO SERVICE STATION SADDLE BROOK TWP	606 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJL600176051	0072939	405304	740601	1.7	BUST
3873	CONTINENTAL BAKING COMPANY	330 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJL600016968	0025751	405431	740624	1.9	BUST
3874	EXXON SERVICE STATION SADDLE BROOK TWP	319 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJD039399464	0083865-BAC	405347	740534	1.1	BUST
3875	GARDEN STATE PARKWAY MILE MARKER 160 2	GS PWY MM 160.2	SADDLE BROOK TOWNSHIP	BERGEN	NJL600126304	0197553	405426	740443	0.7	BUST
3876	JOES CORNER SERVICE CENTER INCORPORATED	458 FAIRLAWN PWY	SADDLE BROOK TOWNSHIP	BERGEN	NJD986574820	0072641M	405426	740443	0.7	BUST
3877	MOBIL SERVICE STATION SADDLE BROOK TWP	16 PEHLE AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD000552067	0062976	405429	740532	1.3	BUST
3878	TEXACO SERVICE STATION SADDLE BROOK TWP	RTE 80 & PEHLE AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD986580975	0110747	405426	740443	0.7	BUST
3879	UNITED PARCEL SERVICE	280 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD039655030	NJD039655030-001	405430	740616	1.8	BUST
3883	BUITONI FOODS INCORPORATED (FORMER)	450 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD986602795	0057305	405153	740252	2.6	BUST
3884	DR MADIS LABORATORIES INCORPORATED	375 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD002012599	940817154019	405203	740257	2.4	BUST
3885	BENJAMIN FRANKLIN MIDDLE SCHOOL	1315 TAFT RD	TEANECK TOWNSHIP	BERGEN	NJD981186018	0181271	405401	740039	3.2	BUST
3886	CITGO SERVICE STATION TEANECK TOWNSHIP	618 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600165955	0262028	405327	740139	2.4	BUST
3887	EXXON SERVICE STATION TEANECK TOWNSHIP	468 TEANECK RD	TEANECK TOWNSHIP	BERGEN	NJD986583219	0070931	405231	740044	3.5	BUST
3888	LARRYS FRIENDLY SERVICE	520 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600040745	0062985	405323	740127	2.6	BUST
3889	SHELL SERVICE STATION TEANECK TOWNSHIP	227 TEANECK & FORT LEE RDS	TEANECK TOWNSHIP	BERGEN	NJD986594828	0047216	405213	740050	3.6	BUST
3890	SHELL SERVICE STATION TEANECK TOWNSHIP	735 CEDAR LN & RIVER RD	TEANECK TOWNSHIP	BERGEN	NJD986594836	0047225	405330	740153	2.2	BUST
3891	STAMBO INCORPORATED	725 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600116305	0183666	405330	740153	2.2	BUST
3892	TEXACO SERVICE STATION TEANECK TOWNSHIP	209 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJD986580876	0110493	405324	740037	3.3	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3893	UTILITIES PAINTING CORPORATION	1475 PALISADE AVE	TEANECK TOWNSHIP	BERGEN	NJL600012181	0017985	405414	740017	3.6	BUST
3901	EXXON SERVICE STATION TETERBORO BOROUGH	2 TO 4 RTE 46 E	TETERBORO BOROUGH	BERGEN	NJD986607745	0084305	405140	740330	2.6	BUST
3902	TETERBORO AIRPORT	485 INDUSTRIAL AVE	TETERBORO BOROUGH	BERGEN	NJD011310083	0099246	405133	740340	2.7	BUST
3907	BORIS & SONS AUTO REPAIR INCORPORATED	120 WALLINGTON AVE	WALLINGTON BOROUGH	BERGEN	NJL000037119	0203519	405120	740653	3.7	BUST
3908	FARMLAND DAIRIES INCORPORATED	520 MAIN AVE	WALLINGTON BOROUGH	BERGEN	NJD008955774	0031493	405136	740559	3.0	BUST
3909	HEMPELS COATINGS USA INCORPORATED	CURIE AVE & LUCIA PL	WALLINGTON BOROUGH	BERGEN	NJD001283944	0044976	405037	740607	4.1	BUST
3910	SHELL SERVICE STATION WALLINGTON BOROUGH	185 PATERSON & LOCUST AVES	WALLINGTON BOROUGH	BERGEN	NJD986594927	0047252	405100	740651	4.0	BUST
4732	2001 TONNELLE AVENUE	2001 TONNELLE AVE	NORTH BERGEN TOWNSHIP	HUDSON	NJL800003485	0247539	405536	740925	4.9	BUST
5699	AMOCO SERVICE STATION CLIFTON CITY	1260 MAIN AVE	CLIFTON CITY	PASSAIC	NJL600248280	0256892	405243	740834	3.9	BUST
5702	BLACK PRINCE DISTILLERY INCORPORATED	691 CLIFTON AVE	CLIFTON CITY	PASSAIC	NJL600186662	0255378	405214	740915	4.7	BUST
5705	C MEUNIER & SON INCORPORATED	498 LAKEVIEW AVE	CLIFTON CITY	PASSAIC	NJL600020366	0031385	405332	740822	3.6	BUST
5708	CLIFTON CITY DEPARTMENT OF PUBLIC WORKS	307 EAST 7TH ST	CLIFTON CITY	PASSAIC	NJP000883678	0135975	405312	740833	3.8	PUST
5710	CLIFTON DODGE	1346 MAIN AVE	CLIFTON CITY	PASSAIC	NJL600146203	0223193	405252	740843	4.0	BUST
5711	CLIFTON PUBLIC SCHOOL #6	745 CLIFTON AVE	CLIFTON CITY	PASSAIC	NJL600248223	0194709	405208	740920	4.8	BUST
5716	LEXINGTON SERVICE GARAGE CLIFTON	355 LEXINGTON AVE	CLIFTON CITY	PASSAIC	NJP000901991	0003944	405225	740751	3.5	BUST
5717	MOBIL SERVICE STATION CLIFTON CITY	1665 MAIN ST	CLIFTON CITY	PASSAIC	NJD986600278	0037983	405321	740915	4.3	BUST
5719	NORGUS SCREEN PRINTERS	58 SYLVAN AVE	CLIFTON CITY	PASSAIC	NJX000266056	0208956	405217	740818	3.9	BUST
5723	TELEP MOTORS	534 VAN HOUTEN AVE	CLIFTON CITY	PASSAIC	NJD981493703	0067320	405125	740845	4.8	BUST
5736	MOBIL SERVICE STATION HAWTHORNE BOROUGH	366 LINCOLN AVE	HAWTHORNE BOROUGH	PASSAIC	NJD986606986	0092567	405533	740840	4.2	BUST
5751	ACME ENGRAVING COMPANY INCORPORATED	19 TO 37 DELAWARE AVE	PASSAIC CITY	PASSAIC	NJD002151504	0201881	405127	740741	4.0	BUST
5752	CENTRAL ENGINEERING SUPPLY	834 MAIN AVE	PASSAIC CITY	PASSAIC	NJL600188783	NJL600188783-001	405158	740750	3.8	BUST
5753	CITGO SERVICE STATION PASSAIC CITY	481 VAN HOUTEN AVE	PASSAIC CITY	PASSAIC	NJL600058374	0092199	405118	740834	4.7	BUST
5755	GREEN TREE PACKING COMPANY	65 CENTRAL AVE	PASSAIC CITY	PASSAIC	NJL000060756	0105194	405155	740743	3.7	BUST
5756	GULF SERVICE STATION PASSAIC CITY	140 MAIN AVE	PASSAIC CITY	PASSAIC	NJL800021529	0063407	405037	740743	4.8	BUST
5757	MOBIL SERVICE STATION PASSAIC CITY	43 MAIN ST	PASSAIC CITY	PASSAIC	NJD982740854	0062011	405033	740750	4.9	BUST
5760	18TH AVENUE & 12TH AVENUE	18TH & 12TH AVES	PATERSON CITY	PASSAIC	NJL000063701	0212591	405515	740917	4.6	BUST
5761	30 RAILWAY AVENUE E	30 RAILWAY AVE E	PATERSON CITY	PASSAIC	NJL800015406	0249258	405401	740929	4.5	BUST
5765	- - COAST STATES	510 35TH ST E	PATERSON CITY	PASSAIC	NJL600186282	0186366	405422	740833	3.7	BUST
5766	BECKWITH MADISON MAINTENANCE CORPORATION	239 LINDBERGH PL (3RD FLOOR)	PATERSON CITY	PASSAIC	NJD065819849	940712	405410	740937	4.6	BUST
5767	BESCO GRAPHICS	2 FLORIDA AVE	PATERSON CITY	PASSAIC	NJL600105944	0169437	405348	740917	4.3	BUST
5769	CAMBRIDGE FACTORS	251 VREELAND AVE	PATERSON CITY	PASSAIC	NJL600153191	0232166	405419	740822	3.6	BUST
5771	COCA COLA BOTTLING COMPANY OF NEW YORK	263 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJL000058081	0090065	405535	740836	4.2	BUST
5772	COCA COLA BOTTLING COMPANY OF NEW YORK	470 TO 496 19TH AVE	PATERSON CITY	PASSAIC	NJD986595130	0137397	405529	740910	4.6	BUST
5773	CONTINENTAL BAKING COMPANY	534 ELLISON ST	PATERSON CITY	PASSAIC	NJL600017057	0025841	405459	740913	4.5	BUST
5774	CONTINENTAL CAN COMPANY	297 GETTY AVE	PATERSON CITY	PASSAIC	NJD002521425	0097176	405348	740930	4.5	BUST
5776	EXXON SERVICE STATION PATERSON CITY	241 21ST AVE	PATERSON CITY	PASSAIC	NJD982273997	0084477	405427	740948	4.8	BUST
5778	EXXON SERVICE STATION PATERSON CITY	MCLEAN BLVD (RTE 20) & 33RD ST E	PATERSON CITY	PASSAIC	NJD986599223	0084585	405533	740840	4.2	BUST
5781	FDR SERVICES	191 LAFAYETTE ST	PATERSON CITY	PASSAIC	NJL800061103	0048657	405531	740927	4.9	BUST
5783	GETTY SERVICE STATION PATERSON CITY	RTE 20 S	PATERSON CITY	PASSAIC	NJX000289686	0016887	405536	740835	4.2	BUST
5784	HI TECH FUELS INCORPORATED	157 GOULD AVE	PATERSON CITY	PASSAIC	NJL600072656	0113337	405344	740924	4.4	BUST
5785	J PANZARDO CONTRACTING COMPANY	145 ALABAMA AVE	PATERSON CITY	PASSAIC	NJL600009385	0014320	405360	740859	4.1	BUST
5786	LESTER RUTLAND RESOURCE CENTER	823 28TH ST E	PATERSON CITY	PASSAIC	NJL600111942	940946	405431	740854	4.1	BUST
5787	LEVINE INDUSTRIES	21 TO 27 FLORIDA AVE	PATERSON CITY	PASSAIC	NJL600193015	NJL600193015-001	405349	740913	4.3	BUST
5788	MADISON AVENUE GARAGE	738 MADISON AVE	PATERSON CITY	PASSAIC	NJD981076326	0117399	405456	740918	4.5	BUST
5789	MARSALA OIL COMPANY INCORPORATED	88 ILLINOIS AVE	PATERSON CITY	PASSAIC	NJL600042386	0065171	405347	740901	4.1	BUST
5792	RAILROAD CONSTRUCT COMPANY INCORPORATED	75 TO 77 GROVE ST	PATERSON CITY	PASSAIC	NJP000852798	0004024	405341	740918	4.4	BUST
5793	RICKBURN PARK	359 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJL600180293	0094188	405415	740805	3.3	BUST
5794	S MALATESTA & SONS	65 ILLINOIS AVE	PATERSON CITY	PASSAIC	NJL600028633	0044020	405347	740905	4.2	BUST
5795	SHELL SERVICE STATION PATERSON CITY	81 1ST AVE	PATERSON CITY	PASSAIC	NJD986594380	0047162	405625	740841	4.8	BUST
5800	W H LINEN SUPPLY COMPANY INCORPORATED	95 20TH ST E	PATERSON CITY	PASSAIC	NJL600064562	9506141	405417	740924	4.5	BUST
5801	WENY BROTHERS & STORMS COMPANY	MCLEAN BLVD & 9TH AVE	PATERSON CITY	PASSAIC	NJD0067986S6	0081678	405533	740835	4.2	BUST
6233	294 ELM AVENUE	294 ELM AVE	BOGOTA BOROUGH	BERGEN	NJL800116204	950303140430	405238	740146	2.7	CEHA
6236	1-33 36TH STREET	1-33 36TH ST	FAIR LAWN BOROUGH	BERGEN	NJL800119935	950317154149	405609	740702	3.5	CEHA
6238	64 HIGHLAND ROAD	64 HIGHLAND RD	GLEN ROCK BOROUGH	BERGEN	NJL800134363	950425094329	405736	740705	4.9	CEHA
6239	125 KANSAS STREET	125 KANSAS ST	HACKENSACK CITY	BERGEN	NJL800117095	950308082819	405238	740255	1.9	CEHA
6240	2 PARK STREET	2 PARK ST	LITTLE FERRY BOROUGH	BERGEN	NJL800138711	950517131300	405100	740213	3.8	CEHA

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
6244	109 CALIFORNIA AVENUE	109 CALIFORNIA AVE	NEW MILFORD BOROUGH	BERGEN	NJL800140923	950523160703	405658	740124	4.4	CEHA
6245	681 COOPER AVENUE	681 COOPER AVE	ORADELL BOROUGH	BERGEN	NJL800118937	950315101909	405659	740210	4.0	CEHA
6247	42 PARK WAY	42 PARK WAY	ROCHELLE PARK TOWNSHIP	BERGEN	NJL800132110	950419140355	405426	740443	0.7	CEHA

Number of Observations: 450

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
1151	ACME & DORF METAL DOOR CORPORATION	181 TO 183 LANZA AVE	GARFIELD CITY	BERGEN	NJL000039669	940140	405312	740710	2.6	BFCM-6
1153	240 RIVER STREET SOUTH	240 RIVER ST S	HACKENSACK CITY	BERGEN	NJL600193163	NJL600193163-001	405216	740221	2.5	BFCM-6
1154	EXXON SERVICE STATION HACKENSACK CITY	141 JOHNSON AVE	HACKENSACK CITY	BERGEN	NJL600128300	0200170	405420	740226	1.7	BFCM-6
1155	JOHNSON SERVICE CENTER	112 PASSAIC ST	HACKENSACK CITY	BERGEN	NJL600168041	0266213	405331	740238	1.5	BFCM-6
1156	OLYMPIAN ENERGY OF NJ INCORPORATED	400 TO 414 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600021828	931052	405320	740245	1.5	BFCM-6
1157	ROTOTECH CORPORATION	130 GAMEWELL ST	HACKENSACK CITY	BERGEN	NJL500028253	E90306	405306	740251	1.6	BFCM-6
1161	AMOCO SERVICE STATION LODI BOROUGH	RTE 46 E & CLARK ST	LODI BOROUGH	BERGEN	NJL600026678	0040781	405243	740453	1.4	BFCM-6
1165	MOONACHIE ROAD PUMP STATION	121 MOONACHIE RD	MOONACHIE BOROUGH	BERGEN	NJL000065490	950588	405024	740252	4.2	BFCM-6
1169	PRESTIGE MERCEDES	405 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD986593606	0031727	405643	740416	3.3	BFCM-6
1173	ADVERTISERS SERVICE GROUP	65 RAILROAD AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL000057448	0234272	405138	740146	3.4	BFCM-6
1174	RIDGEFIELD PARK MOTOR LODGE	RTE 46 E	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600136840	0211141	405041	740051	4.8	BFCM-6
1175	CITGO SERVICE STATION ROCHELLE PARK TWP	88 ESSEX ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600188924	940795	405426	740443	0.7	BFCM-6
1176	RIDGE SERVICE	54 UNION AVE	RUTHERFORD BOROUGH	BERGEN	NJL000056920	950664	404951	740612	4.9	BFCM-6
1177	EXXON SERVICE STATION SADDLE BROOK TWP	319 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJD039399464	0083865-BAC	405347	740534	1.1	BFCM-6
1178	GULF SERVICE STATION SADDLE BROOK TWP	131 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL600031876	9503112	405345	740503	0.6	BFCM-6
1179	SADDLE BROOK MOVING CENTER	210 RTE 46 E	SADDLE BROOK TOWNSHIP	BERGEN	NJD986585552	0032762	405321	740546	1.4	BFCM-6
1180	EMERSON SCHOOL 3	433 NORTH ST	TEANECK TOWNSHIP	BERGEN	NJL600114672	931046	405315	740127	2.6	BFCM-6
1181	SUPER VALUE OIL COMPANY	1617 RIVER RD	TEANECK TOWNSHIP	BERGEN	NJL600044820	0069195	405444	740128	2.7	BFCM-6
1410	CARDINAL GLOVE COMPANY INCORPORATED	1 LISBON ST	CLIFTON CITY	PASSAIC	NJD002167302	E88A70	405145	740859	4.7	BFCM-6
1411	CLIFTON FIRE DEPARTMENT ENGINE 3	180 MAHAR AVE	CLIFTON CITY	PASSAIC	NJD982730293	9407127	405241	740754	3.4	BFCM-6
1412	DIKEMAN LAMINATING CORPORATION	181 SARGEANT AVE	CLIFTON CITY	PASSAIC	NJD002457570	940206	405153	740922	5.0	BFCM-6
1415	GULF SERVICE STATION CLIFTON CITY	532 LEXINGTON AVE	CLIFTON CITY	PASSAIC	NJL600244479	0019109	405243	740804	3.5	BFCM-6
1417	SERVICE STATION CLIFTON CITY	387 CROOKS AVE	CLIFTON CITY	PASSAIC	NJL800113532	0057477	405353	740830	3.6	BFCM-6
1422	ARVIND AUTO SERVICE INCORPORATED	452 PAULISON AVE	PASSAIC CITY	PASSAIC	NJL000061911	931231	405141	740815	4.3	BFCM-6
1423	A CAPONE SANITATION INCORPORATED	178 RIVER ST	PATERSON CITY	PASSAIC	NJL600199178	941157	405111	740714	4.0	BFCM-6
1424	HENRYS BOILER & PRESSING EQUIPMENT	375 11TH AVE	PATERSON CITY	PASSAIC	NJD011618451	9407143	405520	740906	4.5	BFCM-6
1425	PATERSON CITY DEPARTMENT OF PUBLIC WORKS	402 16TH ST E	PATERSON CITY	PASSAIC	NJD980771836	940794	405536	740925	4.9	BFCM-6
1426	SERVICE STATION PATERSON CITY	828 MAIN ST	PATERSON CITY	PASSAIC	NJL600056352	940641	405356	740949	4.8	BFCM-6
1427	SHELL SERVICE STATION PATERSON CITY	10 18TH AVE	PATERSON CITY	PASSAIC	NJD986594364	0047171	405442	740918	4.4	BFCM-6
1429	TPD COMPANY INCORPORATED	451 5TH AVE	PATERSON CITY	PASSAIC	NJD982530750	E90A29	405557	740829	4.3	BFCM-6
1430	WILKINSON COMPANY	128 9TH AVE	PATERSON CITY	PASSAIC	NJL600152953	0231879	405434	740901	4.2	BFCM-6
1527	29 HARING STREET	29 HARING ST	BERGENFIELD BOROUGH	BERGEN	NJL000070375	9402102	405536	740007	4.2	BFD-CA
1530	SKETCHLEY SERVICES	163 SCHLEY ST	GARFIELD CITY	BERGEN	NJD980780944	920188	405252	740617	2.1	BFD-CA
1531	ROUTE POWER MATE COMPANY	514 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJD001820206	930668	405355	740248	1.3	BFD-CA
1532	OVERPECK PARK LANDFILL	FORT LEE RD	LEONIA BOROUGH	BERGEN	NJD980505606	930253	405149	735923	4.9	BFD-CA
1535	CAESAR PALACE PUMP STATION	CAESAR PL & MOONACHIE AVE	MOONACHIE BOROUGH	BERGEN	NJL600127146	0198705	405020	740350	4.1	BFD-CA
1537	NORTHVALE BOROUGH LANDFILL	103 STONEHURST CT	NORTHVALE BOROUGH	BERGEN	NJL900000811	930384	405643	740416	3.3	BFD-CA
1545	TEANECK TOWNSHIP POMANDER WALK SLF	POMANDER WALK	TEANECK TOWNSHIP	BERGEN	NJL900001462	9303204	405321	740208	2.0	BFD-CA
1731	SWEPCO TUBE	1 CLIFTON BLVD	CLIFTON CITY	PASSAIC	NJD002188597	920195	405140	740840	4.6	BFD-CA
1776	162 LODI STREET	162 LODI ST	HACKENSACK CITY	BERGEN	NJL600162028	E93381	405228	740259	2.0	BFD-IN
1777	BERGEN COUNTY VOCATIONAL SCHOOLS	200 HACKENSACK AVE	HACKENSACK CITY	BERGEN	NJD025728155	0141310	405408	740205	2.0	BFD-IN
1800	TECHNICAL OIL PRODUCTS INCORPORATED	150 GRAND ST	CARLSTADT BOROUGH	BERGEN	NJD002172682	930622154406	405012	740426	4.2	BFD-N
1801	WHITE ROSE DAIRY	30 COMMERCE RD	CARLSTADT BOROUGH	BERGEN	NJL800048449	940401105306	404947	740318	4.8	BFD-N
1802	311 GROVE STREET	311 GROVE ST	EAST RUTHERFORD BOROUGH	BERGEN	NJL000061234	NJL000061234	405010	740602	4.5	BFD-N
1808	MATHESON GAS PRODUCTS	932 PATERSON PLANK RD	EAST RUTHERFORD BOROUGH	BERGEN	NJD042793976	9503174	404952	740513	4.7	BFD-N
1813	AETNA CHEMICAL CORPORATION	WALLACE ST	ELMWOOD PARK BOROUGH	BERGEN	NJD001471374	9010258P02M	405410	740626	1.9	BFD-N
1814	EMPIRE OVERALL DRY CLEANERS INC	18 STEFANIC AVENUE	ELMWOOD PARK BOROUGH	BERGEN	NJD011220423	930927	405129	740333	2.8	BFD-N
1815	KAR KRAFT	188 FOREST AVE	ENGLEWOOD CITY	BERGEN	NJL000052910	9002271158	405320	735916	4.5	BFD-N
1817	EASTMAN KODAK PROCESSING LAB	16-31 RTE 208	FAIR LAWN BOROUGH	BERGEN	NJD986603082	900712SP01M	405635	740745	4.3	BFD-N
1818	EINSON FREEMAN & DETROY CORPORATION	20-10 MAPLE AVE	FAIR LAWN BOROUGH	BERGEN	NJD052092616	921265	405637	740831	4.8	BFD-N
1819	KODALUX PROCESSING SERVICE	16-31 RTE 208	FAIR LAWN BOROUGH	BERGEN	NJD011256914	930820133705	405634	740741	4.3	BFD-N
1820	TOPPS CLEANERS & LAUNDERERS	22-02 FAIRLAWN AVE	FAIR LAWN BOROUGH	BERGEN	NJD046346870	NJD046346870	405601	740820	4.3	BFD-N
1824	18 LAUREL STREET	18 LAUREL ST	GARFIELD CITY	BERGEN	NJL000050054	931005	405325	740643	2.2	BFD-N
1825	EC ELECTROPLATING	125 CLARK ST	GARFIELD CITY	BERGEN	NJD002006773	9310131102l6	405222	740608	2.3	BFD-N
1826	MELTZER & SONS	118 TO 120 OUTWATER LN	GARFIELD CITY	BERGEN	NJL840000426	9007131216M	405253	740648	2.4	BFD-N
1828	RIDGEWOOD POLICE FIRING RANGE	561 PROSPECT ST	GLEN ROCK BOROUGH	BERGEN	NJL000062307	930959	405747	740642	4.9	BFD-N

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1830	192 EUCLID AVENUE	192 EUCLID AVE	HACKENSACK CITY	BERGEN	NJL000055657	930126152ZM	405357	740247	1.4	BFD-N
1831	ODYSSEY BODY WORKS INCORPORATED	161 LINDEN ST	HACKENSACK CITY	BERGEN	NJD089747166	9308116	405351	740229	1.6	BFD-N
1832	POLYCAST TECHNOLOGY CORPORATION	215 SOUTH NEWMAN ST	HACKENSACK CITY	BERGEN	NJD010970846	940608133216	405225	740327	1.9	BFD-N
1833	SHELL SERVICE STATION HACKENSACK CITY	160 PASSAIC ST	HACKENSACK CITY	BERGEN	NJD986593333	930503SP01M	405335	740244	1.4	BFD-N
1835	LEONIA OIL SPILL	BERGEN BLVD	LEONIA BOROUGH	BERGEN	NJL000010207	921016SP01M	405149	735923	4.9	BFD-N
1836	DUKES AUTO SALVAGE	99 DELL GLEN AVE	LODI BOROUGH	BERGEN	NJD986570455	9311104	405253	740511	1.4	BFD-N
1845	ESSELTE PENDAFLEX CORPORATION	10 CAESAR PL	MOONACHIE BOROUGH	BERGEN	NJD064329436	921264	405019	740352	4.1	BFD-N
1846	TECHBESTOS INCORPORATED	131 WEST COMMERCIAL AVE	MOONACHIE BOROUGH	BERGEN	NJD001522689	930353	404956	740341	4.6	BFD-N
1849	9 FOREST AVENUE	9 FOREST AVE	PARAMUS BOROUGH	BERGEN	NJL800092520	930208100931M	405643	740416	3.3	BFD-N
1850	AMOCO SERVICE STATION PARAMUS BOROUGH	640 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000529412	9402180819M	405744	740433	4.4	BFD-N
1851	B&R MOTORS EXPRESS	845 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJL800010910	930922083852	405643	740416	3.3	BFD-N
1857	DIXO COMPANY INCORPORATED	158 CENTRAL AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJD002009850	9307184	405402	740422	0.2	BFD-N
1859	LA CENA FOODS	4 ROSOL LN	SADDLE BROOK TOWNSHIP	BERGEN	NJL000052191	930104	405453	740633	2.3	BFD-N
1860	11 ROMANELLI AVENUE	11 ROMANELLI AVE	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJL000047027	931096	405222	740316	2.0	BFD-N
1861	DR MADIS LABORATORIES INCORPORATED	375 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD002012599	940817154019	405203	740257	2.4	BFD-N
1862	CEDARS BAKERY MIDDLE EASTERN FOODS	953 TEANECK RD	TEANECK TOWNSHIP	BERGEN	NJLB40001077	NJLB40001077	405316	740018	3.6	BFD-N
1863	EXXON STORAGE FACILITY	MALCOLM AVE	TETERBORO BOROUGH	BERGEN	NJD981131675	921136	405119	740407	3.0	BFD-N
1867	H & S CHEMICAL COMPANY INCORPORATED	52 VAN DYKE ST	WALLINGTON BOROUGH	BERGEN	NJD002008118	9309260743	405040	740605	4.0	BFD-N
2147	KRAFT GENERAL FOODS	203 KULLER RD	CLIFTON CITY	PASSAIC	NJC876022351	9212171350	405316	740953	4.9	BFD-N
2151	VAR CHEM PRODUCTS INCORPORATED	300 KULLER RD	CLIFTON CITY	PASSAIC	NJD064307994	9406170	405304	740950	4.9	BFD-N
2156	110 BROOK AVENUE	110 BROOK AVE	PASSAIC CITY	PASSAIC	NJL000066977	9306080857N	405026	740745	5.0	BFD-N
2157	59 CENTRAL AVENUE	59 CENTRAL AVE	PASSAIC CITY	PASSAIC	NJL800011926	940317B	405154	740743	3.7	BFD-N
2158	ACME ENGRAVING COMPANY INCORPORATED	19 TO 37 DELAWARE AVE	PASSAIC CITY	PASSAIC	NJD002151504	0201881	405127	740741	4.0	BFD-N
2159	TRI STATE ASSOCIATES	376 PAULISON AVE	PASSAIC CITY	PASSAIC	NJL600168892	0267609	405136	740805	4.2	BFD-N
2160	CPN INDUSTRIAL COMPLEX	27 33RD ST E	PATERSON CITY	PASSAIC	NJD055099113	9306295P01	405521	740826	4.0	BFD-N
2161	CYGNUS INCORPORATED	510 41ST ST E	PATERSON CITY	PASSAIC	NJX000279802	NJL000066126	405419	740812	3.4	BFD-N
2162	HETERENE CHEMICAL COMPANY INCORPORATED	792 21ST AVE	PATERSON CITY	PASSAIC	NJD986592335	930716123226	405415	740818	3.5	BFD-N
2164	TEN HOEVE BROTHERS INCORPORATED	359 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJD002446607	9306161415N	405415	740806	3.3	BFD-N
3081	BORDEN CHEMICAL PRINTING INK DIVISION	9-10 22ND ST	FAIR LAWN BOROUGH	BERGEN	NJD001374883	NJD001374883	405558	740657	3.3	BSCM
3225	KIRKER CHEMICAL COMPANY	1 EAST 11TH ST	PATERSON CITY	PASSAIC	NJD002180834	NJD002180834	405623	740842	4.8	BSCM
3226	MORTON CHEMICAL DIVISION MORTON THIOKOL	335 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJD051274348	NJD051274348	405417	740805	3.3	BSCM
3228	PRATT GABRIEL	204 21ST AVE	PATERSON CITY	PASSAIC	NJD980760250	910903	405428	740959	5.0	BSCM
3290	GRANT INDUSTRIES INCORPORATED	125 MAIN AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD085505196	921098-I	405442	740638	2.2	BSM
3291	STOR DYNAMICS	99 MAIN AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD002998052	NJD002998052	405435	740642	2.2	BSM
3294	AMOCO SERVICE STATION GARFIELD CITY	45 MONROE ST	GARFIELD CITY	BERGEN	NJL000063271	9303251418M	405211	740634	2.8	BSM
3295	LODI MUNICIPAL WELLFIELD CONTAMINATION	VARIOUS LOCATIONS WITHIN BOROUGH	LODI BOROUGH	BERGEN	NJD980769301	M058	405223	740533	2.0	BSM
3296	MAGNOLIA AVENUE GROUND WATER CONTAM	MAGNOLIA AVE	MAYWOOD BOROUGH	BERGEN	NJD982273583	NJD982273583	405415	740413	0.4	BSM
3300	INDUSTRIAL LATEX	350 MT PLEASANT AVE	WALLINGTON BOROUGH	BERGEN	NJD981178411	950561	405119	740558	3.3	BSM
3434	PAPERBOARD SPECIALTIES INCORPORATED	177 TO 302 3RD AVE	PATERSON CITY	PASSAIC	NJD147427843	920835	405611	740835	4.6	BSM
3560	GETTY SERVICE STATION BERGENFIELD BORO	125 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJC876015041	0137351	405555	735943	4.7	BUST
3561	ROCKLAND COACHES INCORPORATED	126 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJL600046064	0071183	405555	735943	4.7	BUST
3562	ROOFERS SUPPLIES INCORPORATED	30 COLUMBIA AVE	BERGENFIELD BOROUGH	BERGEN	NJL600072334	0114888	405525	735953	4.3	BUST
3563	SHELL SERVICE STATION BERGENFIELD BORO	218 NORTH WASHINGTON AVE	BERGENFIELD BOROUGH	BERGEN	NJD980772859	0032339	405606	735942	4.8	BUST
3564	MOBIL SERVICE STATION BOGOTA BOROUGH	51 QUEEN ANNE RD	BOGOTA BOROUGH	BERGEN	NJD986604239	0072245	405202	740121	3.4	BUST
3565	SUNOCO SERVICE STATION BOGOTA BOROUGH	330 PALISADE AVE	BOGOTA BOROUGH	BERGEN	NJL600240600	0102322	405236	740130	2.9	BUST
3566	COMMERCE ROAD REALTORS ASSOCIATION	171 COMMERCE RD	CARLSTADT BOROUGH	BERGEN	NJL600119465	0128391	404955	740339	4.6	BUST
3567	CONTINENTAL BAKING COMPANY	720 WASHINGTON PL	CARLSTADT BOROUGH	BERGEN	NJL600016976	0025760	404943	740318	4.9	BUST
3568	GENERAL FOAM CORPORATION	109 KERO RD	CARLSTADT BOROUGH	BERGEN	NJD044132116	0050942	404941	740341	4.9	BUST
3569	JAKE & TOMS MEADOWLAND SERVICE	204 WASHINGTON AVE	CARLSTADT BOROUGH	BERGEN	NJC876028077	0263513	405011	740638	4.7	BUST
3570	RICHARD BARIS PROPERTIES	555 INDUSTRIAL RD	CARLSTADT BOROUGH	BERGEN	NJD982536732	0273710	405043	740557	3.9	BUST
3571	ROADWAY EXPRESS INCORPORATED	650 COMMERCIAL AVE	CARLSTADT BOROUGH	BERGEN	NJD981561251	0006013	404950	740346	4.7	BUST
3572	RYDER TRUCK RENTAL INCORPORATED	125 COMMERCIAL AVE	CARLSTADT BOROUGH	BERGEN	NJD064336233	0025175	405001	740342	4.5	BUST
3573	ST JOHNSBURY TRUCKING COMPANY INC	50 MOONACHIE AVE	CARLSTADT BOROUGH	BERGEN	NJD055720775	0025715	405029	740424	3.9	BUST
3575	TUNNEL BARREL & DRUM COMPANY INC	85 TRIANGLE BLVD	CARLSTADT BOROUGH	BERGEN	NJD001601152	0111269	404933	740353	5.0	BUST
3591	DUMONT BOROUGH DEPT OF PUBLIC WORKS	FOOT OF ALLADIN AVE	DUMONT BOROUGH	BERGEN	NJD986582880	0026606	405614	740023	4.4	BUST
3592	P & M FRIENDLY SERVICE INCORPORATED	387 NEW MILFORD AVE	DUMONT BOROUGH	BERGEN	NJD986603736	0040745	405638	740028	4.6	BUST

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3594	DELSACO FOODS CORP ORVAL KENT FOODS	164 MADISON ST	EAST RUTHERFORD BOROUGH	BERGEN	NJD054050141	0157962	405048	740708	4.3	BUST
3595	LUX HOLDING CORPORATION	1 MAPLE ST	EAST RUTHERFORD BOROUGH	BERGEN	NJL600193221	NJL600193221-001	405001	740613	4.7	BUST
3596	NJ BELL TELEPHONE EAST RUTHERFORD BORO	85 WILLOW ST	EAST RUTHERFORD BOROUGH	BERGEN	NJD980651947	0080462	405026	740624	4.4	BUST
3600	BRUCES AUTO CLINIC INCORPORATED	348 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJL600007314	0011189	405358	740658	2.3	BUST
3601	ELMWOOD PARK FRIENDLY SERVICE	RTE 46 & ROOSEVELT AVE	ELMWOOD PARK BOROUGH	BERGEN	NJL600058440	0092289	405336	740719	2.6	BUST
3602	EMPIRE OVERALL DRY CLEANERS INC	18 STEFANIC AVENUE	ELMWOOD PARK BOROUGH	BERGEN	NJD011220423	930927	405129	740333	2.8	BUST
3603	EXXON SERVICE STATION EDGEWATER BOROUGH	210 RTE 46 & MILL ST	ELMWOOD PARK BOROUGH	BERGEN	NJD982189144	0078294	405417	740712	2.6	BUST
3604	K&M CERTIFIED AUTOMOTIVE	257 MOLNAR DR	ELMWOOD PARK BOROUGH	BERGEN	NJD986577054	0187103	405414	740642	2.1	BUST
3605	LARKINS FRIENDLY SERVICE INCORPORATED	129 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJL600034920	0054083	405405	740734	2.8	BUST
3606	MERIT SERVICE STATION ELMWOOD PARK BORO	121 BROADWAY	ELMWOOD PARK BOROUGH	BERGEN	NJD982186090	0091000	405511	740721	3.0	BUST
3607	MOBIL SERVICE STATION ELMWOOD PARK	300 MOLNAR DR	ELMWOOD PARK BOROUGH	BERGEN	NJD986605301	0072308	405417	740630	2.0	BUST
3608	SERVICE STATION ELMWOOD PARK BOROUGH	226 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJD011220928	0004781	405402	740718	2.6	BUST
3609	SUNOCO SERVICE STATION ELMWOOD PARK	RIVER DR & LEE ST	ELMWOOD PARK BOROUGH	BERGEN	NJD000693648	0164081	405420	740745	3.0	BUST
3610	SUNOCO SERVICE STATION ELMWOOD PARK BORO	RTE 46 E & ROOSEVELT AVE	ELMWOOD PARK BOROUGH	BERGEN	NJD000693630	0164513	405417	740712	2.6	BUST
3611	TEXACO SERVICE STATION ELMWOOD PARK BORO	357 MARKET ST	ELMWOOD PARK BOROUGH	BERGEN	NJD986580819	0110819	405358	740654	2.2	BUST
3612	TEXACO SERVICE STATION ELMWOOD PARK BORO	39 BROADWAY	ELMWOOD PARK BOROUGH	BERGEN	NJL600190979	NJL600190979-001	405507	740737	3.2	BUST
3622	EXXON SERVICE STATION ENGLEWOOD CITY	119 RTE 4 W	ENGLEWOOD CITY	BERGEN	NJD982744203	0089779	405301	735918	4.5	BUST
3623	EXXON SERVICE STATION ENGLEWOOD CITY	120 RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD982744211	0089346	405259	735918	4.5	BUST
3624	EXXON SERVICE STATION ENGLEWOOD CITY	476 GRAND AVE	ENGLEWOOD CITY	BERGEN	NJD986598712	0089742	405242	735853	5.0	BUST
3626	GETTY SERVICE STATION ENGLEWOOD CITY	134 RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD986586170	0014645	405300	735921	4.5	BUST
3627	LUCAS AEROSPACE INC PRODUCTS SUPPORT	30 VAN NOSTRAND AVE	ENGLEWOOD CITY	BERGEN	NJD037138211	0043661	405251	735854	4.9	BUST
3628	MOBIL SERVICE STATION ENGLEWOOD CITY	101 RTE 4	ENGLEWOOD CITY	BERGEN	NJD986609055	0072281	405258	735912	4.6	BUST
3629	MOBIL SERVICE STATION ENGLEWOOD CITY	501 GRAND AVE	ENGLEWOOD CITY	BERGEN	NJD986609048	0072272	405238	735856	4.9	BUST
3630	MOBIL SERVICE STATION ENGLEWOOD CITY	9 BENNETT RD & LAFAYETTE AVE	ENGLEWOOD CITY	BERGEN	NJD986609014	0254540	405348	735845	4.9	BUST
3631	ROYAL GLASS CORPORATION	500 NORDHOFF PL	ENGLEWOOD CITY	BERGEN	NJD001672419	0184818	405244	735910	4.7	BUST
3633	SUNOCO SERVICE STATION ENGLEWOOD CITY	100 RTE 4 S	ENGLEWOOD CITY	BERGEN	NJD000693663	0164397	405258	735917	4.5	BUST
3634	SUNOCO SERVICE STATION ENGLEWOOD CITY	137 RTE 4 N	ENGLEWOOD CITY	BERGEN	NJD000693671	0149070	405302	735918	4.5	BUST
3635	TARANTO BUS COMPANY CORPORATION	170 SOUTH DEAN ST	ENGLEWOOD CITY	BERGEN	NJL600015598	0023393	405318	735841	5.0	BUST
3636	TEXACO SERVICE STATION ENGLEWOOD CITY	RTE 4 E	ENGLEWOOD CITY	BERGEN	NJD981172869	0110531	405256	735913	4.6	BUST
3642	AUTO SUNSER INCORPORATED	7-06 SADDLE RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600056168	0091910	405611	740551	3.0	BUST
3643	BERDAN HOLDING COMPANY	11 TO 12 RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600179030	0059961	405602	740759	4.0	BUST
3644	EXXON SERVICE STATION FAIR LAWN BOROUGH	20-22 PLAZA RD & FAIRLAWN AVE	FAIR LAWN BOROUGH	BERGEN	NJD986589166	0070760	405622	740710	3.8	BUST
3645	EXXON SERVICE STATION FAIR LAWN BOROUGH	PLAZA RD & MORLOT AVE	FAIR LAWN BOROUGH	BERGEN	NJL000064642	NJL600220487-001	405550	740651	3.1	BUST
3646	STATE TIRE AUTOMATIVE DISCOUNT CENTER	15-10 RIVER RD	FAIR LAWN BOROUGH	BERGEN	NJL600010128	0206938	405611	740804	4.2	BUST
3671	CANGIALOSI BROTHERS	66 IRVING PL	GARFIELD CITY	BERGEN	NJD986612190	0138882	405235	740559	2.1	BUST
3672	GARFIELD CITY GARAGE	413 MIDLAND AVE	GARFIELD CITY	BERGEN	NJL600009914	0015068	405244	740609	2.1	BUST
3673	GARFIELD INDUSTRIAL COMPLEX	174 PASSAIC ST	GARFIELD CITY	BERGEN	NJL600182562	0158871	405204	740604	2.6	BUST
3674	GETTY SERVICE STATION GARFIELD CITY	606 MIDLAND AVE	GARFIELD CITY	BERGEN	NJD986587665	0017444	405303	740601	1.8	BUST
3675	KAYTORS GARAGE	379 RIVER DR	GARFIELD CITY	BERGEN	NJL600118129	NJL600220602-001	405215	740645	2.8	BUST
3676	MIDLAND AUTO ELECTRIC INCORPORATED	386 MIDLAND AVE	GARFIELD CITY	BERGEN	NJL600017396	0026426	405237	740610	2.2	BUST
3677	SHELL SERVICE STATION GARFIELD CITY	MIDLAND AVE & RIVER DR	GARFIELD CITY	BERGEN	NJD986593309	0047388	405150	740621	2.9	BUST
3680	111 MIDTOWN ASSOCIATION	111 MIDTOWN BRIDGE APPROACH	HACKENSACK CITY	BERGEN	NJL800147589	0307514	405301	740219	2.0	BUST
3681	ALL BRANDS AUTO SALES INCORPORATED	400 RIVER ST	HACKENSACK CITY	BERGEN	NJD982181174	0012133	405325	740218	1.9	BUST
3682	ALTERMAN TRANSPORT LINES INCORPORATED	450 TO 510 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600068662	0109497	405145	740209	3.1	BUST
3683	AVALON CONDOMINIUM ASSOCIATION	446 PASSAIC ST	HACKENSACK CITY	BERGEN	NJL000040154	NJL600197918-001	405356	740320	0.9	BUST
3684	BERGEN BUTCHER SERVICE	154 HACKENSACK AVE	HACKENSACK CITY	BERGEN	NJL600251409	0115959	405360	740210	1.9	BUST
3685	BERGEN COUNTY ADMINISTRATION BUILDING	40 HUDSON ST	HACKENSACK CITY	BERGEN	NJL600209522	0116769	405239	740239	2.0	BUST
3686	BERGEN COUNTY POLICE DEPARTMENT	66 ZABRISKIE ST	HACKENSACK CITY	BERGEN	NJL600073548	0116859	405426	740220	1.9	BUST
3687	CHEVRON SERVICE STATION HACKENSACK CITY	433 PASSAIC ST	HACKENSACK CITY	BERGEN	NJD986614634	0001694	405355	740319	0.9	BUST
3688	CIRCLE TIRE SERVICE INCORPORATED	200 RIVER ST	HACKENSACK CITY	BERGEN	NJL600174015	0030403	405302	740226	1.9	BUST
3689	CITIZENS FIRST NATIONAL BANK	260 HUDSON ST	HACKENSACK CITY	BERGEN	NJL600157762	941131	405214	740227	2.5	BUST
3690	EXXON SERVICE STATION HACKENSACK CITY	495 HUDSON ST	HACKENSACK CITY	BERGEN	NJP000790071	0070797	405146	740217	3.0	BUST
3691	FAIRLEIGH DICKINSON UNIVERSITY	10 WOODRIDGE AVE	HACKENSACK CITY	BERGEN	NJD982270555	NJL600190334-001	405347	740211	1.9	BUST
3692	FUJI COLOR COMPANY	514 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJD982179590	0217839	405355	740248	1.3	BUST
3693	HACKENSACK CITY ADMINISTRATION BUILDING	360 UNION ST	HACKENSACK CITY	BERGEN	NJL800139784	0135524	405323	740235	1.6	BUST
3694	HACKENSACK FORD SALES	320 RIVER ST	HACKENSACK CITY	BERGEN	NJD011292125	0117867	405316	740220	1.9	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3695	LOUS SERVICENTER	137 SOUTH STATE ST	HACKENSACK CITY	BERGEN	NJL600071724	0113998	405225	740254	2.1	BUST
3696	METSEL HARDWARE	267 SOUTH SUMMIT AVE	HACKENSACK CITY	BERGEN	NJL600193668	0116257	405233	740355	1.6	BUST
3697	MOBIL SERVICE STATION HACKENSACK CITY	27 RTE 4 E	HACKENSACK CITY	BERGEN	NJD986604338	0072344	405433	740210	2.0	BUST
3698	PIE NATIONWIDE INCORPORATED	101 COMMERCE WAY	HACKENSACK CITY	BERGEN	NJL600024269	0037091	405440	740149	2.4	BUST
3699	R A HAMILTON CORPORATION	409 SOUTH RIVER ST	HACKENSACK CITY	BERGEN	NJL600013296	0019532	405157	740214	2.9	BUST
3700	RICHARD CATENA ACURA	520 RIVER ST	HACKENSACK CITY	BERGEN	NJC876014499	NJL800025058-001	405339	740219	1.8	BUST
3701	RICHEN COMPANY	185 TO 195 KENNETH ST	HACKENSACK CITY	BERGEN	NJL600177943	0033914	405230	740330	1.7	BUST
3702	SHELL SERVICE STATION HACKENSACK CITY	POLIFLY RD & ESSEX ST	HACKENSACK CITY	BERGEN	NJD986593341	0032348	405251	740315	1.5	BUST
3703	SUBURBAN TERRACE CONDOMINIUM ASSOC INC	400 ESPLANADE	HACKENSACK CITY	BERGEN	NJL600137179	0211574	405353	740329	0.7	BUST
3704	SUNOCO SERVICE STATION HACKENSACK CITY	318 HUYLER ST	HACKENSACK CITY	BERGEN	NJL600010102	0015310	405208	740257	2.3	BUST
3705	TEXACO SERVICE STATION HACKENSACK CITY	483 ESSEX ST	HACKENSACK CITY	BERGEN	NJL800050155	0118109	405310	740346	1.0	BUST
3706	TONYS AUTO SERVICE CENTER	119 JOHNSON AVE	HACKENSACK CITY	BERGEN	NJL600146104	0223058	405418	740227	1.7	BUST
3708	AMOCO SERVICE STATION HASBROUCK HEIGHTS	426 BOULEVARD & WILLIAMS ST	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJC876018235	0018191	405143	740426	2.5	BUST
3709	EXXON SERVICE STATION HASBROUCK HEIGHTS	180 BOULEVARD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD054058243	0081353	405139	740446	2.6	BUST
3710	EXXON SERVICE STATION HASBROUCK HEIGHTS	321 BOULEVARD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986599249	0078285	405156	740430	2.2	BUST
3711	EXXON SERVICE STATION HASBROUCK HEIGHTS	423 RTE 17 S	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD982744187	0081416	405149	740352	2.4	BUST
3712	EXXON SERVICE STATION HASBROUCK HEIGHTS	RTE 17 N	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986608693	0078005	405143	740426	2.5	BUST
3713	HASBROUCK HEIGHTS DEPT OF PUBLIC WORKS	PLANT RD	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJL800004061	NJL800004061-001	405143	740426	2.5	BUST
3714	MARTHA LAPP	500 WILLIAMS AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJL600125140	0196149	405156	740353	2.3	BUST
3715	MERIT SERVICE STATION HASBROUCK HEIGHTS	RTE 17	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD982186132	0091163	405143	740426	2.5	BUST
3716	SHELL SERVICE STATION HASBROUCK HEIGHTS	300 BLVD & CENTRAL AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986585958	0047757	405143	740426	2.5	BUST
3717	SHELL SERVICE STATION HASBROUCK HEIGHTS	RTE 17 & FRANKLIN AVE	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986588366	0034968	405143	740426	2.5	BUST
3718	SHELL SERVICE STATION HASBROUCK HEIGHTS	RTE 17 S & HENRY ST	HASBROUCK HEIGHTS BOROUGH	BERGEN	NJD986593374	0047009	405143	740426	2.5	BUST
3725	GULF SERVICE STATION LEONIA BORO(FORMER)	350 GRAND AVE	LEONIA BOROUGH	BERGEN	NJD986614444	0074072	405152	735932	4.8	BUST
3726	EXXON SERVICE STATION LITTLE FERRY BORO	319 RTE 46 E	LITTLE FERRY BOROUGH	BERGEN	NJD981131584	0257399	405118	740240	3.3	BUST
3727	GATES CONSTRUCTION CORPORATION	208 GATES RD	LITTLE FERRY BOROUGH	BERGEN	NJL600018501	0028235	405024	740155	4.5	BUST
3728	GULF SERVICE STATION LITTLE FERRY BORO	252 LIBERTY ST	LITTLE FERRY BOROUGH	BERGEN	NJL600041206	0063614	405106	740236	3.5	BUST
3729	LITTLE FERRY BOROUGH DPW GARAGE	HERRHOF RD & CRESCENT ST	LITTLE FERRY BOROUGH	BERGEN	NJL800065492	0112277	405028	740209	4.4	BUST
3730	MOBIL SERVICE STATION LITTLE FERRY BORO	270 RTE 46	LITTLE FERRY BOROUGH	BERGEN	NJD986614402	0073271	405047	740219	4.0	BUST
3731	SHELL SERVICE STATION LITTLE FERRY BORO	RTE 46 E & FREDERICK ST	LITTLE FERRY BOROUGH	BERGEN	NJD986594299	0047766	405047	740219	4.0	BUST
3732	WALKER POROSWALL PIPE COMPANY	110 BERGEN TPKE	LITTLE FERRY BOROUGH	BERGEN	NJD002011286	0088455	405106	740200	3.8	BUST
3733	AIRCO GASES INCORPORATED	80 HANCOCK ST	LODI BOROUGH	BERGEN	NJD045661204	0220114	405305	740436	0.9	BUST
3734	AMOCO SERVICE STATION LODI BOROUGH	RTE 46 & SAVOIE ST	LODI BOROUGH	BERGEN	NJL600012371	0018182	405243	740453	1.4	BUST
3735	CITGO SERVICE STATION LODI BOROUGH	120 RTE 46 E	LODI BOROUGH	BERGEN	NJL600061592	0098238	405249	740447	1.3	BUST
3736	EXXON SERVICE STATION LODI BOROUGH	460 N MAIN ST	LODI BOROUGH	BERGEN	NJD986585032	0089652	405320	740448	0.8	BUST
3737	GETTY SERVICE STATION LODI BOROUGH	MAIN & UNION STS	LODI BOROUGH	BERGEN	NJD000289132	0016201	405239	740505	1.6	BUST
3738	HESS SERVICE STATION LODI BOROUGH	110 ESSEX ST	LODI BOROUGH	BERGEN	NJL600043350	0066891	405335	740427	0.4	BUST
3739	HESS SERVICE STATION LODI BOROUGH	RTE 46 E	LODI BOROUGH	BERGEN	NJL600043210	0066738	405243	740453	1.4	BUST
3740	MENDON LEASING COMPANY	224 UNION ST	LODI BOROUGH	BERGEN	NJL000061473	0028695	405224	740438	1.7	BUST
3741	SUNOCO SERVICE STATION LODI BOROUGH	RTE 17 N	LODI BOROUGH	BERGEN	NJL600165641	0261470	405243	740453	1.4	BUST
3752	H & K BUS TRANSPORTATION	145 RAMAPO VALLEY RD	MAHWAH TOWNSHIP	BERGEN	NJD980653992	0108858	405811	740500	5.0	BUST
3757	9 BROOK AVENUE	9 BROOK AVE	MAYWOOD BOROUGH	BERGEN	NJL600190045	NJL600190045-001	405403	740414	0.2	BUST
3758	MAYWOOD AUTO	14 PLEASANT AVE E	MAYWOOD BOROUGH	BERGEN	NJL800052136	0266664	405412	740338	0.7	BUST
3759	SUNOCO SERVICE STATION MAYWOOD BOROUGH	147 W PASSAIC ST	MAYWOOD BOROUGH	BERGEN	NJD986568350	0015400	405334	740243	1.5	BUST
3771	PILOT FREIGHT CARRIERS INCORPORATED	28 MOONACHIE BLVD	MOONACHIE BOROUGH	BERGEN	NJD070572474	0106210	405003	740313	4.5	BUST
3772	PRESIDENT CONTAINER	200 WEST COMMERCIAL AVE	MOONACHIE BOROUGH	BERGEN	NJD986591980	0138044	405008	740355	4.3	BUST
3773	KIRKS AUTO REPAIR	201 HENLEY AVE	NEW MILFORD BOROUGH	BERGEN	NJL600020358	0031376	405553	740128	3.4	BUST
3774	NEW MILFORD HIGH SCHOOL	RIVER RD	NEW MILFORD BOROUGH	BERGEN	NJD981131782	0129224	405633	740115	4.1	BUST
3775	SHELL SERVICE STATION NEW MILFORD BORO	722 RIVER RD	NEW MILFORD BOROUGH	BERGEN	NJD986581577	0013691	405552	740130	3.4	BUST
3784	EXXON SERVICE STATION ORADELL BOROUGH	280 KINDERKAMACK RD	ORADELL BOROUGH	BERGEN	NJD986598720	0089715	405659	740155	4.1	BUST
3786	EXXON SERVICE STATION PALISADES PARK	386 GRAND AVE	PALISADES PARK BOROUGH	BERGEN	NJL600174106	0089733	405108	740000	4.9	BUST
3787	LANDY BROTHERS OLDS INCORPORATED	425 GRAND AVE	PALISADES PARK BOROUGH	BERGEN	NJL600163588	0257853	405110	735959	4.9	BUST
3789	TELEDYNE FARRIS ENGINEERING	400 COMMERCIAL AVE	PALISADES PARK BOROUGH	BERGEN	NJD048401442	0184692	405112	740002	4.9	BUST
3790	AMOCO SERVICE STATION PARAMUS BOROUGH	640 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000529412	9402180819M	405744	740433	4.4	BUST
3791	EMIL BUEHLER TRUST	303 TO 317 RTE 17	PARAMUS BOROUGH	BERGEN	NJL600117212	0185114	405627	740419	2.9	BUST
3793	EXXON SERVICE STATION PARAMUS BOROUGH	169 MIDLAND AVE E	PARAMUS BOROUGH	BERGEN	NJD986599447	0089472	405652	740327	3.5	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3794	EXXON SERVICE STATION PARAMUS BOROUGH	214 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD000321414	0070986	405456	740312	1.6	BUST
3795	GARDEN STATE PARKWAY MILE MARKER 164 4	GS PWY MM 164.4	PARAMUS BOROUGH	BERGEN	NJL600204606	0197670	405643	740416	3.3	BUST
3796	GARDEN STATE PARKWAY MILE MARKER 164 7	GS PWY MM 164.7	PARAMUS BOROUGH	BERGEN	NJL600204614	0197689	405643	740416	3.3	BUST
3797	GARDEN STATE PLAZA	RTE 4 & 17 BLDG D	PARAMUS BOROUGH	BERGEN	NJD044832251	0199830	405643	740416	3.3	BUST
3798	GETTY SERVICE STATION PARAMUS BOROUGH	357 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJX000292078	0017435	405643	740416	3.3	BUST
3799	GETTY SERVICE STATION PARAMUS BOROUGH	639 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD986568640	0017138	405643	740416	3.3	BUST
3800	LAIDLAW TRANSIT INCORPORATED	15 PLEASANT AVE	PARAMUS BOROUGH	BERGEN	NJL800004053	0073181	405436	740415	0.8	BUST
3801	MALCOLM KONNER CHEVROLET CORPORATION	194 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD011591260	9405100	405603	740414	2.5	BUST
3802	MOBIL SERVICE STATION PARAMUS BOROUGH	RTE 17 S & GERTRUDE AVE	PARAMUS BOROUGH	BERGEN	NJD986586857	0092748	405643	740416	3.3	BUST
3803	RM OIL CORPORATION	516 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJL600106199	0169897	405643	740416	3.3	BUST
3804	SHELL SERVICE STATION PARAMUS BOROUGH	220 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD986594307	NJD986594307-001	405643	740416	3.3	BUST
3805	SHELL SERVICE STATION PARAMUS BOROUGH	612 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD000583831	0013529	405643	740416	3.3	BUST
3806	SUNOCO SERVICE STATION PARAMUS BOROUGH	321 RTE 4 W	PARAMUS BOROUGH	BERGEN	NJD000704460	0164603	405643	740416	3.3	BUST
3807	SUNOCO SERVICE STATION PARAMUS BOROUGH	335 RTE 17 S	PARAMUS BOROUGH	BERGEN	NJD000693838	0164135	405643	740416	3.3	BUST
3808	SUNOCO SERVICE STATION PARAMUS BOROUGH	50 MIDLAND AVE	PARAMUS BOROUGH	BERGEN	NJD000693820	0148728	405654	740406	3.5	BUST
3809	TRIMECH CORPORATION	106 PROSPECT ST	PARAMUS BOROUGH	BERGEN	NJL600233167	0000659	405512	740348	1.6	BUST
3810	VALUE SERVICE STATION PARAMUS BOROUGH	253 RTE 4	PARAMUS BOROUGH	BERGEN	NJD982186223	0091037	405643	740416	3.3	BUST
3811	VALUE SERVICE STATION PARAMUS BOROUGH	80 RTE 4 E	PARAMUS BOROUGH	BERGEN	NJD982186280	NJD982186280	405515	740423	1.6	BUST
3812	VALUE SERVICE STATION PARAMUS BOROUGH	820 RTE 17 N	PARAMUS BOROUGH	BERGEN	NJD982186264	0091253	405643	740416	3.3	BUST
3813	VAN SAUN PARK	FOREST & HOLWAND AVES	PARAMUS BOROUGH	BERGEN	NJL600073399	0116543	405523	740307	2.0	BUST
3832	KNAPPS EXPRESS INCORPORATED	37 EMERSON ST	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600039721	0061580	405101	740115	4.3	BUST
3833	MOBIL SERVICE STATION RIDGEFIELD PARK	210 RTE 46 & MAIN ST	RIDGEFIELD PARK VILLAGE	BERGEN	NJD986604353	009805B	405100	740132	4.1	BUST
3834	PAQUET REALTY	16 INDUSTRIAL AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600250591	0261155	405130	740146	3.5	BUST
3835	SUPER VALUE	RTE 46 & RIDGEFIELD AVE	RIDGEFIELD PARK VILLAGE	BERGEN	NJL600003644	0005348	405116	740112	4.1	BUST
3836	TEXACO SERVICE STATION RIDGEFIELD PARK	PARK & MAIN STS	RIDGEFIELD PARK VILLAGE	BERGEN	NJD000552372	0126579	405128	740129	3.7	BUST
3847	AMOCO SERVICE STATION RIVER EDGE BOROUGH	525 HACKENSACK AVE	RIVER EDGE BOROUGH	BERGEN	NJL000040519	0011657	405445	740200	2.3	BUST
3848	EXXON SERVICE STATION RIVER EDGE BOROUGH	2 RTE 4 W	RIVER EDGE BOROUGH	BERGEN	NJD981140460	0089337	405438	740216	2.0	BUST
3849	SHELL SERVICE STATION RIVER EDGE BOROUGH	584 KINDERKAMACK RD	RIVER EDGE BOROUGH	BERGEN	NJD986594562	0047568	405540	740203	2.9	BUST
3852	BERGEN PASSAIC TRANSPORT SERVICE	53 CENTRAL AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJD986582187	0051996	405403	740434	0.3	BUST
3853	FRAPAUL CONSTRUCTION COMPANY	124 ESSEX ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJD008913550	NJD008913550-001	405426	740443	0.7	BUST
3854	KC AUTOMOTIVE	200 PASSAIC ST	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600199897	0042969	405450	740447	1.2	BUST
3855	NJ BELL TELEPHONE ROCHELLE PARK TOWNSHIP	CENTRAL & ROCHELLE AVES (MANHOLE 306)	ROCHELLE PARK TOWNSHIP	BERGEN	NJP000302208	NJL600194377-001	405426	740443	0.7	BUST
3856	PARKWAY GARDEN ASSOCIATES	128 ROCHELLE AVE	ROCHELLE PARK TOWNSHIP	BERGEN	NJL600106595	0170408	405358	740441	0.3	BUST
3860	EXXON SERVICE STATION ELMWOOD PARK BORO	370 PATERSON AVE	RUTHERFORD BOROUGH	BERGEN	NJD986598621	0077943	405017	740558	4.4	BUST
3868	AMOCO SERVICE STATION SADDLE BROOK TWP	387 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL600009112	0013970	405350	740547	1.3	BUST
3869	AZCO STEEL CORPORATION	100 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJX000264010	0190965	405334	740614	1.7	BUST
3870	BAKIR AUTO CENTER	230 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJL000049486	0061599	405345	740520	0.9	BUST
3871	BERGEN COUNTY PARK COMMISSION PEHLE PARK	SADDLE RIVER RD	SADDLE BROOK TOWNSHIP	BERGEN	NJD981554769	0116534	405426	740443	0.7	BUST
3872	CITGO SERVICE STATION SADDLE BROOK TWP	606 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJL600176051	0072939	405304	740601	1.7	BUST
3873	CONTINENTAL BAKING COMPANY	330 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJL600016968	0025751	405431	740624	1.9	BUST
3874	EXXON SERVICE STATION SADDLE BROOK TWP	319 MARKET ST	SADDLE BROOK TOWNSHIP	BERGEN	NJD039399464	0083865-BAC	405347	740534	1.1	BUST
3875	GARDEN STATE PARKWAY MILE MARKER 160 2	GS PWY MM 160.2	SADDLE BROOK TOWNSHIP	BERGEN	NJL600126304	0197553	405426	740443	0.7	BUST
3876	JOES CORNER SERVICE CENTER INCORPORATED	458 FAIRLAWN PWY	SADDLE BROOK TOWNSHIP	BERGEN	NJD986574820	0072641M	405426	740443	0.7	BUST
3877	MOBIL SERVICE STATION SADDLE BROOK TWP	16 PEHLE AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD000552067	0062976	405429	740532	1.3	BUST
3878	TEXACO SERVICE STATION SADDLE BROOK TWP	RTE 80 & PEHLE AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD986580975	0110747	405426	740443	0.7	BUST
3879	UNITED PARCEL SERVICE	280 MIDLAND AVE	SADDLE BROOK TOWNSHIP	BERGEN	NJD039655030	NJD039655030-001	405430	740616	1.8	BUST
3883	BUITONI FOODS INCORPORATED (FORMER)	450 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD986602795	0057305	405153	740252	2.6	BUST
3884	DR MADIS LABORATORIES INCORPORATED	375 HUYLER ST	SOUTH HACKENSACK TOWNSHIP	BERGEN	NJD002012599	940817154019	405203	740257	2.4	BUST
3885	BENJAMIN FRANKLIN MIDDLE SCHOOL	1315 TAFT RD	TEANECK TOWNSHIP	BERGEN	NJD981184018	0181271	405401	740039	3.2	BUST
3886	CITGO SERVICE STATION TEANECK TOWNSHIP	618 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600165955	0262028	405327	740139	2.4	BUST
3887	EXXON SERVICE STATION TEANECK TOWNSHIP	468 TEANECK RD	TEANECK TOWNSHIP	BERGEN	NJD986583219	0070931	405231	740044	3.5	BUST
3888	LARRYS FRIENDLY SERVICE	520 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600040745	0062985	405323	740127	2.6	BUST
3889	SHELL SERVICE STATION TEANECK TOWNSHIP	227 TEANECK & FORT LEE RDS	TEANECK TOWNSHIP	BERGEN	NJD986594828	0047216	405213	740050	3.6	BUST
3890	SHELL SERVICE STATION TEANECK TOWNSHIP	735 CEDAR LN & RIVER RD	TEANECK TOWNSHIP	BERGEN	NJD986594836	0047225	405330	740153	2.2	BUST
3891	STAMBO INCORPORATED	725 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJL600116305	0183666	405330	740153	2.2	BUST
3892	TEXACO SERVICE STATION TEANECK TOWNSHIP	209 CEDAR LN	TEANECK TOWNSHIP	BERGEN	NJD984580876	0110493	405324	740037	3.3	BUST

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
3893	UTILITIES PAINTING CORPORATION	1475 PALISADE AVE	TEANECK TOWNSHIP	BERGEN	NJL600012181	0017985	405414	740017	3.6	BUST
3901	EXXON SERVICE STATION TETERBORO BOROUGH	2 TO 4 RTE 46 E	TETERBORO BOROUGH	BERGEN	NJD986607745	0084305	405140	740330	2.6	BUST
3902	TETERBORO AIRPORT	485 INDUSTRIAL AVE	TETERBORO BOROUGH	BERGEN	NJD011310083	0099246	405133	740340	2.7	BUST
3907	BORIS & SONS AUTO REPAIR INCORPORATED	120 WALLINGTON AVE	WALLINGTON BOROUGH	BERGEN	NJL000037119	0203519	405120	740653	3.7	BUST
3908	FARMLAND DAIRIES INCORPORATED	520 MAIN AVE	WALLINGTON BOROUGH	BERGEN	NJD008965774	0031493	405136	740559	3.0	BUST
3909	HEMPELS COATINGS USA INCORPORATED	CURIE AVE & LUCIA PL	WALLINGTON BOROUGH	BERGEN	NJD001283944	0044976	405037	740607	4.1	BUST
3910	SHELL SERVICE STATION WALLINGTON BOROUGH	185 PATERSON & LOCUST AVES	WALLINGTON BOROUGH	BERGEN	NJD986594927	0047252	405100	740651	4.0	BUST
4732	2001 TONNELLE AVENUE	2001 TONNELLE AVE	NORTH BERGEN TOWNSHIP	HUDSON	NJLB00003485	0247539	405536	740925	4.9	BUST
5699	AMOCO SERVICE STATION CLIFTON CITY	1260 MAIN AVE	CLIFTON CITY	PASSAIC	NJL600248280	0256692	405243	740834	3.9	BUST
5702	BLACK PRINCE DISTILLERY INCORPORATED	691 CLIFTON AVE	CLIFTON CITY	PASSAIC	NJL600186662	0255378	405214	740915	4.7	BUST
5705	C MEUNIER & SON INCORPORATED	498 LAKEVIEW AVE	CLIFTON CITY	PASSAIC	NJL600020366	0031385	405332	740822	3.6	BUST
5708	CLIFTON CITY DEPARTMENT OF PUBLIC WORKS	307 EAST 7TH ST	CLIFTON CITY	PASSAIC	NJP000883678	0135975	405312	740833	3.8	BUST
5710	CLIFTON DODGE	1346 MAIN AVE	CLIFTON CITY	PASSAIC	NJL600146203	0223193	405252	740843	4.0	BUST
5711	CLIFTON PUBLIC SCHOOL #6	745 CLIFTON AVE	CLIFTON CITY	PASSAIC	NJL600248223	0194709	405208	740920	4.8	BUST
5716	LEXINGTON SERVICE GARAGE CLIFTON	355 LEXINGTON AVE	CLIFTON CITY	PASSAIC	NJP000901991	0003744	405225	740751	3.5	BUST
5717	MOBIL SERVICE STATION CLIFTON CITY	1665 MAIN ST	CLIFTON CITY	PASSAIC	NJD986600278	0037983	405321	740915	4.3	BUST
5719	NORGUS SCREEN PRINTERS	58 SYLVAN AVE	CLIFTON CITY	PASSAIC	NJX000266056	0208956	405217	740818	3.9	BUST
5723	TELEP MOTORS	534 VAN HOUTEN AVE	CLIFTON CITY	PASSAIC	NJD981493703	0087320	405125	740845	4.8	BUST
5736	MOBIL SERVICE STATION HAWTHORNE BOROUGH	366 LINCOLN AVE	HAWTHORNE BOROUGH	PASSAIC	NJD986606986	0092667	405533	740840	4.2	BUST
5751	ACME ENGRAVING COMPANY INCORPORATED	19 TO 37 DELAWARE AVE	PASSAIC CITY	PASSAIC	NJD002151504	0201881	405127	740741	4.0	BUST
5752	CENTRAL ENGINEERING SUPPLY	834 MAIN AVE	PASSAIC CITY	PASSAIC	NJL600188783	NJL600188783-001	405158	740750	3.8	BUST
5753	CITGO SERVICE STATION PASSAIC CITY	481 VAN HOUTEN AVE	PASSAIC CITY	PASSAIC	NJL600058374	0092199	405118	740834	4.7	BUST
5755	GREEN TREE PACKING COMPANY	65 CENTRAL AVE	PASSAIC CITY	PASSAIC	NJL000060756	0105194	405155	740743	3.7	BUST
5756	GULF SERVICE STATION PASSAIC CITY	140 MAIN AVE	PASSAIC CITY	PASSAIC	NJL600021329	0063407	405037	740743	4.8	BUST
5757	MOBIL SERVICE STATION PASSAIC CITY	43 MAIN ST	PASSAIC CITY	PASSAIC	NJD982740854	0062011	405033	740750	4.9	BUST
5760	18TH AVENUE & 12TH AVENUE	18TH & 12TH AVES	PATERSON CITY	PASSAIC	NJL000063701	0212591	405515	740917	4.6	BUST
5761	30 RAILWAY AVENUE E	30 RAILWAY AVE E	PATERSON CITY	PASSAIC	NJL800015406	0249258	405401	740929	4.5	BUST
5765	[illegible]	510 35TH ST E	PATERSON CITY	PASSAIC	NJL600186282	0186366	405422	740833	3.7	BUST
5766	BECKWITH MADISON MAINTENANCE CORPORATION	239 LINDBERGH PL (3RD FLOOR)	PATERSON CITY	PASSAIC	NJD065819849	940712	405410	740937	4.6	BUST
5767	BESCO GRAPHICS	2 FLORIDA AVE	PATERSON CITY	PASSAIC	NJL600105944	0169437	405348	740917	4.3	BUST
5769	CAMBRIDGE FACTORS	251 VREELAND AVE	PATERSON CITY	PASSAIC	NJL600153191	0232166	405418	740822	3.6	BUST
5771	COCA COLA BOTTLING COMPANY OF NEW YORK	263 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJL000058081	0090065	405535	740836	4.2	BUST
5772	COCA COLA BOTTLING COMPANY OF NEW YORK	470 TO 496 19TH AVE	PATERSON CITY	PASSAIC	NJD986595130	0137397	405529	740910	4.6	BUST
5773	CONTINENTAL BAKING COMPANY	534 ELLISON ST	PATERSON CITY	PASSAIC	NJL600017057	0025841	405459	740913	4.5	BUST
5774	CONTINENTAL CAN COMPANY	297 GETTY AVE	PATERSON CITY	PASSAIC	NJD002521425	0097176	405348	740930	4.5	BUST
5776	EXXON SERVICE STATION PATERSON CITY	241 21ST AVE	PATERSON CITY	PASSAIC	NJD982273997	0084477	405427	740948	4.8	BUST
5778	EXXON SERVICE STATION PATERSON CITY	MCLEAN BLVD (RTE 20) & 33RD ST E	PATERSON CITY	PASSAIC	NJD986599223	0084585	405533	740840	4.2	BUST
5781	FDR SERVICES	191 LAFAYETTE ST	PATERSON CITY	PASSAIC	NJL800061103	0048657	405531	740927	4.9	BUST
5783	GETTY SERVICE STATION PATERSON CITY	RTE 20 S	PATERSON CITY	PASSAIC	NJX000289686	0016887	405536	740835	4.2	BUST
5784	HI TECH FUELS INCORPORATED	157 GOULD AVE	PATERSON CITY	PASSAIC	NJL600072656	0115337	405344	740924	4.4	BUST
5785	J PANZARDO CONTRACTING COMPANY	145 ALABAMA AVE	PATERSON CITY	PASSAIC	NJL600009385	0014320	405360	740859	4.1	BUST
5786	LESTER RUTLAND RESOURCE CENTER	823 28TH ST E	PATERSON CITY	PASSAIC	NJL600111942	940946	405431	740854	4.1	BUST
5787	LEVINE INDUSTRIES	21 TO 27 FLORIDA AVE	PATERSON CITY	PASSAIC	NJL600193015	NJL600193015-001	405349	740913	4.3	BUST
5788	MADISON AVENUE GARAGE	738 MADISON AVE	PATERSON CITY	PASSAIC	NJD981076326	0117399	405456	740918	4.5	BUST
5789	MARSALA OIL COMPANY INCORPORATED	88 ILLINOIS AVE	PATERSON CITY	PASSAIC	NJL600042386	0085171	405347	740901	4.1	BUST
5792	RAILROAD CONSTRUCT COMPANY INCORPORATED	75 TO 77 GROVE ST	PATERSON CITY	PASSAIC	NJP000852798	0004024	405341	740918	4.4	BUST
5793	RICKBURN PARK	359 MCLEAN BLVD	PATERSON CITY	PASSAIC	NJL600180293	0094188	405415	740805	3.3	BUST
5794	S MALATESTA & SONS	65 ILLINOIS AVE	PATERSON CITY	PASSAIC	NJL600028633	0044020	405347	740905	4.2	BUST
5795	SHELL SERVICE STATION PATERSON CITY	81 1ST AVE	PATERSON CITY	PASSAIC	NJD986594380	0047162	405625	740841	4.8	BUST
5800	W H LINEN SUPPLY COMPANY INCORPORATED	95 20TH ST E	PATERSON CITY	PASSAIC	NJL600064562	9506141	405417	740924	4.5	BUST
5801	WENY BROTHERS & STORMS COMPANY	MCLEAN BLVD & 9TH AVE	PATERSON CITY	PASSAIC	NJD006798656	0081678	405533	740835	4.2	BUST
6233	294 ELM AVENUE	294 ELM AVE	BOGOTA BOROUGH	BERGEN	NJL800116204	950303140430	405238	740146	2.7	CEHA
6236	1-33 36TH STREET	1-33 36TH ST	FAIR LAWN BOROUGH	BERGEN	NJL800119935	950317154149	405609	740702	3.5	CEHA
6238	64 HIGHLAND ROAD	64 HIGHLAND RD	GLEN ROCK BOROUGH	BERGEN	NJL800134363	950425094329	405736	740705	4.9	CEHA
6239	125 KANSAS STREET	125 KANSAS ST	HACKENSACK CITY	BERGEN	NJL800117095	950308082819	405238	740255	1.9	CEHA
6240	2 PARK STREET	2 PARK ST	LITTLE FERRY BOROUGH	BERGEN	NJL800138711	950517131300	405100	740213	3.8	CEHA

SITE#	NAME	ADDRESS	MUN	COUNTY	CSL#	CASE#	LAT	LON	DISTANCE	CONTAC
6244	109 CALIFORNIA AVENUE	109 CALIFORNIA AVE	NEW MILFORD BOROUGH	BERGEN	NJL800140923	950523160703	405658	740124	4.4	CEHA
6245	681 COOPER AVENUE	681 COOPER AVE	ORADELL BOROUGH	BERGEN	NJL800118937	950315101909	405659	740210	4.0	CEHA
6247	42 PARK WAY	42 PARK WAY	ROCHELLE PARK TOWNSHIP	BERGEN	NJL800132110	950419140355	405426	740443	0.7	CEHA

Number of Observations: 450

(9395 needed for all)
* Plus 5 Mile

MALCOLM PIRNIE

MALCOLM PIRNIE, INC.
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

April 26, 2002

NJDEP Bureau of Water Allocation
401 East State Street
Trenton, New Jersey 08625
Attn: Linda Belkin

Re: Request for ½ mile and 5 mile well searches.

Dear Ms. Belkin:

Malcolm Pirnie, Inc. is interested in having three ½ mile manual well searches for Location A through C indicated below. We are also requesting a 5 mile computer printout for Location D to include all monitoring wells, domestic wells, public supply wells, irrigation wells and/or other water allocation permit users.

For the ½ mile searches the locations are as follow:

Location A (MISS):	74	04'	22"	40	53'	56"
Location B (SCANEL Property):	74	03'	53"	40	53'	17"
Location C (DMV):	74	04'	42"	40	53'	04"
Location D (5 mile radius search):	74	04'	20"	40	53'	53"

Enclosed you will find the above locations displayed in red on the accompanying topographic maps.

Please find enclosed our check in the amount of $395.00 ($345 + $50) to cover the cost of the three ½ mile manual well searches for locations A through C and the computer printout of all water allocation permit users within a 5 mile radius of Location D.

Very truly yours,

George A. Markt

MALCOLM PIRNIE, INC.

104 CORPORATE PARK DR. BOX 751 WHITE PLAINS, NY 10602-0751 914-694-2100 fax 914-694-9286 http://www.pirnie.com

RECYCLED PAPER

MALCOLM PIRNIE

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½ Mile

(#395) 1 of 3 @ 5 Mile

93924

MALCOLM PIRNIE

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INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

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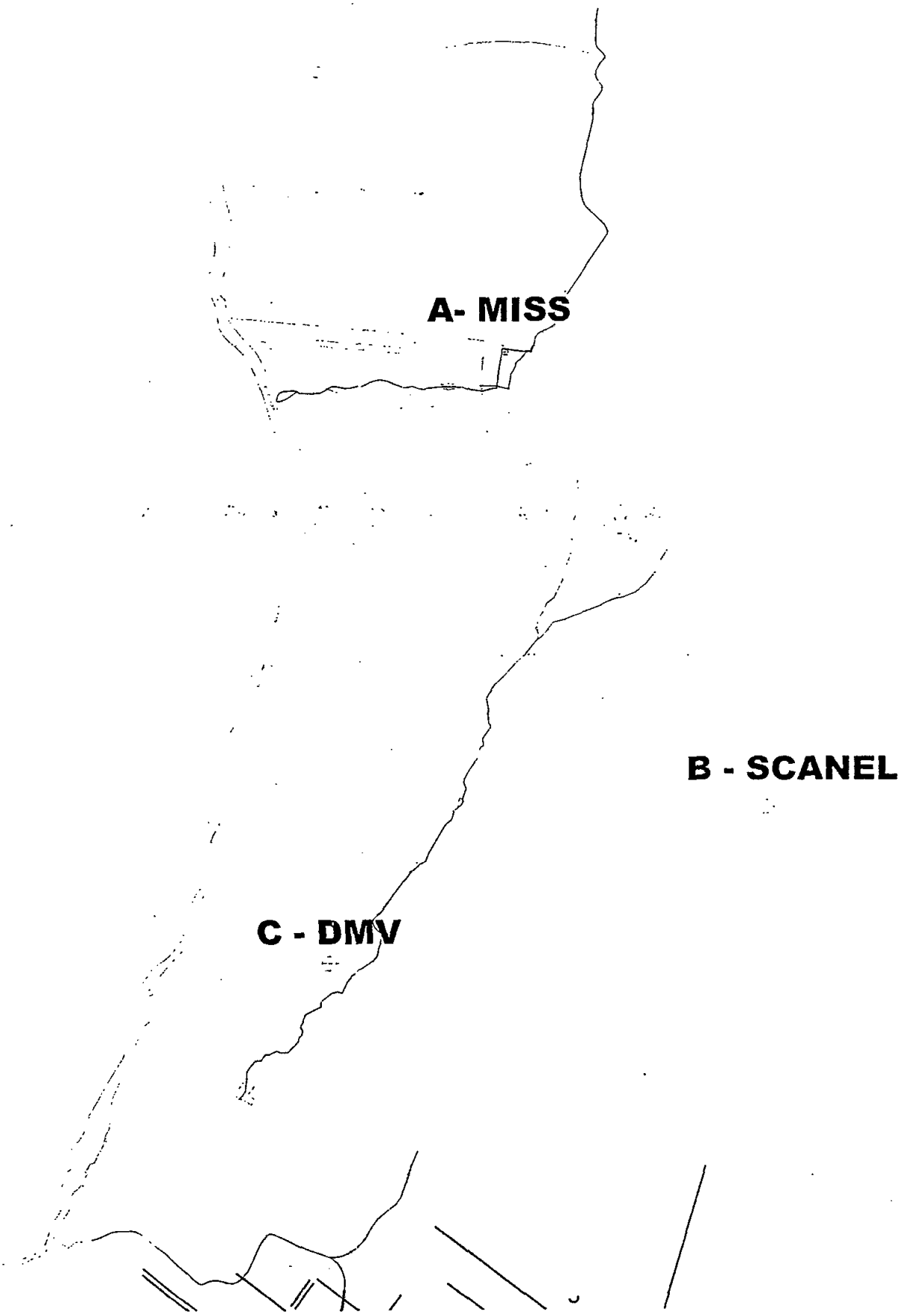
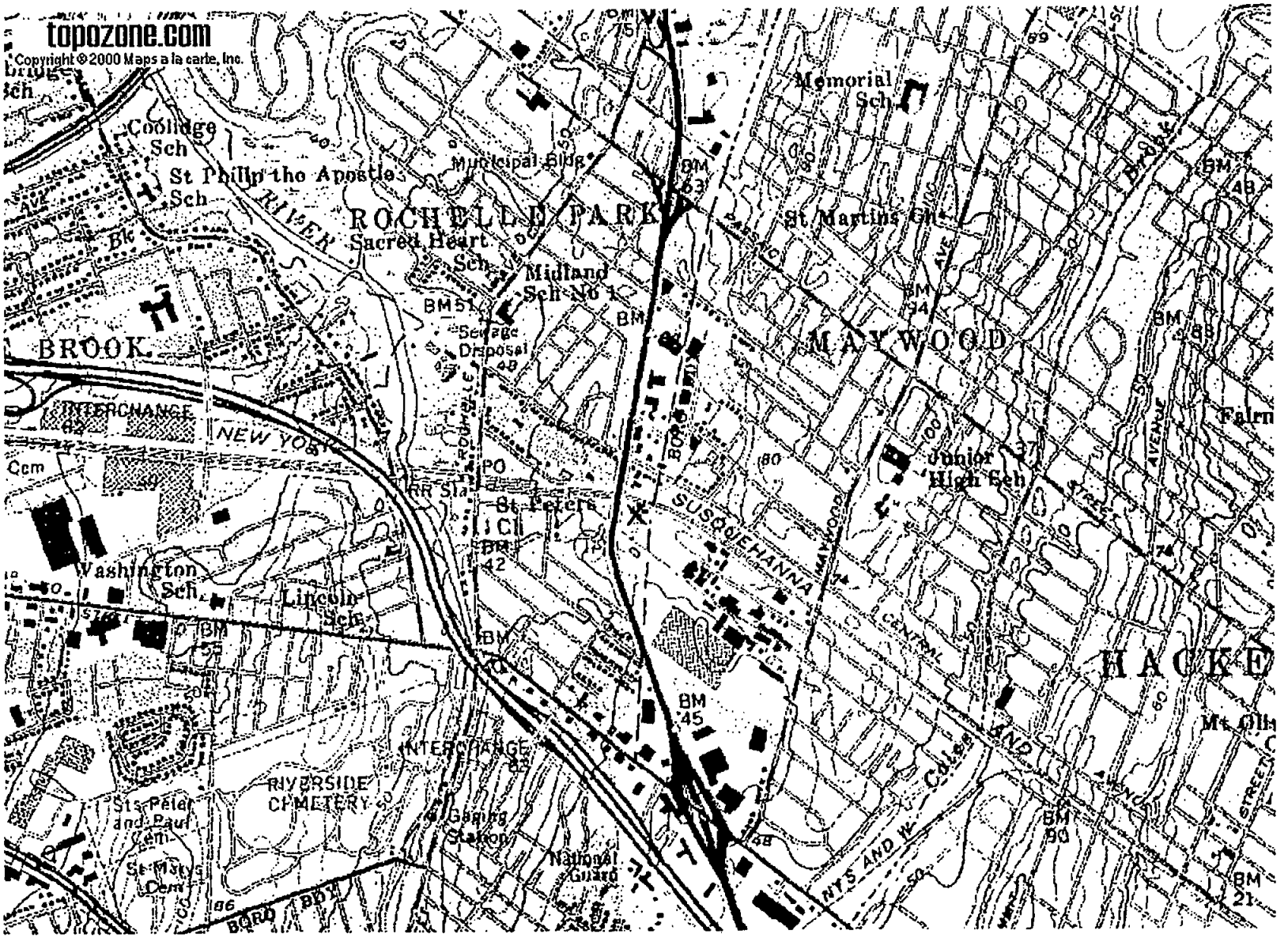

A- MISS
B - SCANEL
C - DMV

TopoZone.com

Target is 40° 53' 56"N, 74° 04' 22"W - **HACKENSACK** quad [Quad Info]



AN, Commissioner
74°08'
2,180,
74°04'
2,170,
74°02'
2,180,
74°00'
2,190,
73°58'
SADDLE
RIVER
TETERBORO
MOONACHIE
MOONACHIE
RIDGEFIELD
NEW MILFORD
NORTH HACKENSACK
SOUTH HACKENSACK
CARLSTADT
RUTHERFORD
LYNDHURST
ARLINGTON
KEARNY
HARRISON
JERSEY CITY
BAYONNE
SECAUCUS
WEEHAWKEN
HOBOKEN
GUTTENBERG
NORTH BERGEN
SOUTH RIVER
BERGEN
HACKENSACK
MOONACHIE
RIVER
Hackensack R.
Overpeck Creek
Saddle R.
Berry's Creek
Berry's Creek Canal
Hackensack River
Overpeck Creek
Saddle River
Moonachie Creek
Moonachie Creek

James E. McGreevey
Governor

State of New Jersey
Department of Environmental Protection

WATER SUPPLY ADMINISTRATION
BUREAU OF WATER ALLOCATION
P.O. BOX 426
TRENTON, NEW JERSEY 08625-0426
TEL.# 609-292-2957
FAX.# 609-633-1231

Bradley M
Commi

The well search that you have requested includes the wells that are currently contained in the Water Allocation Files, which relate to the area in question. Recognizing the fact that all well records may not have been submitted, wells installed before 1947 are not included and that there can be errors in location, it is advisable to use this resource as a guide. The Bureau recommends that a field survey of the area in question be performed in order to verify all data. We try to maintain accurate well records; however, well locations are only as accurate as the information supplied by the drilling company. Therefore, we cannot guarantee their reliability. Local Health Departments should also be contacted concerning the locations of wells within their jurisdiction.

If you have any questions, please call or write to us in reference to "Well Searches" at:

New Jersey Department of Environmental Protection
Bureau of Water Allocation
PO Box 426
Trenton, New Jersey 08625

Tel. # 609-292-2957
Fax # 609-633-1231

Thank you.

/lb
Rev.3/8/02

NEW JERSEY RECTANGULAR COORDINATE GRID SYSTEM

for

THE LOCATION OF WELLS

The rectangular coordinate grid system is a seven digit number based upon the State Atlas Sheets, note the diagram on the following page. The first two digits of the number refers to the number of the State Atlas Sheet. The second two digits represent one of twenty-five blocks, each made up of six minutes of latitude and six minutes of longitude. The fifth digit represents one of nine *Rectangles* (contained within each block), each consists of two minutes of latitude and two minutes of longitude. The sixth digit represents one of nine smaller rectangles called a square (contained within each *Rectangle*). The seventh digit represents one of nine even smaller rectangular units (contained within each square) called a unit. Note the diagrams on the following two pages.

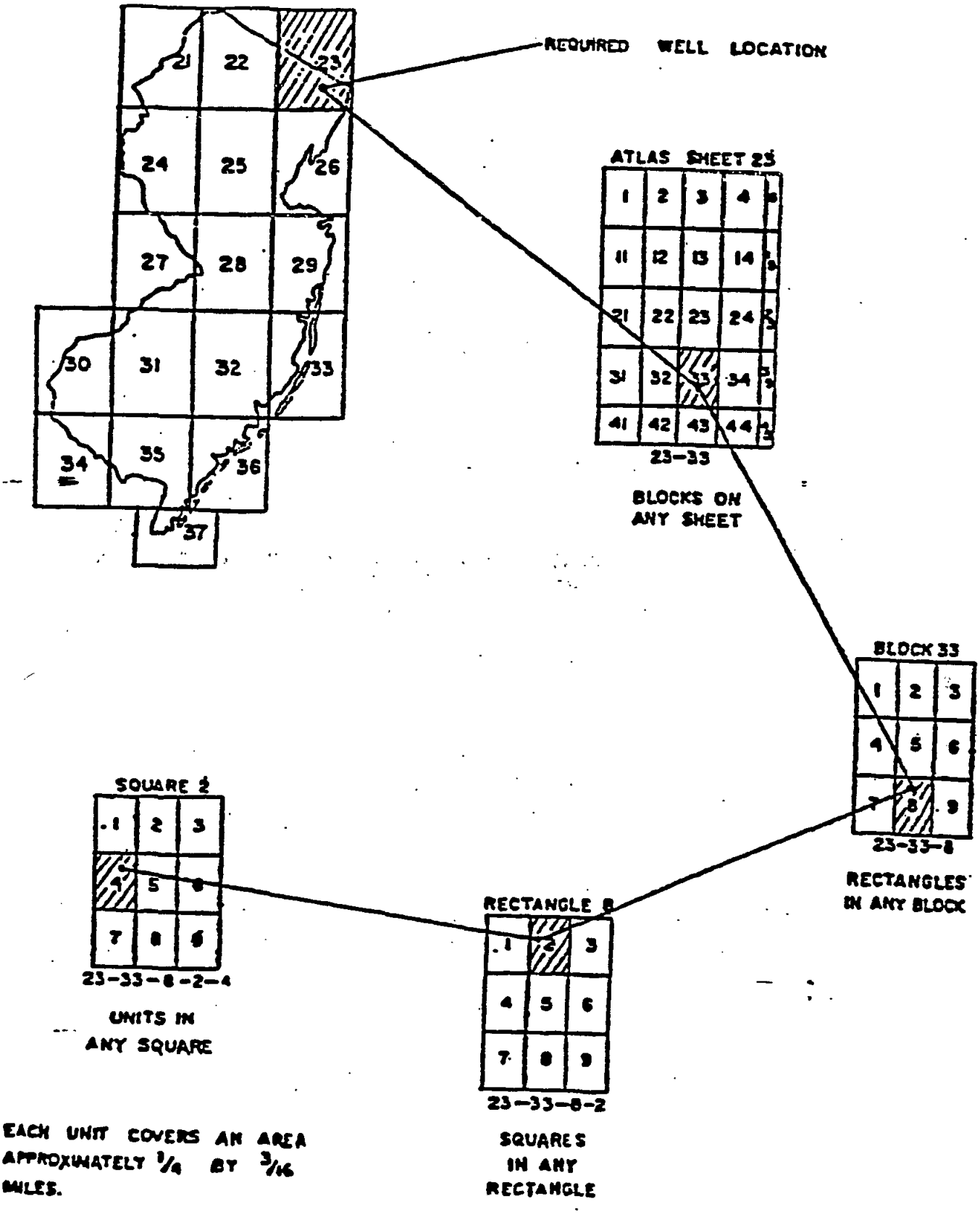
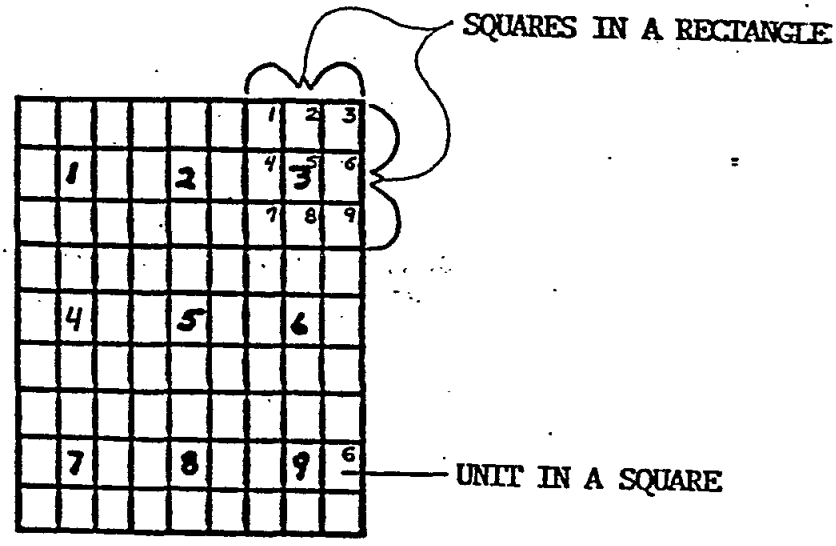


DIAGRAM SHOWING USE OF NEW JERSEY RECTANGULAR COORDINATE SYSTEM. SAMPLE WELL LOCATED AT 23-33-8-2-4


SQUARES IN A RECTANGLE
RECTANGLE
UNIT IN A SQUARE

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16428-1
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. RMW 3-A SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/22/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 103 feet

5. CASING: Type Steel Diameter 6 inches Length 28' (set 29) feet

6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____

   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 2 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Make, Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter in Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

    QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

FORM 87

26-03-537

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-4050
Application No. _____
County _____

WELL RECORD

Permit filed for Stephen Sastic
Drilled for

1. OWNER Alexander Buday ADDRESS 446 Saddle River Rd., Saddle Brook N.J.
Owner's Well No. One SURFACE ELEVATION 160 Feet (Above mean sea level)
2. LOCATION 446 Saddle River Rd., Saddle Brook, N. J.
3. DATE COMPLETED Feb. 3, 1967 DRILLER Soren Nelson Jr.
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 67 Feet
5. CASING: Type 19 # drive Diameter 6 Inches Length 49 Feet
6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet
Geologic Formation Sandy to 22', clay to 38', hardpan & stones to rock at 45', red sand stone to bottom at 69 feet.
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Feb. 3, 1967 Yield 30 Gallons per minute
Static water level before pumping 7 Feet below surface
Pumping level 15 feet below surface after 3 hours pumping
Drawdown 15 Feet Specific Capacity 30 Gals. per min. per ft. of drawdown
How Pumped Suction pump How measured 5 gal. container & watch.
Observed effect on nearby wells No
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR irrigation of lawns AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. X
Taste good Odor none Color clear Temp. 55 °F
12. LOG _____ Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Well site
14. DATA OBTAINED BY Pine Brook Well Drillers Date Feb. 3, 1967

(NOTE: Use other side of this sheet for additional information such as log of strata)

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41623
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-10-11
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9,15,95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 5 ft.
Well finished to 5 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	2	5	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	1	5	4	#2 Morie
Annular Seal/Grout	0	1	4	Cement/Bentonite
Method of Grouting	Tremi With Pump			

Static water level after drilling 2 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker SoilMAX
Name of Driller George VanNess
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 5' Red Brn Sand & Gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanNess Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41622
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-21
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/22/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	9	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	9	15	1.25	Sch 40 PVC .02 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	8	15	4	#2 morie
Annular Seal/Grout	0	8	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 1 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller George VANNESS
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 5' Red Brn Silt Sand f grand
5' to 15' Decomposed Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanVleet Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41625
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 55-2
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/12/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	15	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	9	15	4	#2 morie
Annular Seal/Grout	0	9	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6.5 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig ACKER SOILMAX
Name of Driller George VanNess
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 7' Red Brn Silty Sand
7' to 15' Red Brn Sand, Silt & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanNess Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41627
Atlas Sheet Coordinates 26 : Ø3 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-24
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/14/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	5	10	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	4	10	4	#2 morie
Annular Seal/Grout	0	4	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 4' Red Brn Sand & gravel
4' to 6' Black Sandy Silt with gravel
6' to 8' gray Sand with Silt
8' to 10' Red Brn Silty Sand with gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41628
Atlas Sheet Coordinates 26 : Ø3 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RS-22
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/20/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 345 ft.
Well finished to 20 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	15	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	15	20	1.25	Sch 40 pvc - 020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	13	20	4	#2 morie
Annular Seal/Grout	0	13	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Note: Hole grouted with Cement/Bentonite from 20' to 345'

Static water level after drilling 1.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 13306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Red Brn Sand Silt Gravel
5' to 15' Red gray Brn Sand Silt gravel & Rock Fragments
15' to 29.5' Red Brn Sand, gravel & Sand Stone Fragments
29.5' to 345' Sand Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41629
Atlas Sheet Coordinates 26 : Ø3 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-30
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10/27/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	SCL 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	15	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	9	15	4	#2 Morie
Annular Seal/Grout	0	9	4	Cement/Bentonite
Method of Grouting	Tremi With Pump			

Static water level after drilling 4 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Hillbilly
Name of Driller George VanWess
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one): None (D) C B A
N.J. License No. 51266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 2' Red Brn Silty C/F Sd & gravel (FILL)
2' to 6' Same with Trace of wood
6' to 10' Red Brn C/F Sd & gravel
10' to 12.5' gray f Sd & Silt Tr Clay Tr organic

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanWess Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138.M
11/94

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41630
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-25
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9.25.95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 39.5 ft.
Well finished to 35 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	C	30	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	30	35	1.25	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	28	39.5	4	#2 morie
Annular Seal/Grout	0	28	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 9 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 5' Brn m/f Sd sm gravel Trace Black Top. (Fill)
5' to 13' Brn c/f Sd sm c/f gravel Tr Silt
13' to 25' Brn dk Silt Lt f/Sd Tr gravel
25' to 34'6" Brn c/f Sd sm c/f gravel Tr Sandstone
34'6" to 39'6" Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 11/11/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41631
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PM 13
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9.29.95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	15	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	15	20	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	14	20	4	#2 morie
Annular Seal/Grout	0	14	4	Cement/Bentonite
Method of Grouting	Tremie with Pump			

Static water level after drilling 10 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 8' Brn C/FSd & f C/F gravel (Fill)
8 to 12' Brn org m/FSd Tr f gravel & Shale Frag.
12 to 15' Blk-Brn FSd Sm silt Tr C/F gravel & Shale Frag.
15 to 20' Brn m/FSd Tr silt & Sandstone Frag.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 11/11/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41633
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-8 (Blanket)
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/24/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 18.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid Bentonite Type of Rig Ackerhillbilly
Name of Driller Jerrold Klaus
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B0195
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 2' Brn Silt Tr f Sd Tr Roots
2' to 2'6" Sand Stone Frag
2'6" to 19' Red Brn Silt Sd & gravel
19' to 20' Red Brn Silty Sand & Sand Stone Fragments
20' to 25' Sand Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jerrold Klaus Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 44604
Atlas Sheet Coordinates 26 : 03 :538

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-21A
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address RT. 80 EAST BOUND Date well started 6/5/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 6/6/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Binckhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 14 ft.
Borehole diameter: Top 5 in. Bottom 5 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	9	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	9	14	1.25	Sch 40 PVC .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	7	15	5	#2 Morie
Annular Seal/Grout	0	7	5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 10' ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller Victor Rotonda
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 51273
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6' Red Brn clFSd & gravel
6' to 13' Red Brn clFSd Trace of Clayey Silt
13' to 15' Red Brn clFSd Some mlF gravel Trace Silt

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Victor Rotonda Date 6/15/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 45833
Atlas Sheet Coordinates 26 : Ø3 538

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-3-9
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 11 / 25 / 96
TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11 / 25 / 96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 609-561-4800

WELL CONSTRUCTION

Total depth drilled 55'6" ft.

Well finished to N/A ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 11' ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method MUD ROTARY
Drilling Fluid BENTONITE Type of Rig CME 75
Name of Driller Mike Blejwas
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. B0185
Name of Drilling Company JERSEY BORING & DRILLING CO.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" Asphalt
6" - 2' Gray coarse gravel.
2' - 15' Gray coarse to fine gravel, with some red brown fine to medium sand and silt.
15' - 35' Red brown fine to medium sand and silt.
35' - 40' Red brown fine to coarse sand, trace silt.
40' - 50' Red medium to fine sand & silt, with fine to coarse gravel.
50' - 55'6" Rock.

97 DEC 31 8:15:50

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Michael Blejwas Date 12/26/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~45834~~
Atlas Sheet Coordinates ~~26~~ : ~~03~~ ~~538~~

OWNER IDENTIFICATION - Owner ~~NJ DOT~~
Address PARKWAY AVE
City ~~TRENTON~~ State ~~NJ~~ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 53-5
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 11/27/96
TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ N/A Date well completed 11/27/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett-Fleming Tele. # 908-526-0112

WELL CONSTRUCTION

Total depth drilled 35 ft.
Well finished to 35 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [ ] Yes [X] No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	25	1.25	sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	25	35	1.25	sch 40 pvc .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	23	35	4	#2 morie
Annular Seal/Grout	0	23	4	BenSeal
Method of Grouting	Tremi with pump			

Static water level after drilling 1 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CMES55
Name of Driller George Thornhill
Health and Safety Plan submitted? [ ] Yes [X] No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 21306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0" to 4" Top Soil
4" to 20' Red Brn Sd, gravel & Silt
20' to 30' Red Brn C/F Sd & C/F gravel
30' to 35' Red Brn Shale

97 DEC 31 AM 8:51

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/21/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 25 ~~45835~~
Atlas Sheet Coordinates 26 : ~~05~~ ~~530~~

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625
WELL LOCATION - If not the same as owner please give address. Owner's Well No. 05-4 (53-4)
County BERGEN Municipality LODI BORO Lot No. Block No.
Address ROUTE 80 WESTBOUND Date well started ~~N/A~~ 11/25/96 N/A
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/27/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Garrett Fleming Tele. # 908-562-0112

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 50 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	40	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	40	50	1.25	Sch 40 pvc .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	38	55	4	#2 morie
Annular Seal/Grout	0	38	4	BenSeal
Method of Grouting	Tremi with pump			

Static water level after drilling 45' ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller Sean Conroy
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 21522
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 1' 6" BLK Top Soil 6" Stone
1' to 15' Brn c/FSD m/f gravel Tr SH
15 to 20' Red c/F gravel & Cly SH
20 to 50', Red Brn Sd Sft f gravel
50' to 55' Decomp. Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature [signature] Date 12/28/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59048

Atlas Sheet Coordinates 26 : 03 538

WNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
ddress 99 ESSEX STREET
ity MAYWOOD State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13D
ounty BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
ddress 100 W. HUNTER AVENUE

DATE WELL STARTED 12 / 4 / 00
YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 12 / 6 / 00
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

otal depth drilled 50 ft.
ell finished to 50 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling ± ft.

ater level was measured using Tape

ell was developed for 3 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	25	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	25	50	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	25	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive + Wash Rotary

lethod of development Submersible Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME 75

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

/ell Driller (Print) Steve Wolf

riller's Signature Steve Wolf

egistration No. 1579 Date 2/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Block Top
5 Fine Brown Silt — Water 6'
Fine Medium Red Silty
10 Sand + Gravel
13 ↓
20 Red Sandstone
Red Shale
30 Bedrock
40 ↓
50 EOH 50'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32017
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Viw-18
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/12/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC. 010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Silt Lit
5 ORANGE to Red SAND silt & GRAVEL
WELL SEALED 9-23-93
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32018
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-19
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hoffenberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill Dirt
5' orange to red sand gravel & silt
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hoffenberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

2

MONITORING WELL RECORD

Well Permit No. 26 - 32019
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-20
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Rock #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount / concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 5 hours at 25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Hatzenbuhler
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5
orange to red sand gravel & silt
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hatzenbuhler Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32020
Atlas Sheet Coordinates ~~26~~ . ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-21
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ric. #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill Layer
5' ORANGE TO ~~GREY~~ RED SAND gravel & silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature K. D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32021
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-22
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1,12,93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Size #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to gray Fill Dirt
5 ORANGE TO RED SAND GRAVEL & WELL SEALED 9-23-93
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 9/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32022
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-23
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) APEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC, .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flush mount concrete			

Static water level after drilling 4.9 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill Dirt
5' Orange to red sand gravel & silts
11 WELL SEALED 9-23-93

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

4

MONITORING WELL RECORD

Well Permit No. 26 - 32023
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-24
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / concrete			

Static water level after drilling 4.9 ft.
Water level was measured using Electric Tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hatzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to Grey Fill Dirt
5' ORANGE TO RED SAND GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hatzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E.

MONITORING WELL RECORD

Well Permit No. 26 - 32024
Atlas Sheet Coordinates ____ : 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-25
County ____ Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VADEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .01D
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 4.8 ft.
Water level was measured using Electric Tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black fill Dirt
5' ORANGE & RED SAND & Silts w/ GRAVEL
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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MONITORING WELL RECORD

Well Permit No. 26 - 32025
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-26
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1,8,93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Rock #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 4.8 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black Fill Dirt
5' ORANGE TO RED SAND SILTS and GRAVEL
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32026
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-27
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/12/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 4.8 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to Grey Fill Dirt
WELL SEALED ... 26-03-5625
5' Orange to Red Sand silts & Gravel
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 25 - 32027
Atlas Sheet Coordinates ~~26~~ ~~03~~ 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-2E
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1.12.93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 4.7 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to Grey Fill Dirt.
5' ORANGE TO RED SAND & gravel mixed with silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D Hitz Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32028
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-29
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/4/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8"	Rec. #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount (Concrete)			

Static water level after drilling 5 ft.
Water level was measured using LINE POPPER
Well was developed for .5 hours at .25 gpm
Method of development AIR Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' MATERIAL (FILL) SAND + GRAVEL
2' ORANGE AND RED GRAVEL SAND AND SILTS.
WELL SEALED ..... 9-23-93 .....
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32029
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-350
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount + CONCRETE			

Static water level after drilling 5- ft.
Water level was measured using line popper
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hatzlberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Fill material
Black to grey SANDS
3' ORANGE TO RED SAND SILTS AND GRAVEL
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hatzlberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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MONITORING WELL RECORD

Well Permit No. 26 - 32030
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-51
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAREK Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Line popper
Well was developed for .5 hours at .25 gpm
Method of development Air INJection.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Fill material
2' ORANGE TO RED GRAVEL SANDS AND SILTS.
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32334
Atlas Sheet Coordinates 26 : 23 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-05
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UMPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Morie #1
Annular Seal/Grout	1	3	8	Bell 4
Method of Grouting	Funnel to Annulus			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig D-61
Name of Driller KARL D. Hirschberg
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TARASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to Grey. Fill Material
5' Orange to Red Sand Gravel & Silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hirschberg Date 1/14/93

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Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32031
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-52
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ ~~flush~~ mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ ~~Yes~~ ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2"	PVC .010
Tail Piece				
Gravel Pack	3	9	8"	Rice #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmounts	Concrete		

Static water level after drilling 5 ft.
Water level was measured using line popper
Well was developed for 1.5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Kitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ ~~No~~
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' FILL MATERIAL
SAND + GRAVEL
3' ORANGE to RED
GRAVEL + SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Kitzelberger Date 1/6/93

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MONITORING WELL RECORD

Well Permit No. 26 - 32032
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-53
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2"	PVC .01
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmount (Concrete)			

Static water level after drilling 5 ft.
Water level was measured using LINE POPPER
Well was developed for .5 hours at .25 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. HUTZELMAN
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

6 FILL MATERIAL SAND AND GRAVEL
ORANGE & RED SAND + GRAVEL SOME SILTS
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hutzelman Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32033
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-54
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2"	PVC .010
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8"	Pellets
Method of Grouting	Flushmounts Concrete			

Static water level after drilling 5 ft.
Water level was measured using Line Popper
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Fitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 5-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Fill Material
Sand + Gravel
Black & Grey
Orange and Red
Silts and Gravel
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Fitzelberger Date 1/6/93

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Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32034
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-55
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B61
Name of Driller Karl D. Nibelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32035
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-56
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red
11 sand gravel + silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

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Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32036
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-57
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/28/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Ritzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 range to red
sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32037
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. NW-5c
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. HITZELBERGER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 black to grey fill dirt
5 orange to red pond gravel + silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32038
Atlas Sheet Coordinates 26 : 05 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-59
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 1.5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Kitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32039
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-30
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	9	2"	PVC .010
Tail Piece				
Gravel Pack	4	9	8	Ricci #1
Annular Seal/Grout	2	4		Pellets
Method of Grouting	0-1' Flushmount Concrete			

Static water level after drilling 4.7 ft.
Water level was measured using Electric Tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hite
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) ~~A~~ D C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
Fill material
Sand and silts
Grey to Black
9' ORANGE TO RED
GRAVEL AND SILTS.
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hite Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - ~~26~~ 32040 ~~03~~ 565
Atlas Sheet Coordinates ____ : ____ : ____

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-3/
County ____ Municipality LODI BORO Lot No. 1A Block No. 147A
Address ____

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	6	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	9	2"	PVC .010
Tail Piece				
Gravel Pack	4	6	8	Rock #1
Annular Seal/Grout	1	4	8	~~Bent~~ Pellets
Method of Grouting	0-1' Flushmount Concrete			

Static water level after drilling 4.3 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) ~~A~~ D C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Fill material
SAND and silts
grey to Black
9' ORANGE TO RED
GRAVEL AND SILTS.
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32041
Atlas Sheet Coordinates 26 - 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-32
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/4/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	2"	PVC.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	9	2"	PVC, .010
Tail Piece				
Gravel Pack	4	9	8"	Ricci Bros #1
Annular Seal/Grout	1	4	8"	Pellets
Method of Grouting	Flushmount + CONCRETE 0-1'			

Static water level after drilling 4.0 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development AIR Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Ritzberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Fill material SAND and SILTS grey to Black
9' ORANGES TO RED GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Ritzberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32042
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-33
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/4/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	9	2"	PVC .010
Tail Piece				
Gravel Pack	4	9	8"	Ricci #1
Annular Seal/Grout	1	4	8"	Pellets
Method of Grouting	Flushmount Concrete 0-1'			

Static water level after drilling 4.1 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
Fill material
Sands and silts
grey to Black
9' ORANGE TO RED
11' GRAVEL & SILTS

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/6/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32043
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-34
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/4/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed?
☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2"	PVC, .010
Tail Piece				
Gravel Pack	3	9	8"	Ricci #1
Annular Seal/Grout	1	3	8"	PELLETS
Method of Grouting	Flushmount Concrete 0-1'			

Static water level after drilling 5.0 ft.
Water level was measured using line popper
Well was developed for .5 hours at .25 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. HITZELBERGER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Fill material Black to grey.
4' ORANGE to RED GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/4/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32044
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - *If not the same as owner please give address.* Owner's Well No. VW-35
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red
11 Sand, gravel & silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32045
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-36
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/28/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Hazelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill Dirt
5 Orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

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Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32046
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-37
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ruco #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. HUTZELBERGER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-15720
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hutzelberger Date 1-14-93

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Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32047
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-38
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red sand, gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hutzelberger Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32048
Atlas Sheet Coordinates 26 : Ø3 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-39
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for .5 hours at 25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D Hutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red
Sand, gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hutzelberger Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32049
Atlas Sheet Coordinates ~~28~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-60
County Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 15 hours at 12.5 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1580
Name of Drilling Company ~~TARASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32050
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-61
County Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Rotzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 range to red
sand gravel & pebbles
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Rotzelberger Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32051
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-51
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapor Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32439
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-~~67~~ 67 KH
County Municipality LODI BORO Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/8/93
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC. 010
Tail Piece				
Gravel Pack	3	10	8	Ricci #1
Annular Seal/Grout	1	2	8	Pellets
Method of Grouting	Flushmount (Concrete)			

Static water level after drilling 4.9 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development AIR Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' ORANGE SILTS & SANDS & LARGE GRAVEL
11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 2/17/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

GWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32440
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-65
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Reed #1
Annular Seal/Grout	1	2	8	Pellets
Method of Grouting	Flushmount / Concrete			

Static water level after drilling 5.0 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
ORANGE SILTS & SANDS & LARGE GRAVEL
WELL SEALED 9-23-93
11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32441
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-64
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Rice #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmt		Concrete	

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller Karl D. Hirschberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 5-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 ORANGE SAND AND SILTS with large gravel
11 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hirschberger Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32442
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-66
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' ORANGE SILTS SANDS & GRAVEL 11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32443
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-71
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/8/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 5 hours at 5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig B-61
Name of Driller KARL D. HEEBNER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 ORANGE SAND & SILTS AND Large GRAVEL
11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature K. D. Heebner Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32444
Atlas Sheet Coordinates 26 : Ø3 : 565

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-68
County Municipality LODI BORO Lot No. 1A Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5.0 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1930
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

01
ORANGE SILTS & SANDS
LARGE GRAVEL
WELL SEALED 9-23-93
11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32445
Atlas Sheet Coordinates 26 : Ø3 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-64
County Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 2,9,93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Rici #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flush mounts Concrete			

Static water level after drilling 5.0 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
ORANGE SANDS & SILTS with LARGE GRAVEL.
WELL SEALED 9-23-93
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D Hitz Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32446
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UP-72
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAREX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount (Concrete)			

Static water level after drilling 5.0 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitchberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
ORANGE SAND
~~SAND~~ SILTS
and large GRAVEL
WELL SEALED ... 9-23-93
11 Rock 13'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32449
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VP-23
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 2/9/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	10	8	Rice #1
Annular Seal/Grout	1	2	8	Pellets
Method of Grouting	CONCRETE (Flushmount)			

Static water level after drilling 4.2 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .5 gpm
Method of development AIR Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' ORANGE SILTS SAND and large gravel MORE gravel deeper.
WELL SEALED 9-23-93
11' 13' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitz Date 2/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34702
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code 06101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-2
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address BASF, 200 GREGG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # 617-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 340
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 340 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS. #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig D120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
BROWN SAND & SILT some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34703 - 26 - 03 - 565
Atlas Sheet Coordinates ____ : ____ : ____

TDC 792

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP. ~~UNITED TECHNOLOGY BLDG.~~
Address ~~HARTFORD~~ CT
City ____ State ____ Zip Code ____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-3
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address BASF 200 GREGG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # 617-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 340
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 340 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE- MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig D-120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34704
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-4
County Municipality Lot No. Block No.
Address BERGEN BASF, 200 GREGG ST LODI BORO LODI, NJ 1 A 147 A

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well GAS VENT REPLACEMENT ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617) 821-5560

Date well completed 9/23/93

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS. #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig D-120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Brown sand & silt some gravel

10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitz Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34705
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-12
County Municipality Lot No. Block No.
Address BERGEN BASF, 200 GREGG ST, LODI BORO LODI NJ 07644 1 A 147 A

TYPE OF WELL (as per Well Permit Categories) Date well completed 9/23/93
Regulatory Program Requiring Well GAS VENT REPLACEMENT Case I.D. # ~~85564~~
ECRA
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617)821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS. #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig D-120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT
Some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hitz Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 34706
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-22
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. ~~147 A~~
Address BASF, 200 GREGG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # 617-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	~~1~~	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND
+ SILT
some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34707
Atlas Sheet Coordinates 26 : 03 : 565

TDC 752

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-21
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address 200 GREGG ST, BERGEN CO LODI, NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # 617-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	.010 SLOT SS SCH 304
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS. #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT SOME GRAVEL
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature _____ Date 10/12/93

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DWR-138 M
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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34708
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG.~~
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-15
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address 200 GREEN ST.

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617) 821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	.010 SLOT SS SCH 304
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid NA Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT SOME GRAVEL
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34709
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-13
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address BASF, 200 GREEG ST LODI NJ

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617) 821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT
Some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34710
Atlas Sheet Coordinates 26 : 03 : 565

TD c 792

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address ~~UNITED TECHNOLOGY BLDG~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-11
County BERGEN Municipality LODI BORO Lot No. 1 A Block No. 147 A
Address BASF, 200 GREGG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT REPLACEMENT Date well completed 9/23/93
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # 617-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitz Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34734
Atlas Sheet Coordinates 26 : Ø3 : 565

TDC 792

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. A-11
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A
Address BASF 200 GREG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617) 821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at 15 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig ~~CME~~ D-120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT
Some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitz Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34735
Atlas Sheet Coordinates 26 : 03 : 565

TDC 792

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-17
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address BASF 200 GREGG ST LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617) 821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS. #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig D-120
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT
SOME GRAVEL
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34736
Atlas Sheet Coordinates 26 : 03 : 565

TDC 752

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C-11
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address BASF, 300 GREGG ST, LODI NJ 07644

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 9/23/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. # (617)-821-5560

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	2	SS SCH 304
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	2	SS SCH 304 .010 SLOT
Tail Piece				
Gravel Pack	4	10	8	RICCI BROS #1
Annular Seal/Grout	2	4	8	BENTONITE PELLETS
Method of Grouting	CONCRETE MANIFOLD 0'-2'			

Static water level after drilling 5.0 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development AIR SURGE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGERS
Drilling Fluid N/A Type of Rig CME 45C
Name of Driller KARL HITZELBERGER
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
BROWN SAND & SILT some gravel
10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 10/12/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36710
Atlas Sheet Coordinates 26 : 05 565

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE OF
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11
County BERGEN Municipality LODI BORO Lot No. 1 Block No. 205
Address 150 Grieg ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/5/94
Regulatory Program Requiring Well ISRA SITE Case I.D. # 90717
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ecolsciences Inc. Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 55 ft.
Borehole diameter:
Top 10 in.
Bottom 8 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	35	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	0	23	8	Steel Casing
Screen (Note slot size)	35'	55'	4	Sch40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	33	55	8	#2 well gravel
Annular Seal/Grout	0	33	8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 7 ft.
Water level was measured using Tape & rope line
Well was developed for .5 hours at 5 gpm
Method of development Sumersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig IRT2W
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 31306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to6" Asphalt
6"to1' Stone
1'to3' Fill Sty Sd & Cinders
3'to5' Gry Clayey Silt
5'to23' Red Brn Slt, Sd & gravel
23'to55' Red Shale & Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 7/9/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36711
Atlas Sheet Coordinates 26 : 03 : 505

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE OF
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1~~ Block No. ~~235~~
Address 150 Grand ST.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 7/5/94
Regulatory Program Requiring Well ~~ISRA SITE~~ Case I.D. # ~~90717~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcoScience INC. Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	9	4	Sch 40 PVC 0.10 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	9	9 5/8	#2 well Gravel
Annular Seal/Grout	0	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with Pump			

Static water level after drilling 5 ft.
Water level was measured using Tape drop line
Well was developed for 1.25 hours at 5 gpm
Method of development Submersible
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig IR T2W
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0" to 6" Asphalt
6" to 12" Crushed Stone (FILL)
1' to 3' Brn Silt Sd & gravel Tr Cinders
3' to 5' Gray clayey Silt
5 to 9' Red Brn Silt Sd & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature George Thornhill Date 7/9/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 38137
Atlas Sheet Coordinates 26 03 565

792A

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNION TECHNOLOGY BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 GREGG ST LODI NJ

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 10/10/94
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENVIRON-EN Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 7 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	5	2	FIBERGLASS
Screen (Note slot size)	5	15	2	FIBERGLASS .020 SLOT
Tail Piece				
Gravel Pack	3	15	8	NO. 2 SAND
Annular Seal/Grout	1	3	8	CC SAND
Method of Grouting	0-1 CEMENT CHUTED FIED			

Static water level after drilling 6 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 3 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HSA
Drilling Fluid _____ Type of Rig D-50
Name of Driller MICHAEL LOGAN
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-4628
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 FILL
2-6, COBBLE, SILTY CLAY
6, WATER
6-13, SILTY CLAY
13-15, WEATHERED ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Logan Date 10-11-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

792A

Well Permit No. 26 38138
Atlas Sheet Coordinates 26 03 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNION TECHNOLOGY BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A
Address 202 GREGG ST. LODI NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/10/94
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENVIRONMENT Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	4	2	FIBERGLASS
Screen (Note slot size)	4	14	2	FIBERGLASS .020 SLOT
Tail Piece				
Gravel Pack	3	14	8	NO. 2 SAND
Annular Seal/Grout	1	3	8	CEMENT GROUT
Method of Grouting	CEMENT GROUT (TREMIE)			

Static water level after drilling 6 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 3 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HSA
Drilling Fluid _____ Type of Rig D-50
Name of Driller MICHAEL LOGAN
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-16228
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2, FILL
2-6, COBBLE, SILTY CLAY
6, WATER
6-12, SILTY CLAY
12-14, WEATHERED ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 10-11-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 38140
Atlas Sheet Coordinates ~~26~~ ~~03~~ 565

M92A

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNION TECHNOLOGY BLDG
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-37
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A
Address 200 GREGG ST LODI NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/11/94
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENVIRO-CLEAN Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	5	2	FIBERGLASS
Screen (Note slot size)	5	15	2	FIBERGLASS, .02 SLOT
Tail Piece				
Gravel Pack	3	15	8	#2 SAND
Annular Seal/Grout	1	3	8	CTC SAND
Method of Grouting	0-1	CEMENT	GRAVITY FED	

Static water level after drilling 6 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 3 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HSA
Drilling Fluid ____ Type of Rig D-50
Name of Driller MICHAEL LOGAN
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5-1628
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2, FILL
2-6, COBBLE, SILTY CLAY
6, WATER
6-13, SILTY CLAY
13-15, WEATHERED ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10-11-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 38595
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE OF
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 1 Block No. ~~205~~
Address 35 Industrial Way

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 1/27/95
Regulatory Program Requiring Well ECRA Case I.D. # 9C717
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Eco/Sciences Inc. Tele. # 201-366-9520

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	C	4	4	Schedule
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	14	4	Schedule .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	14	9 5/8	#2 well grade
Annular Seal/Grout	C	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with Pump			

Static water level after drilling 6'6" ft.
Water level was measured using Tape along line
Well was developed for 1 hours at .8 gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 13006
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 5' Brown f/Sd & gravel
5 to 7' Brn Sd, gravel & Concrete Rubble (Fill)
7 to 10' Dark gray c/FSd, gravel & Silt
10 to 11' gray c/Sd
11 to 14' Red Silt f/Sd & c/f gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 2/4/95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 40564
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SMW-2S
County BERGEN Municipality LODI BORO Lot No. 2A Block No. 205C
Address TWO-Forty Assoc Property LODI, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/1/95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) SMITH/BCM Tele. #

WELL CONSTRUCTION

Total depth drilled 43 ft.
Well finished to 43 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2.0 ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	~~0~~ +2	20	6	Steel sch 40
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout	0	20	10"	Portland
Method of Grouting	Pressure Tremie grouted.			

Static water level after drilling 4.5 ft.
Water level was measured using Electric probe
Well was developed for 1 hours at 12 gpm
Method of development Air Lift.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary.
Drilling Fluid None Type of Rig Schramm T-64
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000266
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Till material cobbles sand with silty clay
10' Rock SHALE
20
43

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 6/6/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

DMR

1425

Well Permit No. 26 - 43467
Atlas Sheet Coordinates 26 Ø3 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2P
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address ~~200 GREGG ST.~~ Date well started 2 /29 /96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2 /29 /96
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) SMITH ENV. Tele. #

WELL CONSTRUCTION

Total depth drilled 39 ft.
Well finished to 39 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	19	2	6AL. STEEL
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	19	39	2	S.S. 10SLOT
Tail Piece				
Gravel Pack	18	39	8	#1 BAGS
Annular Seal/Grout	0	18	8	100/ CEMENT-BENT
Method of Grouting	PRESSURE TREMIE			

Static water level after drilling 8' ft.
Water level was measured using ELE. TAPE
Well was developed for 1 hours at 2 gpm
Method of development SUBMERSIBLE
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method DRIVEN CASING
Drilling Fluid ____ Type of Rig D-120 DIEDRICH
Name of Driller WILLIAM SHINN
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. TABASCO DRILLING CORP.
Name of Drilling Company MD1289

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0
RD-BRN SAND
39

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature ____ Date 3 /8 /96

D-147

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - [illegible]

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 47723

Atlas Sheet Coordinates 26 : Ø3 :

OWNER IDENTIFICATION - Owner NEW JERSEY DOT
Address 1Ø35 PARKWAY AVE. CN 615
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-1
County BERGEN Municipality LODI BORO Lot No. NA Block No. NA
Address ROUTE 8Ø (MILE POT 62.2)

DATE WELL STARTED 8/4/97
DATE WELL COMPETED 8/4/97

TYPE OF WELL (as per Well Permit Categories) BORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Edwards & Kelcey Tele. # 201-267-0555

WELL CONSTRUCTION

Total depth drilled 23 ft.
Well finished to — ft.

Borehole diameter:
Top 8.25 in.
Bottom 2.3" in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling ____ ft.

Water level was measured using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	____ lbs. ____ lbs.

Grouting Method Tremie
Drilling Method HS AUGER / CORE DRILL

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-5' DRY FINE-COARSE SAND & SILT
5'-15' - WET FINE-COARSE SAND & GRAVEL
15'-18' - WET SAND, SILT, GRAVEL, ROCK FRAGMENTS
18'-23' - SANDSTONE ROCK

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) PAUL KEENEY
Driller's Signature Paul Keeney
Registration No. J1349 Date 8/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

LAS

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 47574

Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2D
County BERGEN Municipality LODI BORO Lot No. 1 Block No. 205
Address 150 GREGG ST

DATE WELL STARTED 8/19/97
DATE WELL COMPETED 8/20/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 90717

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ecolscience INC. Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 60' ft.
Well finished to 55' ft.

Borehole diameter:
Top 12 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4.9 ft.

Water level was measured using Tape

Well was developed for 1.5 hours at 5 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig IR T2W

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	40	4	PVC	40
Middle Casing (for triple cased wells only)	N/A	N/A	N/A	N/A	N/A
Outer Casing (largest diameter)	0	30	8"	Steel	40
Open Hole or Screen (No. Used)	40	55	4	PVC	40
Blank Casings (No. Used)	N/A	N/A	N/A	N/A	N/A
Tail Piece	N/A	N/A	N/A	N/A	N/A
Gravel Pack	39	55	8	Morie	#2
Grout	0	30	12	~~Neat Cement~~	~~465~~ lbs.
	0	39	8	Bentonite	200 lbs.

Grouting Method Tremi with pump
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 6.5' Brn Silty Sand
6.5 to 7.5' Gray Clayey Silt
7.5 to 8' gray Sand
8 to 9' Red Silt
9 to 19' Red Sand
19 to 20' decomposed Rock
20 to 60' Shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) Michael Beck
Driller's Signature Michael Beck
Registration No. J 1421 Date 10/11/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47575

Atlas Sheet Coordinates 26 : 03 :

OWNER IDENTIFICATION - Owner ~~VISCONTI, NANCY ESTATE~~
Address ~~161 MADISON AVE.~~
City ~~MORRISTOWN~~ State ~~NJ~~ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 3D
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 1 Block No. 205
Address ~~150 GREGG ST.~~

DATE WELL STARTED 8 / 11 / 97
DATE WELL COMPETED 8 / 19 / 97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ~~ISRA SITE~~ Case I.D.# 90717

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Eco/Science INC. Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 55 ft.

Borehole diameter:
Top 12 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4.9 ft.

Water level was measured using Tape

Well was developed for 1.5 hours at 5 gpm

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig IR T2W

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	40	4	pvc.	Sch 40
Middle Casing (for triple cased wells only)	N/A	N/A	N/A	N/A	N/A
Outer Casing (largest diameter)	0	30	8	Steel	Sch 40
Open Hole or Screen (No. Used)	40	55	4	pvc	Sch 40
Blank Casings (No. Used)	N/A	N/A	N/A	N/A	N/A
Tail Piece	N/A	N/A	N/A	N/A	N/A
Gravel Pack	37	55	8	Marie	# 2
Grout	0	30	12	Neat Cement	400 lbs.
	0	37	8	Bentonite	200 lbs.

Grouting Method Tremi with pump
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 15' Brn f/m Sand with Coarse gravel
15 to 22' Red Brn Silty Sand with Coarse gravel
22 to 55' Rock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) Michael Beck
Driller's Signature Michael Beck
Registration No. J 1421 Date 10 / 11 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

LC
LAS

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47576

Atlas Sheet Coordinates 26 : 03 : 56

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11D
County BERGEN Municipality LODI BORO Lot No. 1 Block No. 205
Address 150 GREGG ST.

DATE WELL STARTED 8/14/97
DATE WELL COMPETED 8/15/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 90717

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Eco/Science INC. Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 85 ft.
Well finished to 85 ft.

Borehole diameter:
Top 12 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4'6" ft.

Water level was measured using Tape

Well was developed for 1.5 hours at 5 gpm

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig IR T2W

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	70	4	PVC	Sch 40
Middle Casing (for triple cased wells only)	N/A	N/A	N/A	N/A	N/A
Outer Casing (largest diameter)	0	30	8	Steel	Sch 40
Open Hole or Screen (No. Used)	70	85	4	Sch 40 PVC	Sch 40
Blank Casings (No. Used)	N/A	N/A	N/A	N/A	N/A
Tail Piece	N/A	N/A	N/A	N/A	N/A
Gravel Pack	68	85	8	Morie	#2
Grout	0	30	12	Neat Cement	400 lbs.
	0	68	8	Bentonite	300 lbs.

Grouting Method Tremi with pump
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0' to 15' Brn f/m Sd & cgravel
15' to 22' Rd Brn Silty Sd with c gravel
22' to 85' Rock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING

Well Driller (Print) Michael Beck

Driller's Signature Michael Beck

Registration No. J1421 Date 10/11/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

11/98

Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 55121

Atlas Sheet Coordinates 26 : 03 565

OWNER IDENTIFICATION - Owner FLAG REALTY INC

Address 5 CENTRAL AVE

City CLIFTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1

County BERGEN Municipality LODI BORO Lot No. 2 Block No. 224

Address 10 META LANE

DATE WELL STARTED 10 / 27 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 10 / 27 / 99

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ESA Tele. # 732-469-8888

WELL CONSTRUCTION

Total depth drilled 13 ft.

Well finished to 11 ft.

Borehole diameter:

Top 6 in.

Bottom 6 in.

Well was finished: ☐ above grade

☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?

☐ Yes ☒ No

Static water level after drilling 2 ft.

Water level was measured using m-scope

Well was developed for 1 hours at 1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	1	11	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.75	13	6x2	#2 Gravel	
Grout	0	.75	6x2	Neat Cement Bentonite	94 lbs. ____ lbs.

Grouting Method Mixed and poured

Drilling Method Hollow stem auger

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid - Type of Rig Acker Soil Max

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SAMUEL STOTHOFF CO., INC.

Well Driller (Print) Paul Vraber

Driller's Signature

Registration No. 1545J Date 10/29/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0' - 4" Blacktop

4" - 8' Fill

8' - 13' Red silty sand & gravel

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

FORM 87-10M

26-03-563 D

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2171
Application No. _____
County _____

WELL RECORD

1. OWNER Lodi Shopping Center, Inc. ADDRESS Essex St., Route 17, Lodi, N.J.
   Owner's Well No. 2 SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Modell's Shoppers World-Route 17, Lodi, N.J.
3. DATE COMPLETED 4/15/60 DRILLER Burrows Well Drilling Co., Inc.
4. DIAMETER: top 8 Inches Botton 8 Inches TOTAL DEPTH 300 Feet
5. CASING: Type Steel Diameter 8 Inches Length 22 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range { Top _____ Feet Bottom _____ Feet Geologic Formation _____
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 4/11/60 Yield 290 Gallons per minute
   Static water level before pumping 2 Feet below surface
   Pumping level 56 feet below surface after 24 hours pumping
   Drawdown 54 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Turbine pump How measured orifice
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type no pump on this well Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet _____ Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet _____ Depth of Meter on Pump _____
10. USED FOR Diffusion well AMOUNT Average _____ Gallons Daily
    Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. x
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG over Are samples available No.
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Drillings
14. DATA OBTAINED BY Burrows Well Drilling Co., Inc. Date 4/20/60

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

VR-135A
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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-787
APPLICATION NO. _____
COUNTY _____
COORD. 26-03-563

WELL RECORD

1. OWNER Reisch Trucking & Trans. Co. Inc. ADDRESS Palisades Park, NJ
   Owner's Well No. 1 SURFACE ELEVATION 20 Feet (Above mean sea level)
2. LOCATION Route #17 Lodi, NJ
3. DATE COMPLETED 10-24-54 DRILLER Ernest S. Richardson
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 86 Feet
5. CASING: Type drive Diameter 6 Inches Length 34 Feet
6. SCREEN: Type no Size of Opening ____ Diameter ____ Inches Length ____ Feet
   Range in Depth { Top ____ Feet; Bottom ____ Feet } Geologic Formation ____
   Tail Piece: Diameter ____ Inches Length ____ Feet
7. WELL FLOWS NATURALLY no Gallons per minute at ____ Feet above surface
   Water rises to ____ Feet above surface
8. RECORD OF TEST: Date 10-24-53 Yield 50 Gallons per minute
   Static water level before pumping 10 Feet below surface
   Pumping level 18 feet below surface after 1 hours pumping
   Drawdown 8 Feet Specific Capacity ____ Gals. per min. per ft. of drawdown
   How pumped bailer test How measured ____
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT: no
   Type ____ Mfrs. Name ____
   Capacity ____ G.P.M. How Driven ____ H.P. ____ R.P.M. ____
   Depth of Pump in well ____ Feet Depth of Footpiece in well ____ Feet
   Depth of Air Line in well ____ Feet Type of Meter on Pump ____ Size ____ Inches
10. USED FOR Industrial AMOUNT { Average 2,000 Gallons Daily; Maximum 4000 Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes ____ No X
    Taste none Odor none Color clear Temp. 51 °F.
12. LOG see reverse side Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA driller
14. DATA OBTAINED BY E. S. Richardson Date 5/21/54

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

26-03-563 [9]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Red #

Permit No. 26-1355
Application No. _____
County _____

1. OWNER LODI SHOPPING CENTER INC ADDRESS ESSEX ST & ROUT 17
Owner's Well No. FIRST SURFACE ELEVATION 40 Feet (Above mean sea level)

2. LOCATION LODI SHOPPING CENTER INC ESSEX ST & ROUT 17 LODI N.J.

3. DATE COMPLETED DEC 11 1956 DRILLER BORROWS WELL DRILLING CO

4. DIAMETER: Top 8 Inches Bottom 8 Inches TOTAL DEPTH 301 Feet

5. CASING: Type STEEL DRIVE Diameter 8 Inches Length 10'-8" Feet

6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet

Range in Depth { Top _____ Feet Bottom _____ Feet Geologic Formation RED HARD PAN TO ROCK

Tail piece. Diameter _____ Inches Length _____ Feet

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

RECORD OF TEST: Date DEC 13 1956 Yield 350 Gallons per minute
Static water level before pumping 10 Feet below surface
Pumping level 100 feet below surface after 8 hours pumping
Drawdown 75 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped TURBINE PUMP How measured ORFICE GAUGE
Observed effect on nearby wells NONE

9. PERMANENT PUMPING EQUIPMENT:
Type TURBINE PUMP Capacity 400 Gallons per minute
How Driven ~~ELECTRIC~~ ELECTRIC MOTOR Horse Power 40 R.P.M. 1760
Depth of pump in well 130 Feet Depth of Foot piece in well 150 Feet
Depth of Air Line in well 13 Feet Type of Meter on Pump _____

10. USED FOR AIR CONDITIONING AMOUNT { Average 96000 Gallons Daily Maximum _____ Gallons Daily

11. QUALITY OF WATER GOOD Sample: Yes _____ No. ✓
Taste NONE Odor NONE Color CLEAR Temperature 52° °F

12. LOG OVER (Give details on back of sheet or on separate sheet) Are samples available? NO

13. SOURCE OF DATA DRILLINGS

14. DATA OBTAINED BY BORROWS WELL DRILLING CO DATE DEC 13 1956

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

C-O-P-Y

MODELLS

26.03.563

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

Permit No. 26-1355
Application No. _____
County _____

WELL RECORD

1. OWNER Lodi Shopping Center Inc. ADDRESS Essex St. & Route 17
   Owner's Well No. First SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Lodi Shopping Center, Inc. Essex St. & Rt. 17, Lodi, N.J.
3. DATE COMPLETED Dec. 11, 56 DRILLER Burrows Well Drilling Co., Inc.
4. DIAMETER: Top 8 Inches Bottom 8 Inches TOTAL DEPTH 301 Feet
5. CASING: Type steel Drive Diameter 8 Inches Length 20'-8" Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation Red Hard Pan to Rock
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Dec. 13, 1956 Yield 350 Gallons per minute
   Static water level before pumping 10 Feet below surface
   Pumping level 100 feet below surface after 8 hours pumping
   Drawdown 75 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Turbine Pump How measured Orfice Gauge
   Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Pump Capacity 400 Gallons per minute
   How Driven Electric Motor Horse Power 40 R.P.M. 1750
   Depth of pump in well 130 Feet Depth of Foot piece in well 150 Feet
   Depth of Air Line in well 130 Feet Type of Meter on Pump _____
10. USED FOR Air Conditioning AMOUNT { Average 96,000 Gallons Daily / Maximum 96,000 Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes _____ No. X
    Taste None Odor None Color Clear Temperature 52 °F
12. LOG over (Give details on back of sheet or on separate sheet) Are samples available? no
13. SOURCE OF DATA Drillings
14. DATA OBTAINED BY Burrows Well Drilling Co. Inc. DATE Dec. 13, 1956

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43109
Atlas Sheet Coordinates 26 03 563

OWNER IDENTIFICATION - Owner PERGAMENT, MURRAY & ROBER
Address 1500 OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address 46 INDUSTRIAL RD.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was *finished:* ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	6	4	Sch40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	12	4	Sch40 PVC .020
Tail Piece				
Gravel Pack	5	12		Morie #2
Annular Seal/Grout	0	5		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000 1359
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43110
Atlas Sheet Coordinates 26 03 563

OWNER IDENTIFICATION - Owner ~~PERGAMENT, MURRAY & ROBER~~
Address 1500 OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address ~~46 INDUSTRIAL RD.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	9	20		Morie #2
Annular Seal/Grout	0	9		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev. hours at ____ gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 0001359
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43111
Atlas Sheet Coordinates 26 03 563

OWNER IDENTIFICATION - Owner ~~PERGAMENT, MURRAY & ROBER~~
Address 1500 OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address ~~40 INDUSTRIAL RD.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	Sch 40 PVC, 020
Tail Piece				
Gravel Pack	9	20		Morie #2
Annular Seal/Grout	0	9		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 0001359
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Div.-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58539

Atlas Sheet Coordinates 26 : 03 563

OWNER IDENTIFICATION - Owner KOLITCH, STEVEN
Address 411 STATE ROUTE 17 SUITE 110
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5R
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N @ ESSEX ST

DATE WELL STARTED 9/ 6/ 00
DATE WELL COMPLETED 9/ 6/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 3' ft.

Water level was measured using Tape

Well was developed for 1/2 hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) Rich Gurczynski
Driller's Signature Rich Gurczynski
Registration No. J1570 Date 9 / 14 / 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

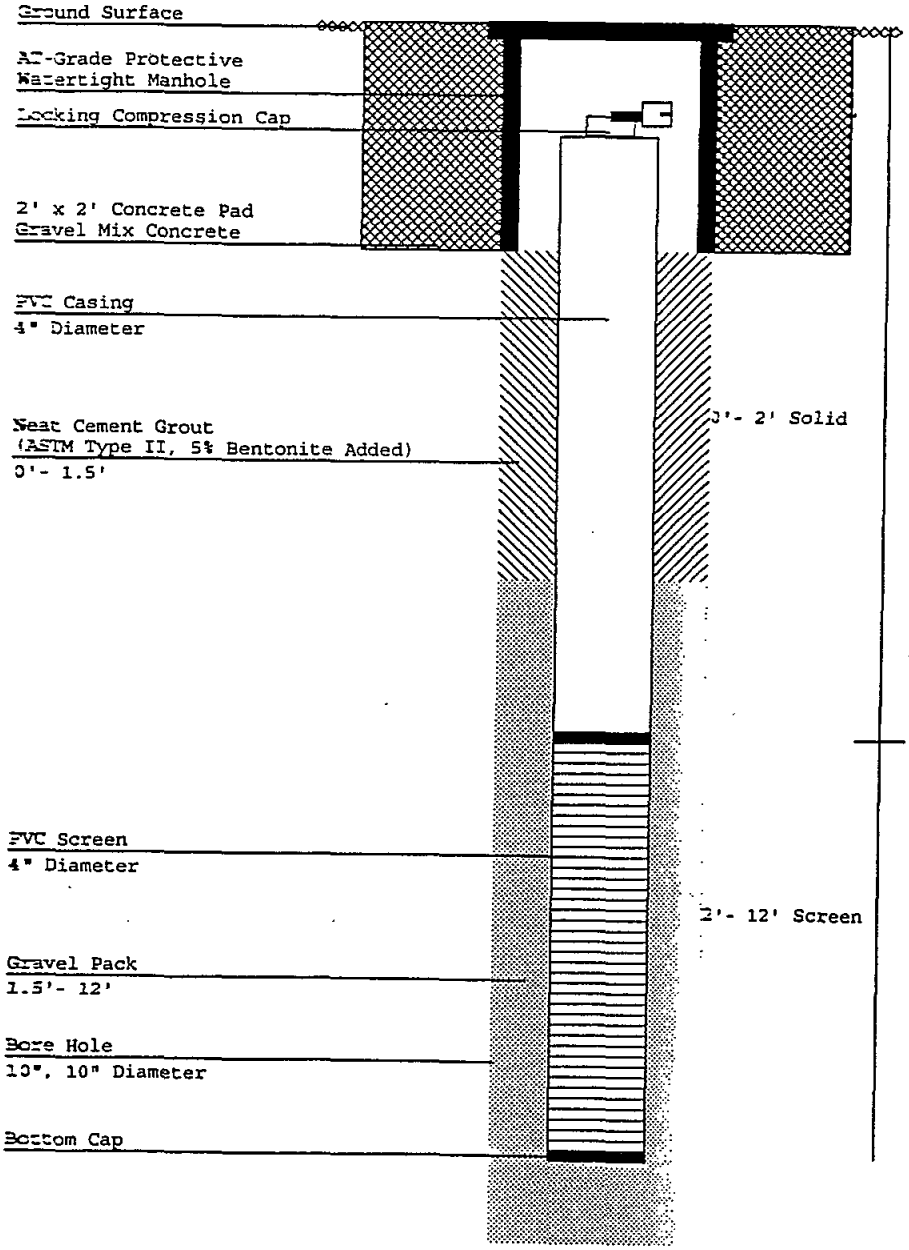
WELL: MW5R DATE DRILLED: 09/06/2000 COORD #1: 26.03.563 PERMIT #1: 26-58539
COORD #2: PERMIT #2:
SITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
OWNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

OWNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC	DRILLING METHOD: Auger
DIAMETER: 4"	DIAMETER:	SCREEN TYPE 2:	SAMPLING METHOD:
LENGTH: 2'	LENGTH:	DIAMETER: 4"	HOLE DIA: 10", 10"
		LENGTH 1: 10'	TOTAL DEPTH: 12'
SET WELL: 12'	GAL PER MIN: 1/2	LENGTH 2:	
GRAVEL PK SZ: Morie #1	STAT H2O LVL: 3'	SLOT SIZE: .010	
DRILLER: Rich Gurczynski	DEVELOPMENT METHOD: Pump	CASING SEAL: Portland	
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1/2 hour	OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 7' FIll material.
7'- 12' Mediium sand some silt.



SWR-138 M
7 98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58540

Atlas Sheet Coordinates 26 : 03 563

OWNER IDENTIFICATION - Owner KOLITCH, STEVEN
Address 411 STATE ROUTE 17 SUITE 110
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6AR
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N @ ESSEX ST

DATE WELL STARTED 9/ 6/ 00
DATE WELL COMPLETED 9/ 6/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 3' ft.

Water level was measured using Tape

Well was developed for 1/2 hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) Rich Gurczynski
Driller's Signature Rich Gurczynski
Registration No. J1570 Date 9 / 14 / 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

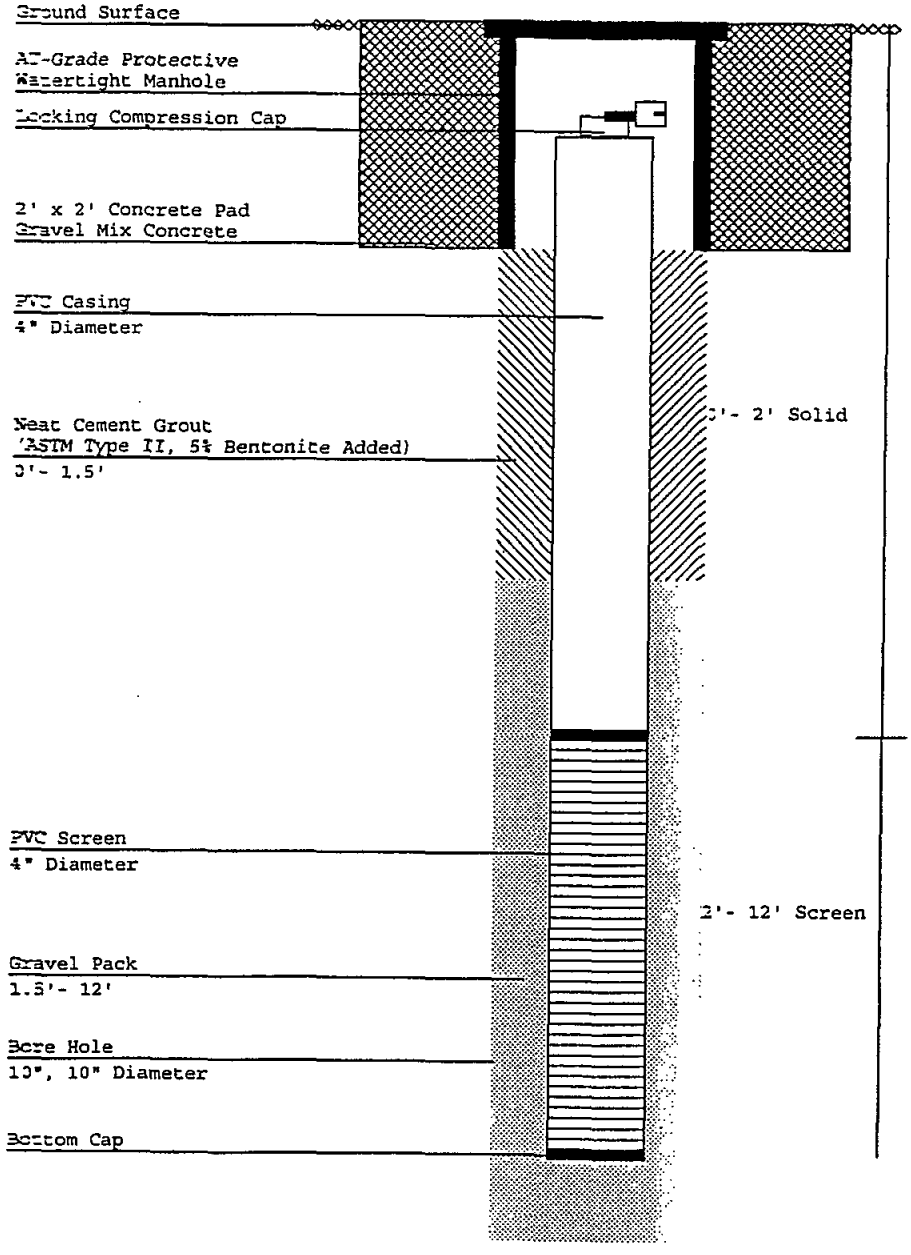
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW6AR DATE DRILLED: 09/06/2000 COORD #1: 26.03.563 PERMIT #1: 26-58540
COORD #2: PERMIT #2:
SITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
OWNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	2'	LENGTH:	DIAMETER:	4"	HOLE DIA: 10", 10"
			LENGTH 1:	10'	TOTAL DEPTH: 12'
SET WELL:	12'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 3'	SLOT SIZE:	.010	
DRILLER:	Rich Gurczynski	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION: M		DEVELOPMENT TIME: 1/2 hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
		0'- 7' Fill material.
		7'- 12' Mediium sand some silt.



WR-138 M
7/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58541

Atlas Sheet Coordinates 26 : 03 563

OWNER IDENTIFICATION - Owner KOLITCH, STEVEN
Address 411 STATE ROUTE 17 SUITE 110
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7AR
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N @ ESSEX ST

DATE WELL STARTED 9/ 6/ 00
DATE WELL COMPLETED 9/ 6/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 3' ft.

Water level was measured using Tape

Well was developed for 1/2 hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) Rich Gurczynski
Driller's Signature Rich Gurczynski
Registration No. J1570 Date 9/ 14/ 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
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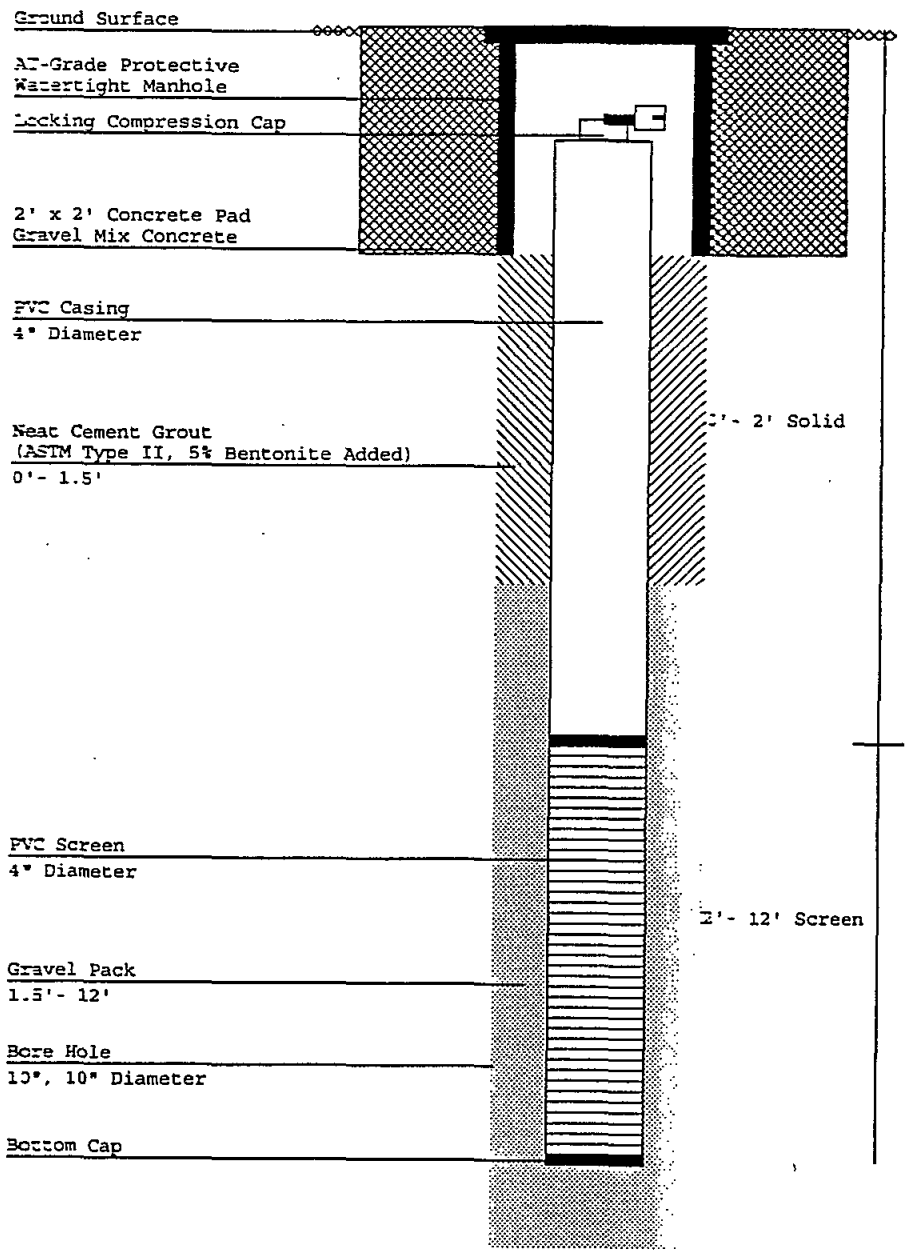
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW7AR DATE DRILLED: 09/06/2000 COORD #1: 26.03.563 PERMIT #1: 26-58541
COORD #2: PERMIT #2:
SITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
OWNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Auger
DIAMETER:	4"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	2'	LENGTH:		DIAMETER:	4"	HOLE DIA:	10", 10"
				LENGTH 1:	10'	TOTAL DEPTH:	12'
SET WELL:	12'	GAL PER MIN:	1/2	LENGTH 2:			
GRAVEL PK SZ:	Morie #1	STAT H2O LVL:	3'	SLOT SIZE:	.010		
DRILLER:	Rich Gurczynski	DEVELOPMENT METHOD:	Pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1/2 hour	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
-		
0'- 7'		Fill material.
7'- 12'		Mediium sand some silt.



DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18792
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~N/A~~ Block No. ~~176.11~~
Address 200 GREGG STREET

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 3 / 2 / 90
Regulatory Program Requiring Well ECRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HART ENVIRONMENTAL Tele. # 201-647-8111

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? FLUSHMOUNT
☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	7	4"	SCH 40 PVC
Outer Casing (Not Protective Casing)	---	---	----	
Screen (Note slot size)	7	15	4"	SCH 40 PVC .010
Tail Piece	---	----		
Gravel Pack	5	15		
Annular Seal/Grout	0	5		
Method of Grouting	BENTONITE CEMENT			

Static water level after drilling n/a ft.
Water level was measured using n/a
Well was developed for 3 hours at varied gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method Hollow Stem Auger
Drilling Fluid n/a Type of Rig Mobile B-61
Name of Driller Michael W. Huber
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1258
Name of Drilling Company HARDIN-HUBER, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

BROWN FINE SAND TRACE OF CLAY	0 - 5
REDDISH BROWN SAND SOME SILT	5 - 8
SAME AS ABOVE WITH ROCK FRAGMENTS TRACE OF CLAY	8 - 15

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael W Huber Date 9-19-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18793
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County BERGEN Municipality LODI BORO Lot No. N/A Block No. 176.11
Address 200 GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2 / 21 / 90
Regulatory Program Requiring Well ECRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HART ENVIRONMENTAL Tele. # 201-647-8111

WELL CONSTRUCTION

Total depth drilled 41.5 ft.
Well finished to 41.5 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	21.5	6"	STEEL
Outer Casing (Not Protective Casing)	---	---		
Screen (Note slot size)	O P E N	WELL		
Tail Piece	---	---		
Gravel Pack	19	41.5		
Annular Seal/Grout	0	19		
Method of Grouting	BENTONITE CEMENT			

Static water level after drilling N/a ft.
Water level was measured using N/A
Well was developed for 3 hours at Varied gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid N/A Type of Rig Mobile B-61
Name of Driller MICHAEL W. HUBER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1258
Name of Drilling Company HARDIN-HUBER, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

REDDISH BROWN SILT AND SAND SOME PEBBLES	0 - 10
SILTSTONE AND SAND	10 - 15
REDDISH BROWN FINE GRAINED SANDSTONE AND SILT	15 - 41.5

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael W. Huber Date 9-19-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18794
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~N/A~~ Block No. ~~176.11~~
Address 200 GREGG STREET

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 3 / 2 / 90
Regulatory Program Requiring Well ECRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HART ENVIRONMENTAL Tele. # 201-647-8111

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 100 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed?
☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	70'	6"	STEEL
Outer Casing (Not Protective Casing)	---	---	---	
Screen (Note slot size)	O P E N	WEL L		
Tail Piece	---	---		
Gravel Pack	66	100'		
Annular Seal/Grout	0	66		
Method of Grouting	BENTONTIE CEMENT			

Static water level after drilling n/a ft.
Water level was measured using n/a
Well was developed for 3 hours at varied gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method HSA
Drilling Fluid n/a Type of Rig MOBILE B-61
Name of Driller MICHAEL W. HUBER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1258
Name of Drilling Company HARDIN-HUBER, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Reddish silt and sand	0 - 10
Weathered bedrock reddish silty sandstone	10 - 54
Reddish Sandstone	54 - 70

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael W. Huber Date 9-19-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22732
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner U.T.C. CORP.
Address 200 GREGG ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. H.M.W 12
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A-77
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/8/90
Regulatory Program Requiring Well ECRA Case I.D. # 85864
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F. C. HART Tele. # 212-447-1480

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	4	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	4	020 PVC
Tail Piece				
Gravel Pack	2	14		# 1
Annular Seal/Grout	6"	2'		BENTONITE
Method of Grouting	POUR			

Static water level after drilling 4.7 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 1 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type:
Drilling Method H.S.A
Drilling Fluid ____ Type of Rig CME 75
Name of Driller C. Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Trap Rock + Blacktop
6"-11.5 Red silt
11.5-14 Weathered Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Chas Kramer Date 11-26-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22733
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner U.T.C. CORP.
Address 200 GREGG ST
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW 11
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A-77
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/6/90
Regulatory Program Requiring Well ECRA Case I.D. # 85864
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.C. HART Tele. # 1-212-447-1480

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	4	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	4	PVC 020
Tail Piece				
Gravel Pack	2	14		#1
Annular Seal/Grout	6"	2		BENTONITE
Method of Grouting	POUR			

Static water level after drilling 8 T.P. ft.
Water level was measured using TAPE
Well was developed for 2 hours at 1 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H.S.A
Drilling Fluid ____ Type of Rig CME 75
Name of Driller Chas Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" TAN + Rocks
6"-12 Red silt + Rocks
12-14 Weather Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Chas Kramer Date 11-26-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

NOTE: FORMERLY PERMIT NO. 26-22741

MONITORING WELL RECORD

Well Permit No. 26 - 28046
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLIGIES BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11 / 20 / 90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren Hart / F. Brocker Hoff Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 95 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	85	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	+2	18	8	SCH. 40 STEEL
Screen (Note slot size)	85	95	4	SCH. 40 PVC, 020
Tail Piece	—	—	—	—
Gravel Pack	82	100	8	NO. 2 MORIE SAND
Annular Seal/Grout	0	82	8	CEMENT / BENTONITE
Method of Grouting	TREMIE PIPE PRESSURE GROUTED			

Static water level after drilling 7.5 ft.
Water level was measured using Tape
Well was developed for .5 hours at 7 gpm
Method of development AIR
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig Schramm T-450
Name of Driller H.L. REXRODE JR.
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14A

0 - 14.5 MODERATE BROWN, SILTY SAND, SOME CLAY, TRACE TO SOME ROCK FRAGMENTS.

14.5 - 16.0 WEATHERED INCOMPETENT SHALE

16.0 - 100' SHALE - REDDISH BROWN, FISSILE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H.L. Rexrode Jr. Date 1/07/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

NOTE: FORMERLY PERMIT NO. 26-22740

MONITORING WELL RECORD

Well Permit No. 26 - 28045
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11 / 9 / 90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLAREN/HART F. BROCKERHOFF Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 37 ft.
Well finished to 37 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	—	—	—	—
Outer Casing (Not Protective Casing)	+ 2	17.2	8"	SCH. 40 STEEL
Screen (Note slot size)	—	—	—	—
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	—	—	—	—
Method of Grouting	PRESSURE GROUTED			

Static water level after drilling 7.5 ft.
Water level was measured using TAPE
Well was developed for 1.5 hours at 6 gpm
Method of development AIR
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM T-450
Name of Driller H. L. REXRODE
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14B

0-10' MODERATE BROWN, SILTY SAND, SOME CLAY, SOME ROCK FRAGMENTS.

10-13' MODERATE BROWN, SILTY SAND AND CLAY GRADING INTO WEATHERED SHALE @ 12.5'

13'-37' REDDISH BROWN, FISSILE SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 1/07/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

formerly Used as 22-729

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27945
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-2
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/5/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	6	0.020 PVC
Tail Piece	—	—	—	—
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	0	2		Grout
Method of Grouting	Pour			

Static water level after drilling 5.25 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H.S.A.
Drilling Fluid None Type of Rig Gus Pech
Name of Driller Mark McGuinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-12' Red silt & stone
12'-14' Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L Kramer Jr. Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
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merly
-mitted as
-6-22732

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27944
Atlas Sheet Coordinates 26 :03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-12
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/8/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	4	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	4	0.020 PVC
Tail Piece	—	—	—	—
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4.7 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method H.S.A.
Drilling Fluid Type of Rig CME 75
Name of Driller Charles Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Trap Rock & Black Top
6"-11.5 Red Silt
11.5-14 Weathered Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
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formerly
listed
as #26-22733

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27943
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-11
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/6/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	4	PVC 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	14		#4 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 8.7 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method H.S.A.
Drilling Fluid Type of Rig CME 75
Name of Driller Charles Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Taro Rocks
6"-12 Red silt & Rocks
12-14 Weather Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27942
Atlas Sheet Coordinates 26 :03 :562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-4
County BERGEN Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/6/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	3	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	13	6	020 PVC
Tail Piece				
Gravel Pack	2	13		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4.2 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H. S. A
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Mark McGuinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-11' Red Silt
11-13 Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

formerly
permit #
26-2731

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27941
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-5
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St Lodi, NJ

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/6/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	6	020 PVC
Tail Piece				
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4.9 ft.
Water level was measured using Tape
Well was developed for 2 hours at 0.5 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HSA
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top & Rocks
6"-12' Red silt and stone
12-14 Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-985[illegible]
Toll Free: (800) 242-66[illegible]
FAX: (803) 796-96[illegible]

WELL LOG

Well No. PZ - 3 Coordinate No. 26.03.562 Permit No. 26-27744

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 14'

Casing: Type PVC Diameter 2" Length 4'

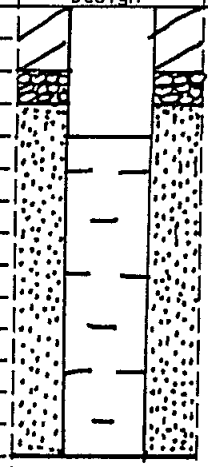
Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		

Well Design



0' - 2'	GROUT	0' - 14'	Red brn. m/f sand, tr. clay
0' - 4'	SOLID		silt, tr. f/gravel some small
2' - 3'	PELLETS		cobbles
3' - 14'	GRAVEL		
4' - 14'	SCREEN		
	OPEN HOLE		
14'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

Identification of Soils / Remarks

DWR-138-M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

formerly
tted
26-22947

Well Permit No. 26 27744
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-3
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories ~~MONITORING~~ Piezometer Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	0	3	—	Ben Pellets Portland Grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 4 Coordinate No. 26.03.562 Permit No. 26-27743

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 12'

Casing: Type PVC Diameter 2" Length 2'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks	
				no grout	GROUT	0' - 12'	Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles
				0' - 2'	SOLID		
				.5'- 1'	PELLETS		
				1' - 12'	GRAVEL		
				2' - 12'	SCREEN		
					OPEN HOLE		
				12'	SET WELL		
					GPM		
					STNDP.		
10'				X	MANHOLE		
					VAULT		
					GRIPPER		
					NONE		
20'							
30'							
40'							

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Formerly permitted as #26-22942

Well Permit No. 26 - 27743
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-4
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 208 Gregg Street

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Piezometer Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~M~~ NA Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No.

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Pellets
Method of Grouting	[illegible]			N/A

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-98[illegible]
Toll Free: (800) 242-66[illegible]
FAX: (803) 796-969[illegible]

WELL LOG

Well No. PZ - 9 Coordinate No. 26.03.562 Permit No. 26-27742

Date Drilled 11/21/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Auger Sampling Method

Hole Diameter 6" Total Depth 13.5'

Casing: Type PVC Diameter 2" Length 3.5'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets and grout

Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design		Identification of Soils / Remarks
				0' - 1' GROUT	0' - 13.5' Red/brn. sand silt
				0' - 3.5' SOLID	
				1' - 2' PELLETS	
				2' - 13.5' GRAVEL	
				3.5'-13.5' SCREEN	
				OPEN HOLE	
				.5 SET WELL	
				GPM	
				STNDP.	
10'				X MANHOLE	
				VAULT	
				GRIPPER	
				NONE	
20'					
30'					
40'					

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Note: former 14 omitted as 26-22950

Well Permit No. 26 - 27742
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-9
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/21/91
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1 / 0	2 / 1	=	Ben Fillets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid N A Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Toll Free: (800) 242-66
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 8 Coordinate No. 26.03.562 Permit No. 26-27741

Date Drilled 11/21/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Auger Sampling Method

Hole Diameter 6" Total Depth 13.5'

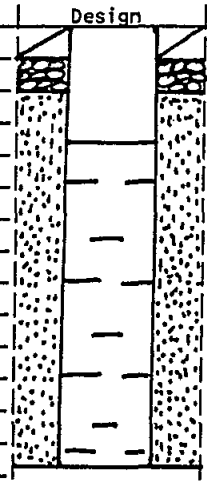
Casing: Type PVC Diameter 2" Length 3.5'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets and grout

Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



Identification of Soils / Remarks

0' - 13.5' Red/brn. sand silt

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formerly
Permitted
26-22949

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27741
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-8
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11,21,90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1 / 0	2 / 1	=	Ben Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using TAPE
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210 SUMMIT WELL DRILLING
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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West Columbia, SC 29169
Telephone: (803) 739-9852
Toll Free: (800) 242-66
FAX: (803) 796-969

WELL LOG

Well No. PZ - 7 Coordinate No. 26.03.562 Permit No. 26-27740

Date Drilled 11/21/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Auger Sampling Method

Hole Diameter 6" Total Depth 13.5'

Casing: Type PVC Diameter 2" Length 3.5'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets and grout

Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				0' - 1' GROUT
				0' - 3.5' SOLID
				1' - 2' PELLETS
				2' - 13.5' GRAVEL
				3.5'-13.5' SCREEN
				OPEN HOLE
				.5 SET WELL
				GPM
				STNDP.
10'				X MANHOLE
				VAULT
				GRIPPER
				NONE
20'				
30'				
40'				

0' - 13.5' Red/brn. sand silt

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formerly Hedas #26-22948

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27740
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-7
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/21/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	0	2	=	Ben Pellets Portland grout
Method of Grouting				

Static water level after drilling 10 ft. –
Water level was measured using TAPE
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller _____
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCosa Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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Bridgewater, NJ 08807
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West Columbia, SC 29169
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Toll Free: (800) 242-664
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 6 Coordinate No. 26.03.562 Permit No. 26-27739

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 12'

Casing: Type PVC Diameter 2" Length 2'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design				Identification of Soils / Remarks
				no grout	GROUT	0' - 12'	Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles
				0' - 2'	SOLID		
				.5'- 1'	PELLETS		
				1' - 12'	GRAVEL		
				2' - 12'	SCREEN		
					OPEN HOLE		
				12'	SET WELL		
					GPM		
					STNDP.		
10'				X	MANHOLE		
					VAULT		
					GRIPPER		
					NONE		
20'							
30'							
40'							

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formerly
Permitted as
26-22944

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27739
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-6
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Ben Pellets
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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2544D Morningside Dr.
West Columbia, SC 29169
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Toll Free: (800) 242-66
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 5 Coordinate No. 26.03.562 Permit No. 26-27738

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 12'

Casing: Type PVC Diameter 2" Length 2'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
			no grout	GROUT 0' - 12' Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles
			0' - 2'	SOLID
			.5'- 1'	PELLETS
			1' - 12'	GRAVEL
			2' - 12'	SCREEN
				OPEN HOLE
			12'	SET WELL
				GPM
				STNDP.
10'			X	MANHOLE
				VAULT
				GRIPPER
				NONE
20'				
30'				
40'				

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Formerly Hed as 622943

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 .27738
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-5
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/17/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Ben Pellets
Method of Grouting		—		

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Peck
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
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FAX: (803) 796-969

WELL LOG

Well No. PZ - 2 Coordinate No. 26.03.562 Permit No. 26-27737

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 14'

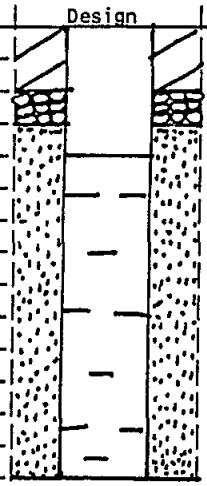
Casing: Type PVC Diameter 2" Length 4'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



0' - 2'	GROUT		
0' - 4'	SOLID		
2' - 3'	PELLETS		
3' - 14'	GRAVEL		
4' - 14'	SCREEN		
	OPEN HOLE		
14'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

Identification of Soils / Remarks

0' - 14' Red/brn. m/f sand, tr. clay silt, tr. f/gravel some small cobbles

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6/89

formerly submitted as [redacted]-22946

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27737
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-2
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11 / 19 / 90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	—	Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-
Toll Free: (800) 242-
FAX: (803) 796-

WELL LOG

Well No. PZ - 1 Coordinate No. 26.03.562 Permit No. 26-27736

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 14'

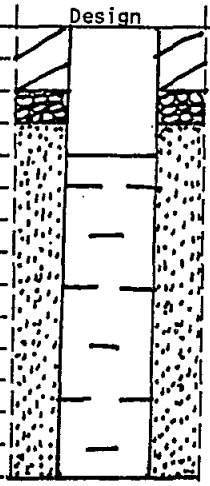
Casing: Type PVC Diameter 2" Length 4'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



0' - 2'	GROUT	0' - 14'	Red/brn. m/f sand, tr. clay
0' - 4'	SOLID		silt, tr. f/gravel some small
2' - 3'	PELLETS		cobbles
3' - 14'	GRAVEL		
4' - 14'	SCREEN		
	OPEN HOLE		
14'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

Identification of Soils / Remarks

DWR-138 M

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Note: Formerly listed as # 26-22945

Well Permit No. 26 - 27736
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-1
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg Street

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren/Hart Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC.
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	—	Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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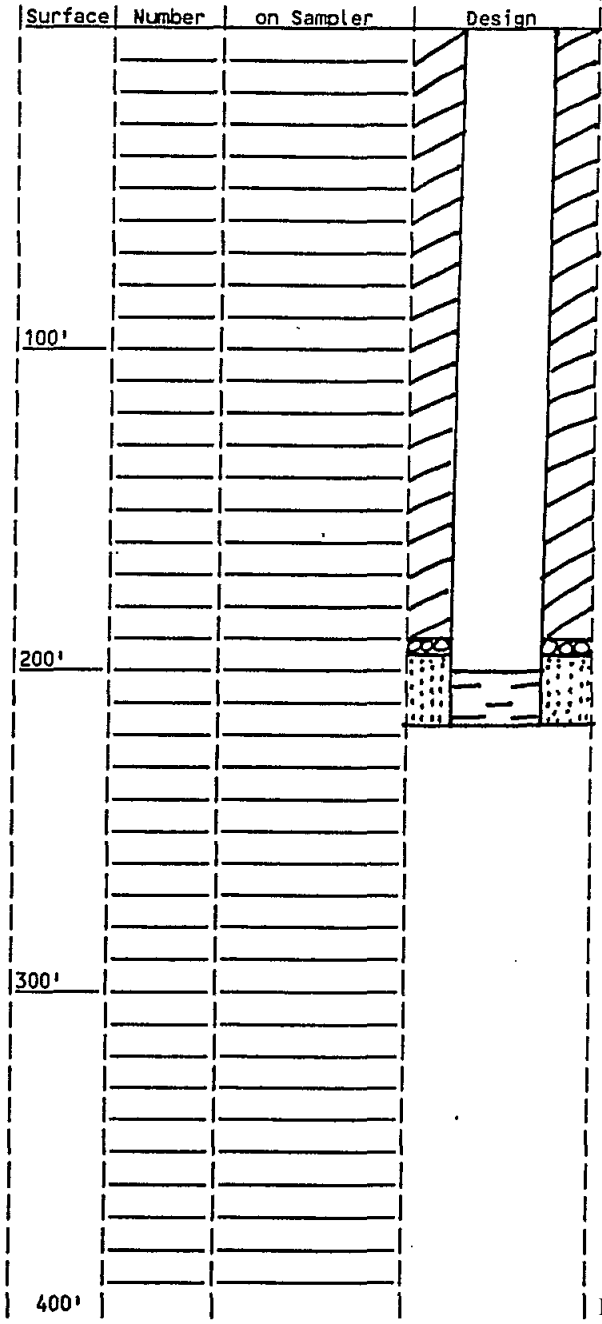
Toll Free: (800) 242-66
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 10C | Coordinate No. 26.03.562 | Permit No. 26-27735
Date Drilled 11/20/90 | County Bergen | Use Recovery
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air | Sampling Method cuttings
Hole Diameter 0'-19'=12", 19'-180'=8", 180'-215'=6" | Total Depth 215'
Casing: Type see below | Diameter 2", 6",8" | Length see below
Screen: Type PVC | Slot .020 | Diameter 2" | Length 200'-215'
Gravel Pack Size Morie # 2 | Casing Seal pellets & portland
Static Water Level 20' | Geologic Formation



Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design

0' - 195'	GROUT	
0' - 200'	SOLID	
190'-195'	PELLETS	
195'-215'	GRAVEL	
200'-215'	SCREEN	
	OPEN HOLE	
215'	SET WELL	
	GPM	
	STNDP.	
X	MANHOLE	
	VAULT	
	GRIPPER	
	NONE	
The above info is for 2" PVC		

Identification of Soils / Remarks

0' - 14' Red/brn. clay silt, tr. m/f sand, tr. f/gravel & cobbles
14' - 19' Silt, stone
This hole later to be turned into triple cased well (we pumped last gallon of grout, casing broke at joint 155'. Redrill at later date to 215')
12" hole 0' - 19'
8" steel grouted to 19'
8" hole in rock to 180'
4" PVC set at 180'
PVC broke at joint while grouting
Drilled out PVC to 180'
Attempt to set 6" steel to 180', could only set to 170' - grouted
Drilled 6" hole to 215' & set 2" well 215'

DWR-138 M
6/89

formerly Hzd as 26 22655-6

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - ~~27735~~ 27735
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10C
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address ~~2[illegible]~~ 55 Trudy Drive

TYPE OF WELL (as per Well Permit Categories) ~~[illegible]~~ MONITORING Date well completed 11/20/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 215 ft.
Well finished to 215 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	200	2	PVC
Outer Casing (Not Protective Casing)	0 0	19 170	8 6	Steel Steel
Screen (Note slot size)	200	215	2	PVC -0.020
Tail Piece	—	—	—	—
Gravel Pack	195	215	6	Morie #2
Annular Seal/Grout	190 0	195 190	6 6	Ben Pellets Portland grout
Method of Grouting	Tremie			

Static water level after drilling 20 ft.
Water level was measured using Tape
Well was developed for 1 hours at 5 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air + Mud Rotary
Drilling Fluid Bentonite Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Toll Free: (800) 242-664
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 13A Coordinate No. 26.03.562 Permit No. 26-27734
Date Drilled 11/12/90 County Bergen Use Monitor
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air Sampling Method from cuttings
Hole Diameter 0'-21.5'=10" Total Depth 40'
Casing: Type Steel Diameter 6" Length 21' set 21.5'
Screen: Type Open Hole Slot .020 Diameter 6" Length 18.5'
Gravel Pack Size Morie #2 Casing Seal Pellets and grout
Static Water Level ____ Geologic Formation ____

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design		
			0' - 21.5'	GROUT	
			6" - 21.5'	SOLID	
				PELLETS	
				GRAVEL	
				SCREEN	
			21.5'-40'	OPEN HOLE	
			40'	SET WELL	
				GPM	
				STNDP.	
10'			X	MANHOLE	
				VAULT	
				GRIPPER	
				NONE	
20'					
30'					
40'					

Identification of Soils / Remarks

0' - 1'	Top soil
1' - 12'	Red/brn. silty f/sand, some c/f gravel
12' - 15'	Weathered red sandstone
15' - 21.5'	Sandstone
21' - 40'	Sandstone

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27734
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address Trudy Drive adjacent to 200 Gregg St, Lodi,

TYPE OF WELL (as per Well Permit Categories) ~~PRODUCTION~~ MONITORING Date well completed 11/12/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	21.5	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	21.5	40		Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0.5	21.5	—	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 27 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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West Columbia, SC 29169
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Toll Free: (800) 242-6
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 13B | Coordinate No. 26.03.562 | Permit No. 26-27733
Date Drilled 11/16/90 | County Bergen | Use Recovery
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air | Sampling Method
Hole Diameter 0'-17'=10" 17'-100'=6" | Total Depth 100'
Casing: Type Steel 6" | Diameter 6" | Length 17'
Screen: Type Rock well open hole | Slot | Diameter | Length
Gravel Pack Size | Casing Seal casing & grout
Static Water Level 18' | Geologic Formation bedrock

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks
				0' - 17'	GROUT	0' - 17' Red brn. clay silt, tr. m/f
				0' - 17'	SOLID	sand, tr. f/gravel some small
					PELLETS	cobbles
					GRAVEL	This hole was hot break threw
				17' - 100'	SCREEN	on respirator
					OPEN HOLE	
				100'	SET WELL	
					GPM	
					STNDP.	
10'				X	MANHOLE	
					VAULT	
					GRIPPER	
					NONE	
20'						
30'						
40'						

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD 26-27733

Well Permit No. 26 - 27733
Atlas Sheet Coordinates 25 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-13B
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg Street

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/20/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren/Hart Tele. #

WELL CONSTRUCTION
Total depth drilled 100 ft.
Well finished to 100 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: [X] above grade [X] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [X] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	17	6	Steel
Outer Casing (Not Protective Casing)	N/A	N/A		N/A
Screen (Note slot size)	17	100	6	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	N/A	N/A	—	N/A
Annular Seal/Grout	0	17		Portland grout
Method of Grouting	Tremie			

Static water level after drilling 18 ft.
Water level was measured using tape
Well was developed for 2 hours at 25 gpm
Method of development Air lift
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig CME 75 Tech.
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 1-9-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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FAX: (803) 796-9698

WELL LOG

Well No. BR - 1 Coordinate No. 26.03.562 Permit No. 26-27732

Date Drilled 11/16/90 County Bergen Use Recovery

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

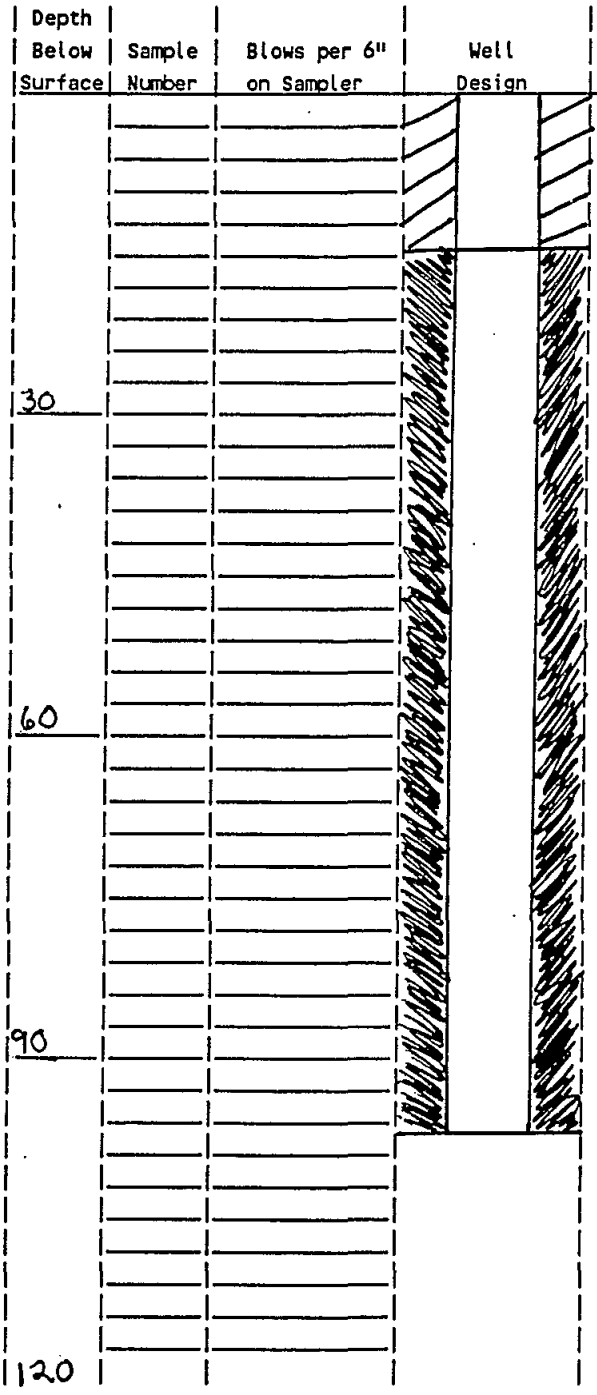
Hole Diameter 0'-17'=10", 17'-100'=6" Total Depth 100'

Casing: Type 6" steel Diameter 6" Length 17'

Screen: Type rock well open hole Slot Diameter Length

Gravel Pack Size Casing Seal casing & grout

Static Water Level 18' Geologic Formation Bedrock



Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design

0' - 17'	GROUT	0' - 17'	Red brn. clay silt, tr. m/f
0' - 17'	SOLID		sand, tr. f/gravel some small
	PELLETS		cobbles
	GRAVEL		This hole was hot break threw
17'- 100'	SCREEN		on respirator
	OPEN HOLE		
100'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

DWR-138 M
6/89

formerly # 23364-9

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27732
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR-1
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/16/90
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 100 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	17	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	—	—	—	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	17	—	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 18 ft.
Water level was measured using Tape
Well was developed for 2 hours at 5 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid N A Type of Rig GUS Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Logs.

1

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Toll Free: (800) 242-66[illegible]
FAX: (803) 796-96[illegible]

WELL LOG

Well No. HMW - 10B Coordinate No. 26.03.562 Permit No. 26-27731

Date Drilled 06/06/91 County Bergen Use Monitor

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method _____ Sampling Method cuttings

Hole Diameter 6" rock well, 2" PVC well Total Depth 97.5'

Casing: Type PVC Diameter 2" Length 86.5' - 1.2"

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets & portland

Static Water Level 12' Geologic Formation Brunswick

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				1'6"-82'6" GROUT — 2" well installed
				1'2"-87'6" SOLID — 6" rock monitor well
				82'6"-85'6" PELLETS — steel 15'
				85'6"-100' GRAVEL — depth 100'
				87'6"-97'6" SCREEN — Note: Installed 2" well inside
				OPEN HOLE — 6" rock well
				97'6" SET WELL
				GPM
				STNDP.
100'				MANHOLE
				VAULT
				GRIPPER
				NONE
200'				
300'				
400'				

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Formerly Permitted as 5399 #26-2

Well Permit No. 26 - 27731
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10B
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address ~~200 Gregg Street~~ Pearl Court Area Adjacent to 200 Gregg St, Lodi, NJ 07644
TYPE OF WELL (as per Well Permit Categories) ~~REPLACE MONITOR~~ Date well completed ~~11/16/90~~ 6 6 91
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~Malcolm Hoot~~ NA Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to ~~100~~ 97'6" ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☒ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	~~+2~~ 1'2"	87'6"	~~6~~ 2	~~Steel~~ PVC
Outer Casing (Not Protective Casing)	0.5	15	6	Steel
Screen (Note slot size)	87'6"	~~97'6"~~	~~+~~ 2	~~Open Hole~~ PVC - 0.020
Tail Piece	—	—	—	~~L~~
Gravel Pack	~~85'6"~~ 82'6"	100	6	Morie #2
Annular Seal/Grout	~~82'6"~~ 1'2"	~~85'6"~~ 82'6"	~~6~~ 6	~~Portland Cement~~ Bent. Pellets
Method of Grouting	Tremie			

Static water level after drilling ~~12~~ ft.
Water level was measured using Tape
Well was developed for ~~NA 2~~ hours at ~~5~~ gpm
Method of development ~~Air Lift~~

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Tech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 1/9/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27127
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 5
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/13/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	7'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	7'	14'	4"	.020 P.V.C.
Tail Piece	X	X	X	
Gravel Pack	6'	14'	8"	#2 GRAVEL
Annular Seal/Grout	5'	6'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'2" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4" - 8" GRAVEL FILL
8" - 7' RED SANDY CLAY FORMATION
7' - 14' RED SANDY CLAY W/ SOME GRAVEL & WATER.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27126
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 4
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/22/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 3' 10" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	15'	4"	.020 P.V.C.
Tail Piece	X	X	X	
Gravel Pack	4'	15'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4" - 8" GRAVEL FILL
8" - 6' RED SANDY CLAY FORMATION
6' - 15' RED SANDY W/ SOME CLAY & GRAVEL WATER 10' - 15'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27125
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 3
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 10/22/91
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	6'	13'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	5'	13'	8"	#2 GRAVEL
Annular Seal/Grout	4'	5'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 4 ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 13J
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4" - 12" GRAVEL FILL
12" - 7' RED SANDY CLAY FORMATION
7' - 13' RED SANDY FORMATION W/ SOME GRAVE & WATER

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22748
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 3
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/15/90
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

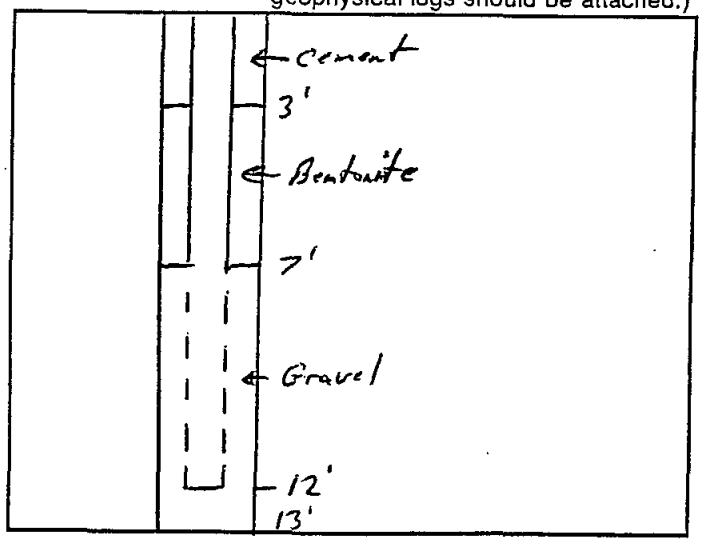
WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	12	4"	S 40 PVC
Outer Casing (Not Protective Casing)	-	-	-	
Screen (Note slot size)	7'	12'	4"	.010 PVC
Tail Piece	-	-	-	
Gravel Pack	7	12	8"	#2 Gravel
Annular Seal/Grout	3"	7'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3'10" ft.
Water level was measured using Electric line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagan Date 9/2/92

D-209

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22747
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WADC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/15/90
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

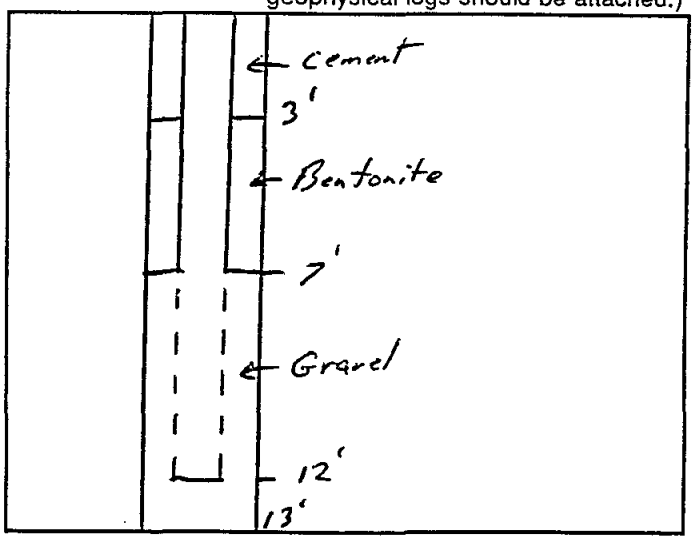
WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	12'	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	
Screen (Note slot size)	7'	12'	4	.010 PVC
Tail Piece	—	—	—	
Gravel Pack	7'	12'	8"	#2 Gravel
Annular Seal/Grout	3'	7'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3' 10" ft.
Water level was measured using Electric Line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagan Date 9/2/92

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5/89

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Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27124
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/21/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	12'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	4'	12'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'10" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" TOP SOIL
6" - 6' RED SANDY CLAY FORMATION
6'-12' RED SANDY SOIL W/SOME LARGE GRAVEL & WATER

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27123
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 1
County Municipality LODI BORO Lot No. 2H Block No. 2004
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/21/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	10'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	4'	10'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'6" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4' - 12" GRAVEL FILL
12" - 5' RED SANDY CLAY FORMATION
5' - 10' RED SANDY W/ SOME GRAVEL

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

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DWR-138 M
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Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22746
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 1
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/15/90
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

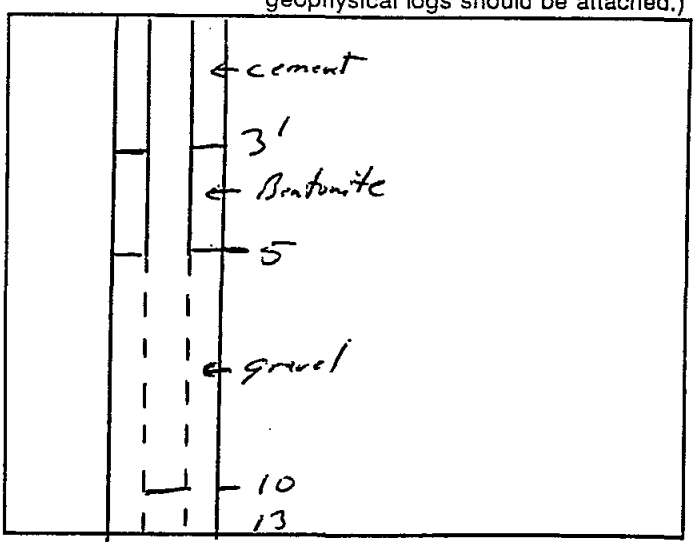
WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	10	4"	Sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	
Screen (Note slot size)	5'	10'	4"	.010 PVC
Tail Piece	—	—	—	
Gravel Pack	5'	10'	8"	#2 Gravel
Annular Seal/Grout	3'	5'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3'10" ft.
Water level was measured using Electric line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagan Date 9/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - ~~22741~~
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : ~~562~~

OWNER IDENTIFICATION - Owner
Address UNITED TECHNOLOGY CORP.
City ~~200 GREG STREET~~ LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14A
County Municipality Lot No. Block No.
Address LODI BORO 1-A 147A-

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/20/90
Regulatory Program Requiring Well MONITORING Case I.D. #
ECRA
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLAREN HART / F. BRACKENHOFF Tele. #(212) 447-1480

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 95 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	85	4	SCH 40 PVC
Outer Casing (Not Protective Casing)	+2	18	8	SCH 40 STEEL
Screen (Note slot size)	85	95	4	SCH 40 PVC .020
Tail Piece	—	—	—	—
Gravel Pack	82	100	8	#2 Morie Sand
Annular Seal/Grout	0.0	82	8	Cement / bentonite
Method of Grouting	Pressure grouted with tremie pipe			

Static water level after drilling 7.5 ft.
Water level was measured using TAPE
Well was developed for .5 hours at 7 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM AIR ROTARY
Name of Driller H.L. REXRODE, JR
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14A
0-14.5' Modest Brown silty sand, some clay, trace to some rock fragments
14.5-16' Weathered incompetent shale
16-100' Shale - reddish brown fissile.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 12/11/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60059

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP516
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW-32
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
DATE WELL COMPLETED 5 / 3 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	30455	1.61 #
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.5	11	6	MORIE	#1
Grout	0	.5	6	Neat Cement Bentonite	25 lbs. ____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME-75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature [signature]

Registration No. J 22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-11' BROWN FINE SILTY SAND WITH GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60058

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP516
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. IT-36
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
DATE WELL COMPLETED 5 / 3 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1.5	2	304SS	1.61#
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1.5	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1	12	6	MORIE	#1
Grout	0	1	6	Neat Cement	25 lbs.
				Bentonite	____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature [signature]
Registration No. J22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-3'	DARK GREY FINE/MEDIUM/ COARSE SAND SILTY SAND WITH SMALL GRAVEL
3-7'	LIGHT GREY FINE SANDY SILTY CLAY
7-9'	LIGHT GREY SILTY FINE SAND
9-12'	BROWN SILTY FINE SAND AND GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59096

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner NJ DEPT. OF TRANSPORTATIO
ddress 1035 PARKWAY AVE.
ity TRENTON State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15D
ounty BERGEN Municipality LODI BORO Lot No. 1.05 Block No. 205.02
ddress HANCOCK & INDUSTRIAL ROAD

DATE WELL STARTED 11 / 17 / 00
DATE WELL COMPLETED 11 / 21 / 00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

otal depth drilled 61 ft.
ell finished to 61 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 5 ft.

ater level was measured using Tape

ell was developed for 6 hours
2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	36	4	steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	36	61	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	36	8	Neat Cement Bentonite	900 lbs. 45 lbs.

Grouting Method Tremmie

Drilling Method Drive + Wash Rotary

lethod of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

riller's Signature Steve Wolf

egistration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Block Top	Water
	Medium Red Brown	5
10	Silt, Clay, Sand + Gravel	
	w/ Cobbles	
20	↓	
26		
30	Weathered Bedrock	
36	↓	
40	Competent Red Shale	
50	↓	
60		
61	EOH 61	

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59095

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner NJ DEPT. OF TRANSPORTATIO
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15 S
County BERGEN Municipality LODI BORO Lot No. 1.05 Block No. 205.02
Address HANCOCK & INDUSTRIAL ROAD

DATE WELL STARTED 11 / 17 / 00
DATE WELL COMPLETED 11 / 17 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 19 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.8 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	14	19	2	PVC	Sch 40
Gravel Pack	2	24	6	Morie 0	800 lbs
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 23 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Red Silty Clay
5
10 Red Brown Medium Fine
Silty Sand & Gravel
15
20 Weathered Red Shale
24 EOH 24'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~59053~~

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~562~~

)WNER IDENTIFICATION - Owner ~~WELLINS, ROBERT~~
Address ~~411 ROUTE 17~~
City ~~HASBROUCK HEIGHTS~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14S
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~2.04~~ Block No. ~~205.03~~
Address ~~HANCOCK ST. & INDUSTRIAL~~

DATE WELL STARTED 11/13/00
DATE WELL COMPLETED 11/13/00

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~
Regulatory Program Requiring Well Case I.D.#

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 22 ft.
Well finished to 20 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

f finished above grade, casing height (stick up ove land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 5 hours
at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	14	20	2	PVC	Sch 40
Gravel Pack	2	22	6	Morie 0	400 lbs
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1/23/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Medium Fine Red Silty
5 Sand w/ Gravel + Cobbles
10
15
20 Weathered Rock
22 Red Shale / Sandstone
EOH 22

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59049

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner WELLINS, ROBERT
Address 411 ROUTE 17
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 14 D
County BERGEN Municipality LODI BORO Lot No. 2.04 Block No. 205.03
Address 100 W. HUNTER AVENUE

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 29 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 266 6618

WELL CONSTRUCTION

Total depth drilled 52 ft.
Well finished to 52 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	27	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	27	52	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	27	8	Neat Cement Bentonite	650 lbs. 35 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Medium Fine Red Silty Sand & Gravel
10
16 ↓
20
Red Shale Bedrock
30
40
50
EOH 52'

COPIES: White - DEP Canary - Driller P-220 Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58404

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C-24
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/18/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/21/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6	LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS
6-10.5'	REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller D-221 Pink - Owner Goldenrod - Health Dept.

WR-138 M
'98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58405

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. A17
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	30455	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6-10.5' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1 98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58402

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. C 22
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

otal depth drilled 10.5 ft.
ell finished to 10.5 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick
p ve land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 5.5 ft.

ater level was measured using TAPE

ell was developed for 1/2 hours
t 1-2 gpm

ethod of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	30455	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

Ne riller (Print) NORMAN CRANE

riller's Signature

egistration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION MATERIAL DEBRIS CONCRETE AND CEMENT CHUNKS

6-10.5' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller D-223 *Pink - Owner Goldenrod - Health Dept.*

VR-138 M
'98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58403

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. C-23
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/18/00
DATE WELL COMPLETED 4/18/01

YPE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

otal depth drilled 10.5 ft.
ell finished to 10.5 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick p) above land surface ____ ft.

as steel protective casing installed? ☐ Yes ☒ No

tatic water level after drilling 5.5 ft.

ater level was measured using TAPE

ell was developed for 1/2 hours
: 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/21/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6'	LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS
6-10.5'	REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58400

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. C 20
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

YPE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

otal depth drilled 10.5 ft.
ell finished to 10.5 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
ve land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 5.5 ft.

ater level was measured using TAPE

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

Ne iller (Print) NORMAN CRANE

riller's Signature

Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 6 ' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT TRUCK'S

6 - 10.5 ' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58401

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~1 FINANCIAL PLAZA MAIL STOP~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 21
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4 / 18 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MONIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature Norman Crane
Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT TRUCKS

6-10.5' REDDISH BROWN SILTY SAND

D-226

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58398

Atlas Sheet Coordinates 26 : 03 562

)WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. E-21
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/27/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/12/01
Regulatory Program Requiring Well Case I.D.#

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1½ hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	304SS	1.61 16/Ft.
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	52 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Name of Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/22/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 6' FILL LOOSE CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6 - 11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58399

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 19
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 10 1/2 ft.
Well finished to 10 1/2 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 1/2 ft.

Water level was measured using

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	SCH 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	56 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature Norm Cr

Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 6' FILL BRICK CONSTRUCTION DEBRIS CEMENT AND CONCRETE CHUNKS

6 - 10.5' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58396

Atlas Sheet Coordinates 26 : 03 562

ER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. D-16
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 27 / 00
DATE WELL COMPLETED 4 / 17 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1-Li 16/Ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 002221 Date 6 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6 - 11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58397

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. D 17
cunty BERGEN Municipality LODI BORO Lot No. ~~1.01~~ ~~177~~.01 Block No.
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/27/00
egulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 4/17/01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. #(609) 584 8900

WELL CONSTRUCTION

:tal depth drilled 11 ft.
/e'l finished to 11 ft.

: ehole diameter:
Top 6 in.
Bottom 6 in.

/all was finished: ☐ above grade
☒ flush mounted

:nished above grade, casing height (stick p) above land surface ____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

:atic water level after drilling 6 ft.

/ater level was measured using TAPE

/all was developed for 1/2 hours
1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity NA gpm

'ump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 161/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE, CEMENT SAND

6-11' REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/22/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58394

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-19
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
Regulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 4/18/01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58395

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (NP) E-20
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
Regulatory Program Requiring Well DATE WELL COMPLETED 4/18/01
Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-89[illegible]

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.41 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature [signature]
Registration No. 0622211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58392

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-17
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/29/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.
Water level was measured using Tape
Well was developed for 1/2 hours
at 1-2 gpm
Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/f
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58393

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-18
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/29/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58390

Atlas Sheet Coordinates 26 . 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-15
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

CNSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
ell finished to 11 ft.

nehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick up) above land surface ____ ft.

el protective casing installed?
☐ Yes ☒ No

tic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lbs/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
ump capacity NA gpm
ump type: NA
rilling Fluid HSA Type of Rig CME 75
ealth and Safety Plan submitted? ☐ Yes ☒ No
evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.
ell Driller (Print) Norman Crane
riller's Signature N. Crane
egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction Debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58391

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-16
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/29/00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☑ flush mounted

inished above grade, casing height (stick
) above land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity N A gpm

ump type: N A

rilling Fluid HSA Type of Rig CME 75

ealth and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris, concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.
/ell Driller (Print) Norman Crane
riller's Signature
egistration No. 0022211 Date 6/26/01

COPIES: White - DEP Canary - Driller D-236 *Pink - Owner Goldenrod - Health Dept.*

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58388

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-13
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/15/01

'PE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele(#609)584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p ve land surface ____ ft.

as el protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1,61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

lethod of development Pump

Vas permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

'ump type: NA

)rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

)riller's Signature N. Crane

Registration No. 00 22211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction Debris Concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller D-237 Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58389

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-14
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
egulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 4/18/01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

ehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
above land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
ump capacity NA gpm
ump type: NA

rilling Fluid HSA Type of Rig CME75
ealth and Safety Plan submitted? ☐ Yes ☒ No
evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.
ell Driller (Print) Norman Crane
riller's Signature N. Crane
egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58386

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
dress 1 FINANCIAL PLAZA MAIL STOP
y HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-11
unty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
dress 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

PE OF WELL (as per Well Permit Categories) RECOVERY
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ll finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
ve land surface ____ ft.

as steel protective casing installed?
Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using TAPE

ell was developed for 1/2 hours
1-2 gpm

lethod of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 16/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME 75

lealth and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRATE

riller's Signature

egistration No. 0022211 Date 6/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT

6-11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58387

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MPE-12
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 5848900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Casing finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1½ hours
1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 lb/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT

6-11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58384

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. E8
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

YPE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele.(#609)584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
e" finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☑ flush mounted

inished above grade, casing height (stick
e land surface ____ ft.

as steel protective casing installed?
☐ Yes ☑ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	# 1
Grout	0	5	6	Neat Cement Bentonite	5c lbs. 3 lbs.

Grouting Method Pavement
Drilling Method HSA

as permanent pumping equipment installed? ☐ Yes ☑ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig

ealth and Safety Plan submitted? ☐ Yes ☑ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

ell Driller (Print) Norman Crane

riller's Signature

egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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1 98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58385

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E9
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. #(609) 584-8907

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58382

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E6
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) I T Group Tele. #(609) 548-890

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Casing finished above grade, casing height (stick pipe above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	5c lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 022211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58383

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E7
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours

Yield 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 16/P
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58380

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E4
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/15/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. #(609)584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.41 Sch 10
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Noman Crane
Driller's Signature N. Crane
Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58381

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E5
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-890

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 161
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 0022211 Date 6/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58382

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E6
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 548-8902

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Unfinished above grade, casing height (stick pipe above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4½ hours
1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 16#
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement	50 lbs.
				Bentonite	3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 0022217 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58383

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E7
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8907

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 12 hours
at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill constructed debris concrete and cement

6-11' Reddish brown silty sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58380

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E4
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609)584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface) ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 4/1
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Noman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58381

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E5
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-890

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.01D
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 022211 Date 6/25/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58378

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E2
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface) ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.6.1 16/4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58379

Atlas Sheet Coordinates 26 : 03 562

)WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
\ddress 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. E3
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
\ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16#
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crank
Driller's Signature
Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58376

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~1 FINANCIAL PLAZA MAIL STOP~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MPE-1
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Unfinished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours 1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	161 16/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Method of development

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58377

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E1
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. #(609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.01
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature
Registration No. 0622211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DW .38 M
11/96

E DMR

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 48885

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Web No. MW31A
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 GREGG ST

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 85564

DATE WELL STARTED 10 / 7 / 97
DATE WELL COMPETED 10 / 8 / 97

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirogen, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 40' ft.
Well finished to 40' ft.

Borehole diameter:
Top 10" in.
Bottom 6" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 19' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-80

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	20'	6"	Steel	19 lbs
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	20'	40'		Open Hole	
Blank Casings (No. Used)					19 lbs
Tail Piece					
Gravel Pack					
Grout	0'	20'		Neat Cement Bentonite	940 lbs. 50 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Steve Yotcoski

Driller Signature Steve Yotcoski

Registration No. J1622 Date 11 / 7 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

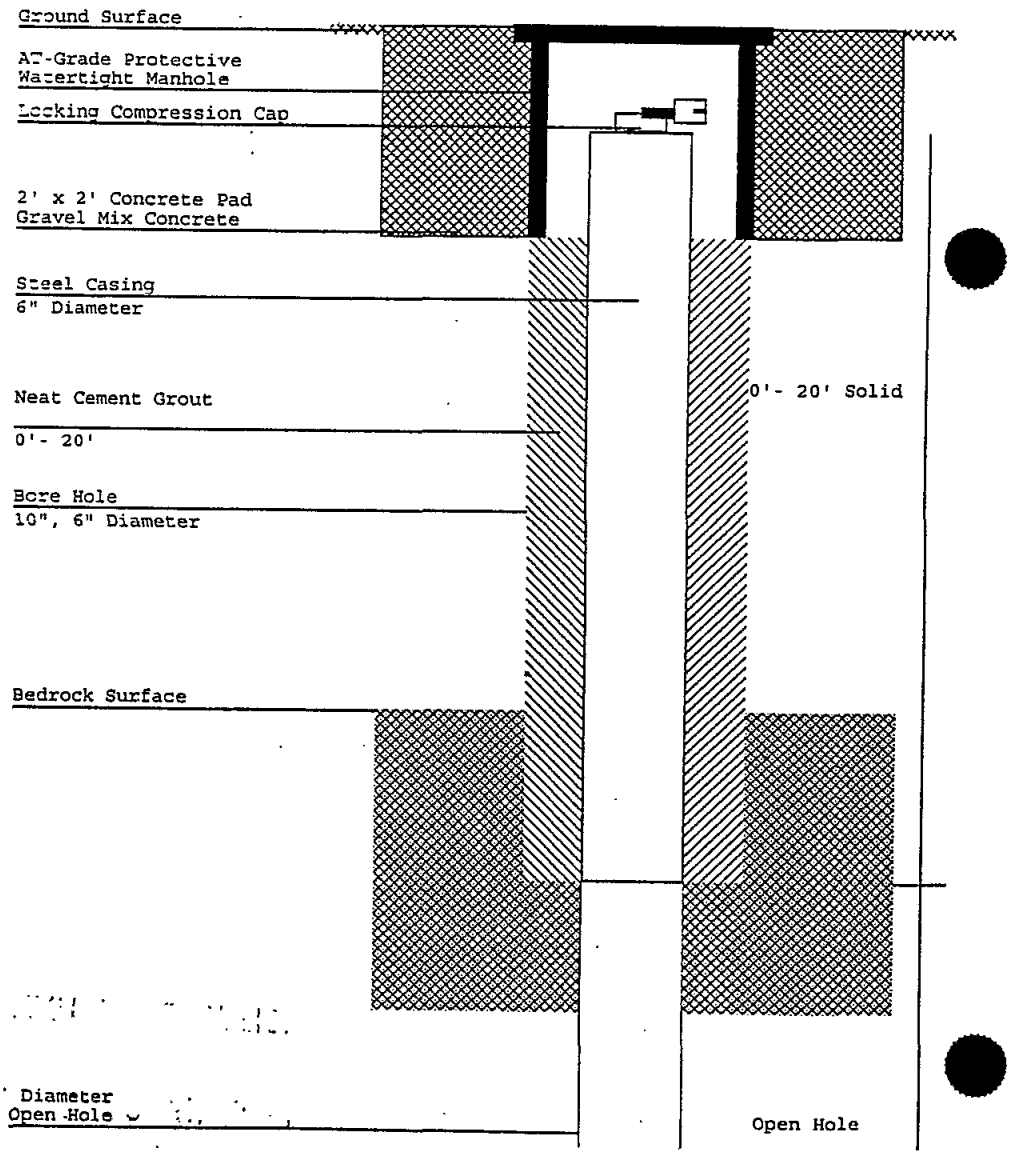
Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-16

WELL LOG

ELL: MW31A DATE DRILLED: 10/08/1997 COCRD #1: 26.03.562 PERMIT #1: 26-48885
COCRD #2: PERMIT #2:
ITE: UTC/BASF (former Inmont Facili, Trudy Drive (200 Gregg Street), , Lodi, NJ 07664 COUNTY: Bergan
WNER: United Technologies Corpo, 1 Financial Plaza, , Hartford, CT 06101 XSTREET:
USE: Monitoring

WNER CASING: Steel	OUTER CASING:	SCREEN TYPE 1: Open Hole	DRILLING METHOD: Air Rotary
IAMETER: 6"	DIAMETER:	SCREEN TYPE 2:	SAMPLING METHOD:
ENGTH: 20'	LENGTH:	DIAMETER:	HOLE DIA: 10", 6"
		LENGTH 1:	TOTAL DEPTH: 40'
ET WELL: 40'	GAL PER MIN: 1	LENGTH 2:	
RAVEL PK SZ:	STAT H2O LVL: 19'	SLOT SIZE:	
RILLER: Steve Yotcoski	DEVELOPMENT METHOD: Pump	CASING SEAL: Portland	
URFACE COMPLETION: M	DEVELOPMENT TIME: 1/2 Hour	OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
-		
' - 2'		Asphalt & stone.
' - 6'		Red-brown medium sand & gravel some silt.
' - 15'		Red-brown medium sand some silt trace gravel.
5' - 20'		Bedrock, sandstone, shale.
0' - 40'		Rock, sandstone, shale.
ater at 30' & 33'.		



DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46393
Atlas Sheet Coordinates 26 : Ø3 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW30
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A
Address 200 GREGG ST. Date well started 12/20/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/20/96
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENVIrogen, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface +2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	+2	2	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2	12	4	Sch 40 PVC .010
Tail Piece				
Gravel Pack	1	12		Morie #1
Annular Seal/Grout	0	1		Portland
Method of Grouting	Gravity			

Static water level after drilling 4 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig B-57
Name of Driller Jim Burton
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
Registration No. J13752
Name of Drilling Company SUMMIT WELL DRILLING CO INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Jim Burton Date 12/26/96

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 – 45583
Atlas Sheet Coordinates 26 Ø3 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address.
County BERGEN Municipality LODI BORO Owner's Well No. EMW29
Address 200 GREGG ST Lot No. 1A Block No. 147&177
Date well started 9/16/96
TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Date well completed 9/16/96
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ensirogen, Inc. Case I.D. # 85564 Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter: Top 10 in. Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 4 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 1/2 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J1210
Name of Drilling Company SUMMIT WELL DRILLING CO INC

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	3	10		Morie #2
Annular Seal/Grout	0	3		Portland
Method of Grouting	Gravity			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 9/18/96

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41632
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-31 (Blanket)
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/27/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 35.8 ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 5.5 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid Bentonite Type of Rig Acker Hillbilly
Name of Driller Jerold Klaus
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B0195
Name of Drilling Company JERSEY BORING

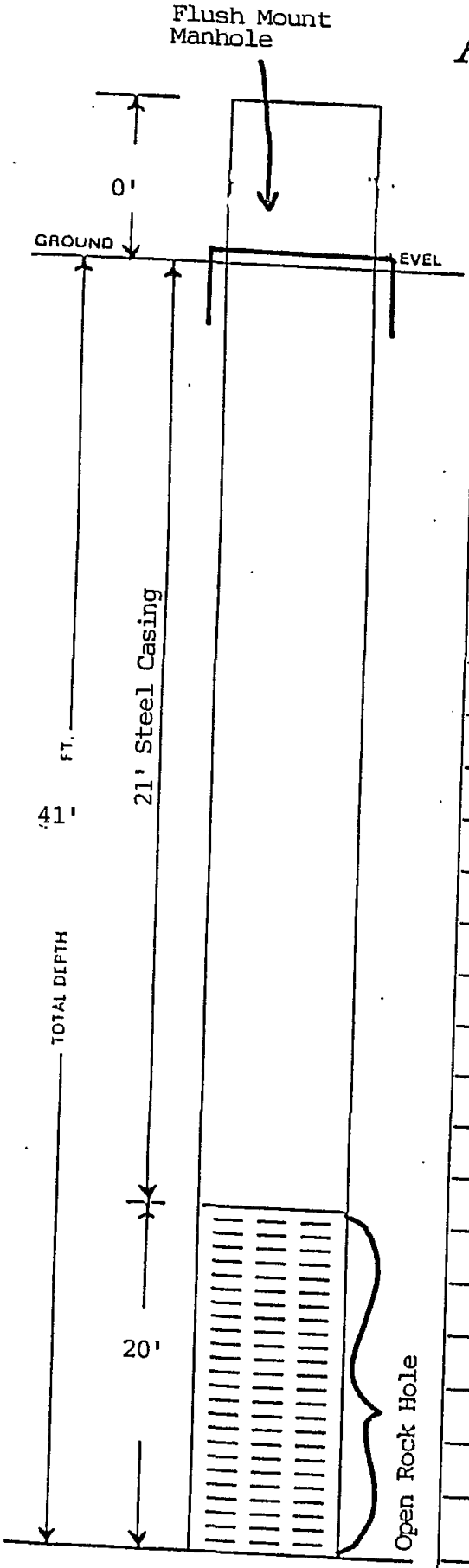
GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 15' Brn Red Brn Silt, Sd & gravel
15 to 20' Brn Silt Tr gravel Tr Sand Stone & 4" Asphalt (Fill)
20 to 25' Black Organic Silt Little gravel Trace F Sand
25 to 30' Lite Brn Silt
30 to 35.8' Red Brn f/sd Lt m/f gravel with Rock Fragments Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jerold Klaus Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept



A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562

WELL LOG	FEET FROM GROUND SURFACE 0 to 41'
Sand & Brownish red	0-11.5'
stones	
Weathered Rock	11.5'-16'
Competent rock	16'-41'

NAME OF OWNER	United Technologies Corp.
Location	BASF Plant Lodi, NJ
Well No.	MW-22A
State Permit	2632649
Job No.	23642
Test Pumped (Hrs.)	1/2
Capacity (GPM)	3
Static Level	3'
Pumping Level	NA
Datum	Ground
Specific Capacity	NA
Diameter of Casing	6"
Depth of Well (Ground)	41'
Depth to Gravel	NA
Gravel Size	NA
Length of Casing	21'
Screen Material	Open Rock Hole
Screen Mfg.	NA
Screen Dia.	6"
Length of Screen	20'
Top of Screen Fitting	NA
Bottom of Screen Fitting	NA
Slot Size	NA
Seal Material	Cement
Quantity	530 lbs.
Depth of Seal Material	0-21'
Drilling Machine	Air Rotary
Date Well Completed	4/5/93
Driller	Steven Steffen J-1305 & Logan Bollinger

OWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

4

MONITORING WELL RECORD

Well Permit No. 24 - 32649
Atlas Sheet Coordinates 24 : 03 : 542

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECHNOLOGIES BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-22A
County Bergen Municipality Lot No. Block No.
Address 200 Gregg St. LODI BORO 1A 147A

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 5 / 93
Regulatory Program Requiring Well MONITORING ECRA Case I.D. # 83364
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 41 ft.
Well finished to 41 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	21	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21	41	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	21	10	Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development Pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

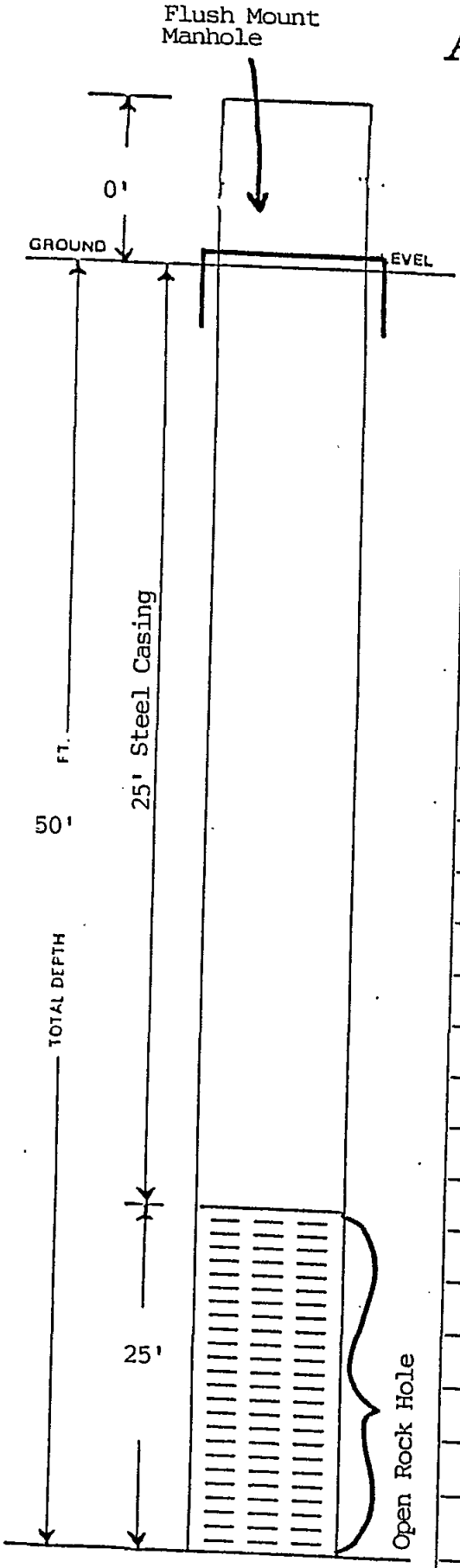
GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steven Steffen JJP Date 6/2/93

COPIES: *White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.*



A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562

WELL LOG	FEET FROM GROUND SURFACE 0 to 50'	
		NAME OF OWNER: United Technologies Corp
Sand & stones	0-17'	Location: BASF Plant Lodi, NJ
Weathered rock	17'-20'	Well No.: MW-21A
Competent bedrock	20'-50'	State Permit: 2632648
		Job No.: 23642
		Test Pumped (Hrs.): 1/2
		Capacity (GPM): 3
		Static Level: 3'
		Pumping Level: NA
		Datum: Ground
		Specific Capacity: NA
		Diameter of Casing: 6"
		Depth of Well (Ground): 50'
		Depth to Gravel: NA
		Gravel Size: NA
		Length of Casing: 25'
		Screen Material: Open Rock Hol
		Screen Mfg.: NA
		Screen Dia.: 6"
		Length of Screen: 25'
		Top of Screen Fitting: NA
		Bottom of Screen Fitting: NA
		Slot Size: NA
		Seal Material: Cement
		Quantity: 630 lbs.
		Depth of Seal Material: 0-25'
		Drilling Machine: Air Rotary
		Date Well Completed: 4/5/93
		Driller: Steven Steffen J-130 & Logan Bollinger

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32570
Atlas Sheet Coordinates 26 :Ø3 :562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~UNITED TECH BLDG. MAIL STOP 5Ø~~
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2C-3
County Bergen Municipality LODI BORO Lot No. 1A Block No. ~~147A-77~~
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 26 / 93
Regulatory Program Requiring Well recovery ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 46.83 ft.
Well finished to 46.83 ft.
Borehole diameter:
Top * in.
Bottom * in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				NO DATA
Outer Casing (Not Protective Casing)				AVAILABLE
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 4 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development Developed Previously
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 5 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig * ~~*~~
Name of Driller ~~MRX~~ Chuck Griffith/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1527/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

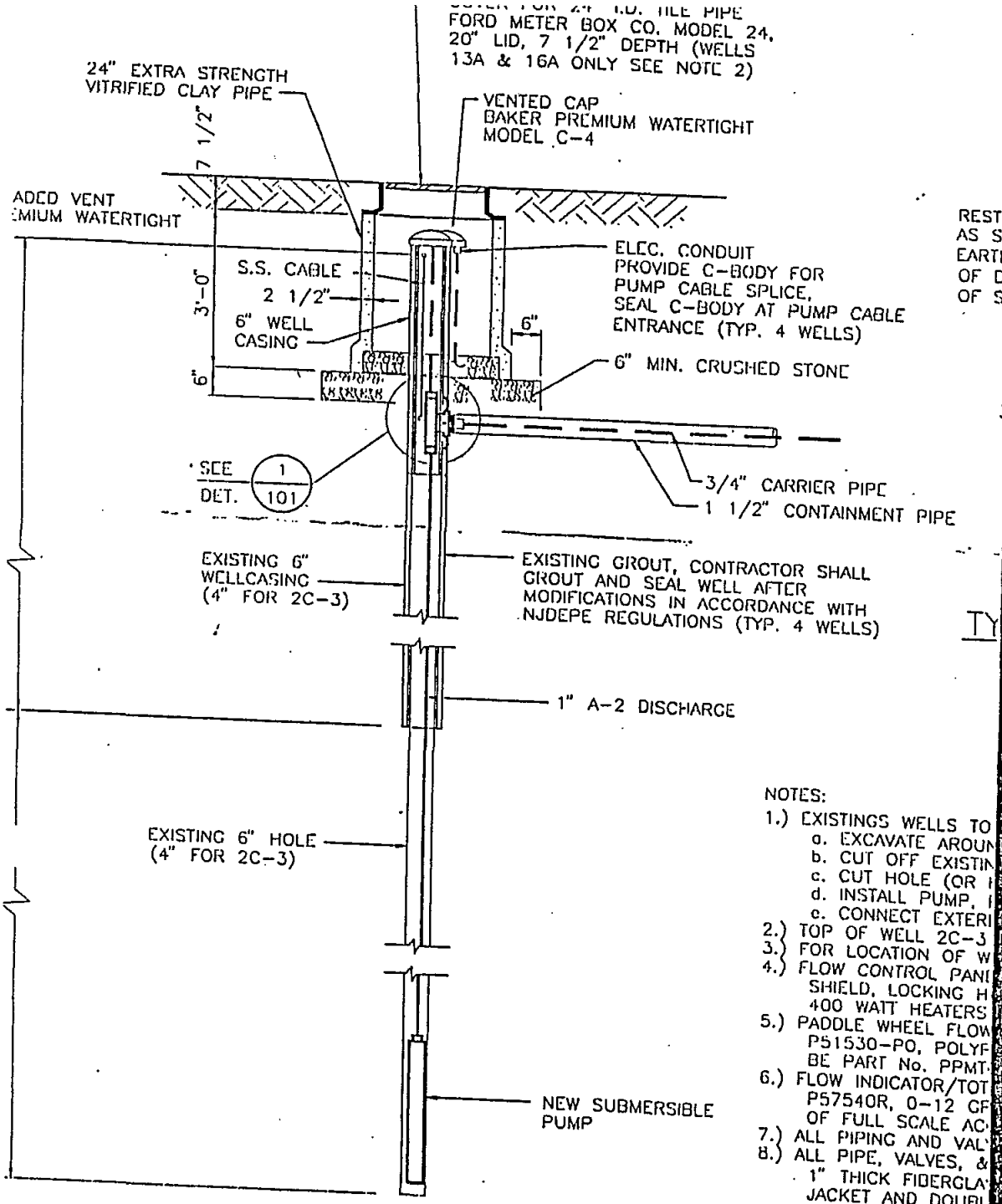
*NOTE: Well previously constructed under permit #26-5226 by Warren George Inc.

*See the attached drawing for modifications performed by A. C. Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Gary Reiss /TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



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NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANI SHIELD, LOCKING H 400 WATT HEATERS
5.) PADDLE WHEEL FLOW P51530-PO, POLYF BE PART No. PPMT
6.) FLOW INDICATOR/TOT P57540R, 0-12 GF OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, & 1" THICK FIBERGLA JACKET AND DOUBL INSULATION--SHALL INCH DEEP CORRUG
9.) DIAPHRAGM VALVES PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH SHOWN ON DWG. 1

/ELLS HMW-13A, BMW-16A & 2C-3

1/2" 0 1 2 4 6

Compaction T

BCM BCM Engineers Inc.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32647
Atlas Sheet Coordinates 26 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES COR
Address UNITED TECHNOLOGIES BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-17A
County Bergen Municipality LODI BORO Lot No. 1A Block No.
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4 / 5 / 93
Regulatory Program Requiring Well ECRA Case I.D. # E8564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 41 ft.
Well finished to 41 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	21	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21	41	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	21	10	Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development Pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

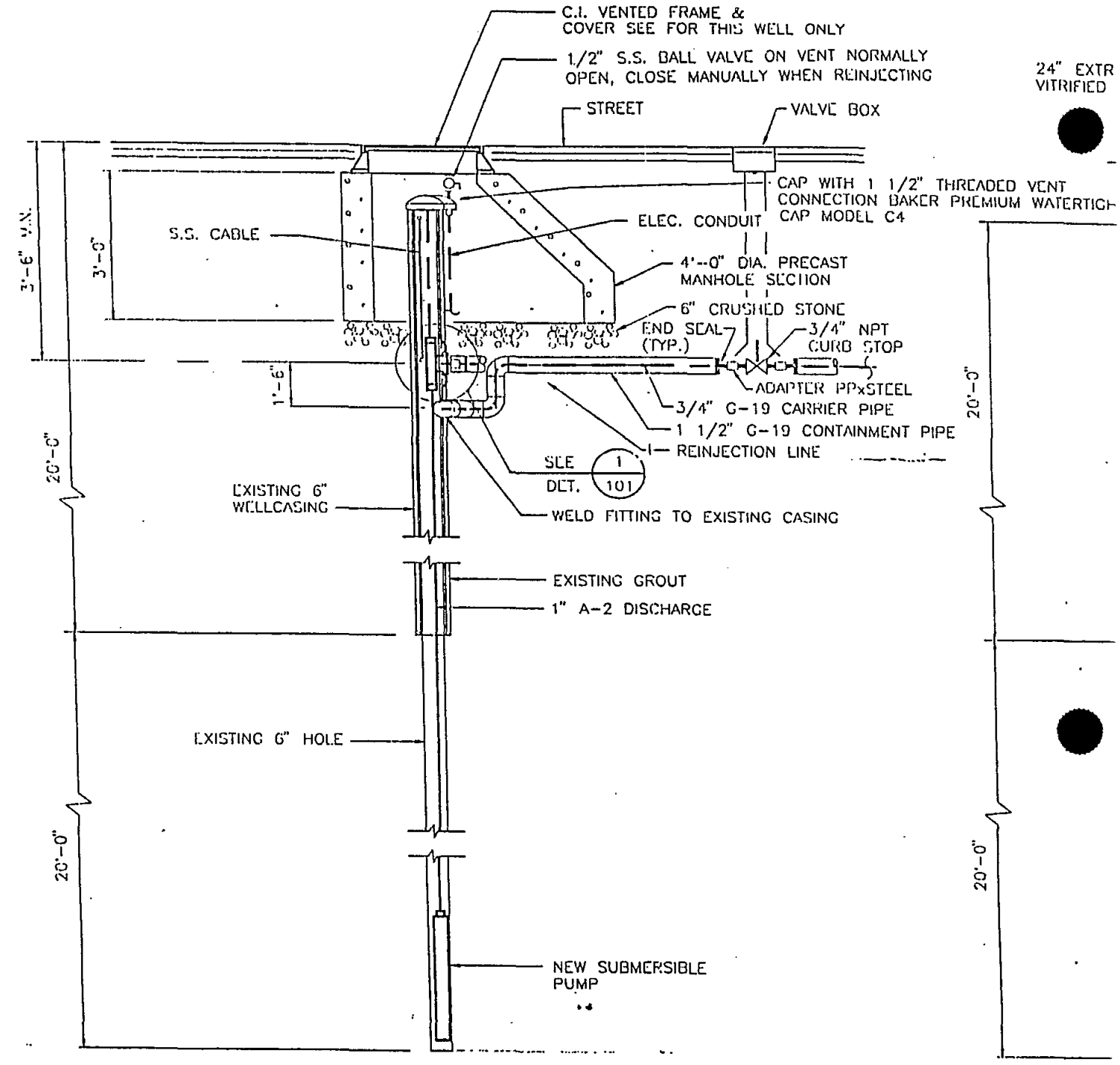
GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steven Steffen /TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



24" EXTR VITRIFIED

WELL HMW-10A

4/13

SECTION A/101

1/2" 0 1 2 4 6

WELLS H

1/2" 0

3/4 Rb's 4'97

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32648
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CTR
Address UNITED TECHNOLOGIES BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21A
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/ 5 / 93
Regulatory Program Requiring Well ECRA Case I.D. # 88644
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	25	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	25	50	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	25	10	XXXXXX Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development Pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

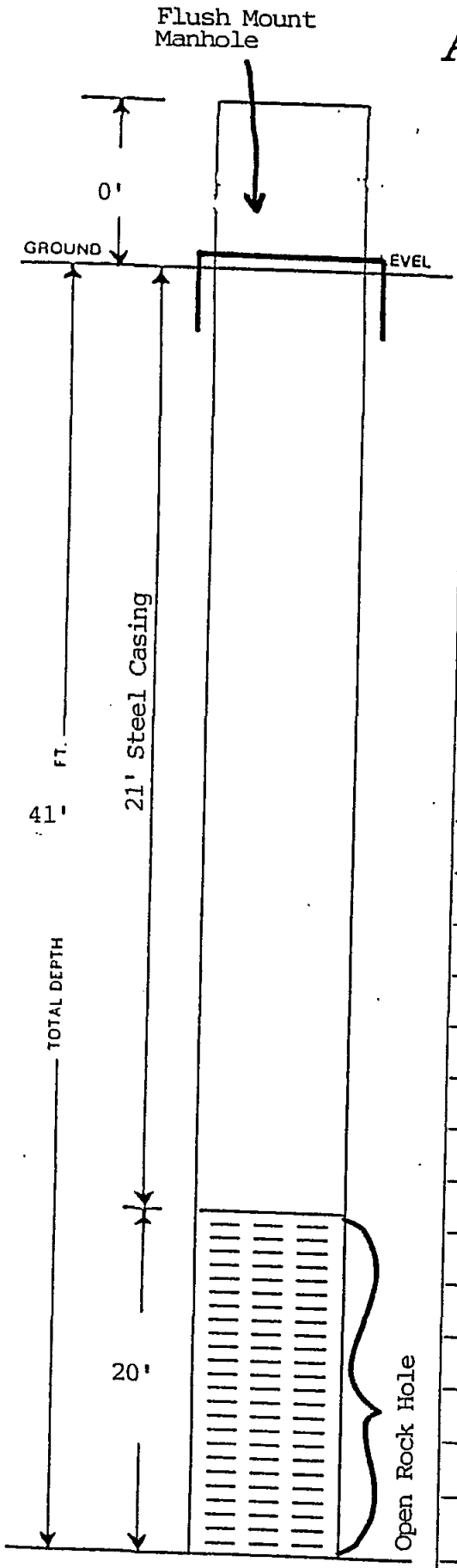
GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steven Steffen /TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562

WELL LOG	FEET FROM GROUND SURFACE 0 to 41'
Sand & Stone	0-12'
Weathered Rock	12'-16'
Competent Bedrock	16'-41'

NAME OF OWNER	United Technologies Corp.
Location	BASF Plant Lodi, NJ
Well No.	MW-17A
State Permit	2632647
Job No.	23642
Test Pumped (Hrs.)	1/2
Capacity (GPM)	3
Static Level	3'
Pumping Level	NA
Datum	Ground
Specific Capacity	NA
Diameter of Casing	6"
Depth of Well (Ground)	41'
Depth to Gravel	NA
Gravel Size	NA
Length of Casing	21'
Screen Material	Open Rock Hole
Screen Mfg.	NA
Screen Dia.	6"
Length of Screen	20'
Top of Screen Fitting	NA
Bottom of Screen Fitting	NA
Slot Size	NA
Seal Material	Cement
Quantity	530 lbs.
Depth of Seal Material	0-21'
Drilling Machine	Air Rotary
Date Well Completed	4/5/93
Driller	Steven Steffen J-1305 & Logan Bollinger

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: _____

PERMIT NO. 26/1887

APPLICATION NO. _____

COUNTY Bergen

WELL RECORD

1. OWNER Boro of Lodi ADDRESS Kennedy Park CODINT
   Owner's Well No. Soil Borings SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Above
3. DATE COMPLETED 12/11/87 DRILLER Environmental Drilling
4. DIAMETER: Top 7" inches Bottom 7" inches TOTAL DEPTH 12 Feet
5. CASING: Type None Diameter — Inches Length — Feet
6. SCREEN: Type — Size of Opening — Diameter — Inches Length — Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY — Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date — Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type — Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Soil Information AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-1ft Topsoil 1-12ft Sandy silty Red clay Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA EDI
    DATA OBTAINED BY ENVIRONMENTAL DRILLING, INC. P.O. BOX 323 STAFFORD FORGE ROAD EAGLESWOOD TWP. WEST CREEK, NEW JERSEY 08092-0323 Date 12/17/87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

Borings sealed with Cement/Bentonite slurry

/R-139A
8

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-825
APPLICATION NO. _____
COUNTY _____
COORD 26-03-56

WELL RECORD

1. OWNER Lodi Realty Corp. ADDRESS 165 Main St. Lodi, NJ
Owner's Well No. 1 SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Lodi, NJ
3. DATE COMPLETED 12-28-53 DRILLER Ernest S. Richardson
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 105 Feet
5. CASING: Type drive Diameter 6 Inches Length 26 Feet
6. SCREEN: Type no Size of Opening ____ Diameter ____ Inches Length ____ Feet
Range in Depth { Top ____ Feet / Bottom ____ Feet } Geologic Formation ____
Tail Piece: Diameter ____ Inches Length ____ Feet
7. WELL FLOWS NATURALLY no Gallons per minute at ____ Feet above surface
Water rises to ____ Feet above surface
8. RECORD OF TEST: Date 12-28-53 Yield 50 Gallons per minute
Static water level before pumping 6 Feet below surface
Pumping level 20 feet below surface after 1 hours pumping
Drawdown 14 Feet Specific Capacity ____ Gals. per min. per ft. of drawdown
How pumped bailer test How measured ____
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type shallow well Mfrs. Name ____
Capacity 35 G.P.M. How Driven electric H.P. 1½ R.P.M. 3750
Depth of Pump in well 30 Feet Depth of Footpiece in well 30 Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump ____ Size ____ Inches
10. USED FOR Industrial AMOUNT { Average 1,000 Gallons Daily / Maximum 2,000 Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes ____ No X
Taste none Odor none Color clear Temp. 51 °F.
12. LOG See reverse side Are samples available? no
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA driller
14. DATA OBTAINED BY E. S. Richardson Date 5/21/54

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47774

Atlas Sheet Coordinates 26 : 03 : 561

[redacted]ER IDENTIFICATION - Owner EMRN REALTY
Address MCLEAN BLVD & 9TH ST
City PATERSON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County BERGEN Municipality LODI BORO Lot No. 2.03 Block No. 205.03
Address 80 HANCOCK ST.

DATE WELL STARTED 7/22/96
DATE WELL COMPETED 7/22/96

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) KILLAM ASSOC. Tele. # 201-379-3400

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.

Borehole diameter:
Top 12" in.
Bottom 12" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

W[redacted]teel protective casing installed?
[redacted]s ☐ No

Static water level after drilling 3.5 ft.

Water level was measured using TAPE

Well was developed for 1.0 hours
at N/A gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	2.0	4"	PVC	SCH. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	2.0	12.0	4"	PVC	SCH. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.0	12.0	12"	MORIE #1	±500 lbs
Grout SEAL (PELLETS)	0.5	1.0	12"	~~Neat Cement~~ Bentonite	— lbs. 25 lbs.

Grouting Method GRAVITY (CEMENT): 0-0.5'
Drilling Method HOLLOW STEM AUGERS

Method of development HAND BAILER

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid NONE Type of Rig MOBILE B-47

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) (None) D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company M & R SOIL INVESTIGATIONS, INC.

Well Driller (Print) K. HAMILTON

D[redacted]'s Signature

Registration No. J-1297 Date 7/23/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

F. SAND, SILTY, TR. F. GRAVEL
0-8'
F. SAND, SILT & CLAY
8'-12'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 56936

Atlas Sheet Coordinates 26 03 561

)WNER IDENTIFICATION - Owner N Y S & W RAILWAY CORP
Address PO BOX 439
City BUTLER State NJ Zip Code 07405

NELL LOCATION - If not the same as owner please give address. Owner's Well No. Site GB-15
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address RT 17 TO MAIN ST

DATE WELL STARTED 6/20/00
TYPE OF WELL (as per Well Permit Categories) BORING DATE WELL COMPLETED 6/20/00
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Yu & Assoc. Tele. # 1-201-791-0075

WELL CONSTRUCTION

Total depth drilled 47 ft.
Well finished to — ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	___ lbs. ___ lbs.

Grouting Method Tremi With Pump
Drilling Method Mud Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING

Well Driller (Print) Michael Bivens

Driller's Signature Michael Bivens

Registration No. B0185 Date 9/11/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 3" Blk Top
3" to 20' f-c gravel, cobbles Brwn Sd & gravel
20 to 37' Rd Brn C/F gravel C/F Sd Tr Silt
37 to 39' Boulder
39 to 40' Rd Brn C/F Sd & C/F gravel
40' to 47' Decomp Shale

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 53712

Atlas Sheet Coordinates 26 :03 559

[redacted]ER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6/ 22/ 99
DATE WELL COMPLETED 6/ 22/ 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

[redacted]ell protective casing installed?
☐ [redacted] ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	3'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	15'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Dr[redacted]s Signature John Vogt

Registration No. J4544 Date 6 / 29 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

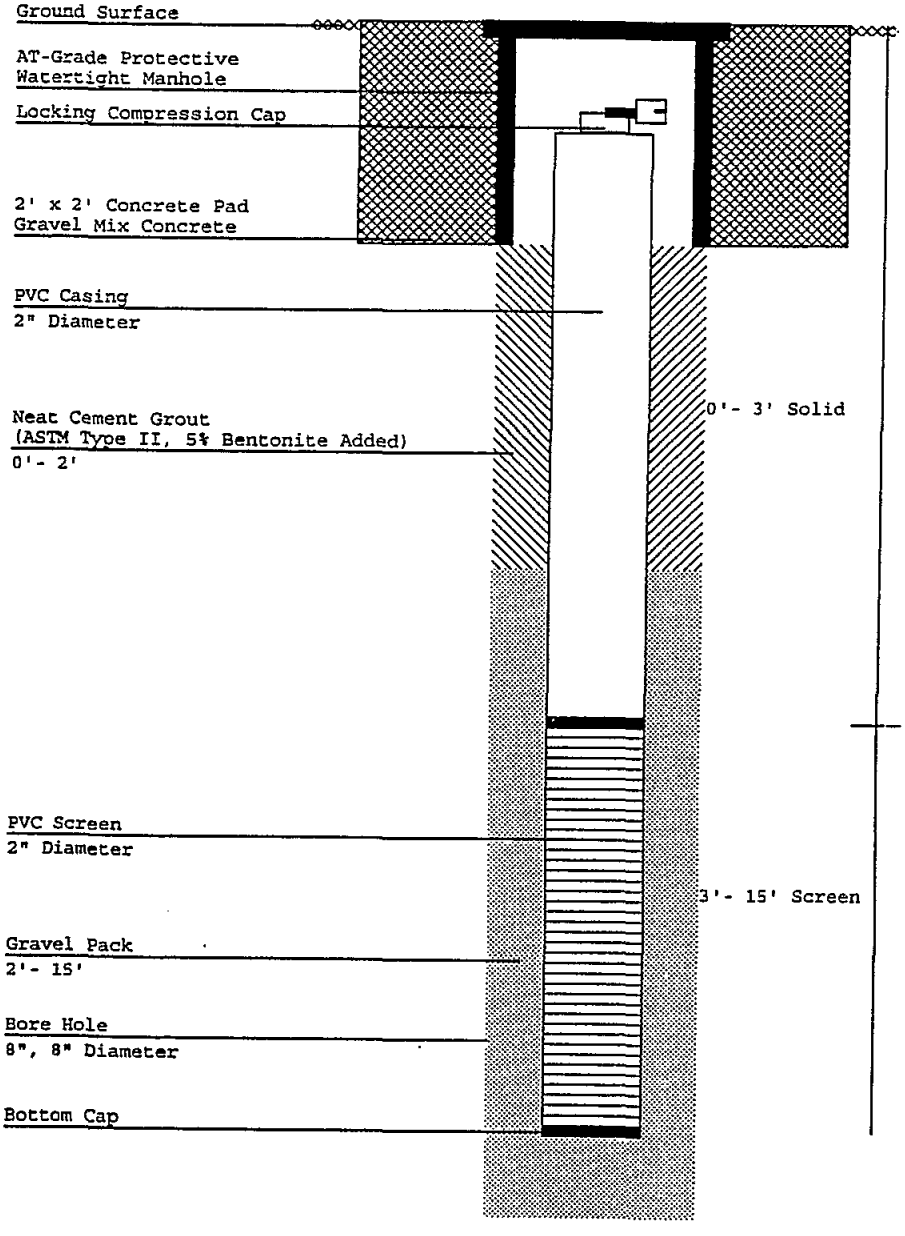
WELL: MW1 DATE DRILLED: 06/22/1999 COORD #1: 26.03.559 PERMIT #1: 26-53712
COORD #2: PERMIT #2:
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitor

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC		DRILLING METHOD: Auger
DIAMETER: 2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH: 3'	LENGTH:	DIAMETER:	2"	HOLE DIA: 8", 8"
		LENGTH 1:	12'	TOTAL DEPTH: 15'
SET WELL: 15'	GAL PER MIN: 2	LENGTH 2:		
GRAVEL PK SZ: Morie #2	STAT H2O LVL: 4'	SLOT SIZE:	.020	
DRILLER: John Vogt	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 5' Brown sand some fill.
5'- 15' Red sand some silt very decomposed rock.



'38 M

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 53713

Atlas Sheet Coordinates 26 03 559

WELL IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6 / 22 / 99
DATE WELL COMPLETED 6 / 22 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	3'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	15'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller Signature John Vogt

Registration No. J1544 Date 6 / 29 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

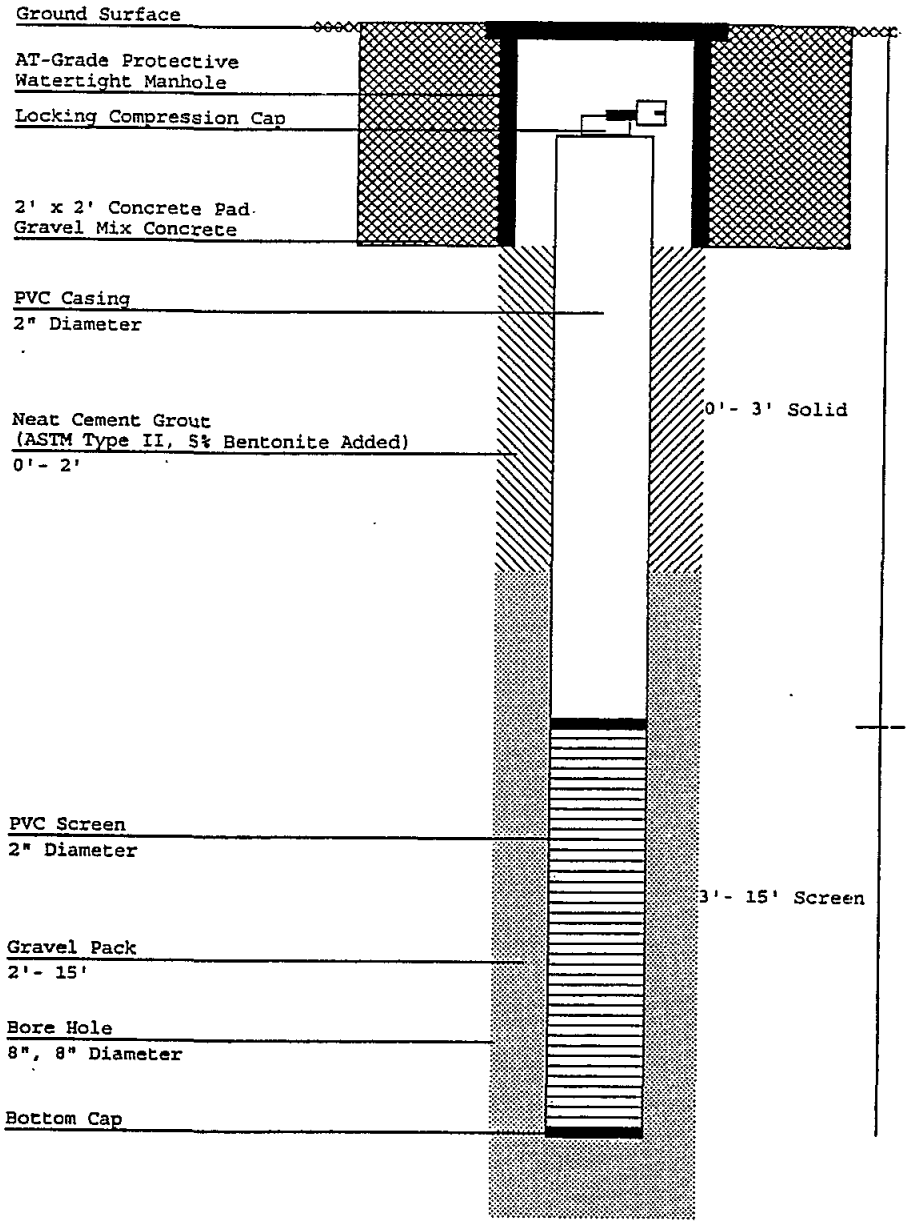
WELL: MW2 DATE DRILLED: 06/22/1999 COORD #1: 26.03.559 PERMIT #1: 26-53713
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitor

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1: PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:		SCREEN TYPE 2:	SAMPLING METHOD:
LENGTH:	3'	LENGTH:		DIAMETER: 2"	HOLE DIA: 8", 8"
				LENGTH 1: 12'	TOTAL DEPTH: 15'
SET WELL:	15'	GAL PER MIN: 2		LENGTH 2:	
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 4'		SLOT SIZE: .020	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump		CASING SEAL: Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour		OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 6' Brown fine sand some fill.
6'- 15' Red sand some silt very decomposed rock.



)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53714

Atlas Sheet Coordinates 26 : 03 559

[redacted]ER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6 / 22 / 99
DATE WELL COMPLETED 6 / 22 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

[redacted]ell protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	3'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	15'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

[redacted]s Signature John Vogt

Registration No. J1544 Date 6 / 29 /99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
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Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW3 DATE DRILLED: 06/22/1999 COORD #1: 26.03.559 PERMIT #1: 26-53714
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitor

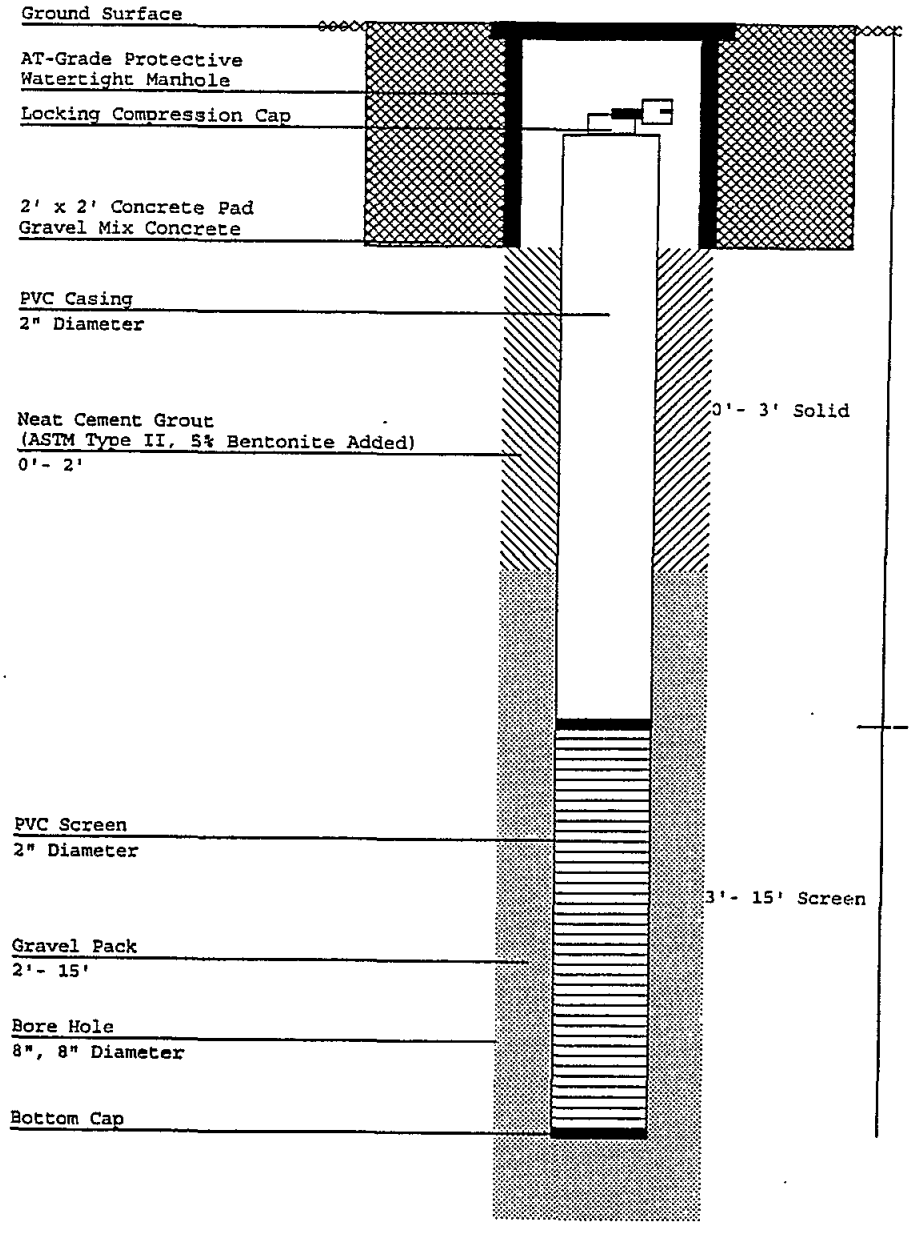
INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	3'	LENGTH:	DIAMETER:	2"	HOLE DIA: 8", 8"
			LENGTH 1:	12'	TOTAL DEPTH: 15'
SET WELL:	15'	GAL PER MIN: 2	LENGTH 2:		
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 4'	SLOT SIZE:	.020	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO | BLOWS PER 6" ON SAMPLER

-

REMARKS / SOILS IDENTIFICATION

0'- 6' Brown fine sand some fill.
6'- 15' Red sand some silt very decomposed rock.



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11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53715

Atlas Sheet Coordinates 26 : 03 559

[redacted]ER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6 / 23 / 99
DATE WELL COMPLETED 6 / 23 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

W[redacted]eel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	1.5'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1.5'	12'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	12'		Morie #2	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

[redacted]'s Signature John Vogt

Registration No. J1544 Date 6 / 29 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling

WELL LOG

WELL: MW4 DATE DRILLED: 06/23/1999 COORD #1: 26.03.559 PERMIT #1: 26-53715
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitor

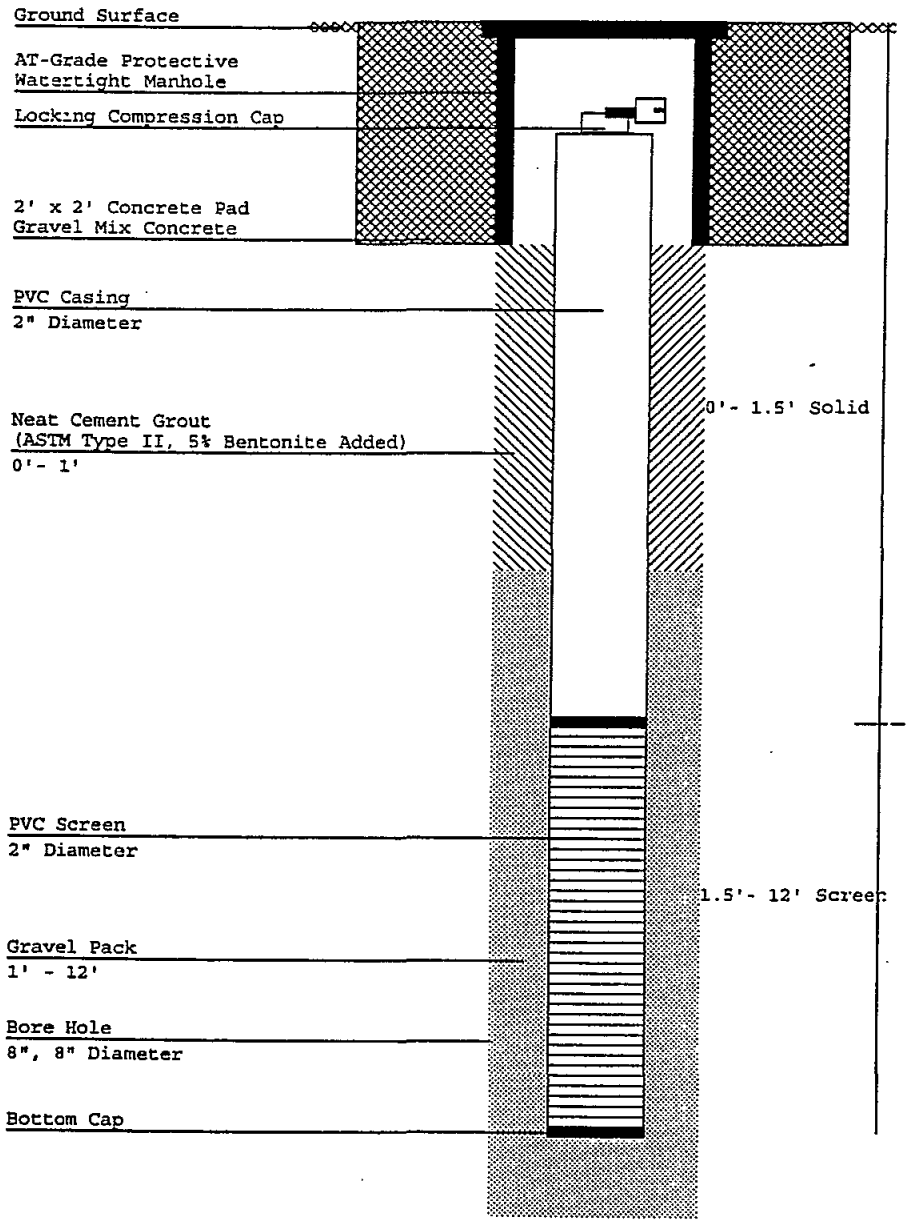
INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Auger
DIAMETER:	2"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	1.5'	LENGTH:		DIAMETER:	2"	HOLE DIA:	8", 8"
				LENGTH 1:	10.5'	TOTAL DEPTH:	12'
SET WELL:	12'	GAL PER MIN:	2	LENGTH 2:			
GRAVEL PK SZ:	Morie #2	STAT H2O LVL:	4'	SLOT SIZE:	.020		
DRILLER:	John Vogt	DEVELOPMENT METHOD:	Pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1 Hour	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO | BLOWS PER 6" ON SAMPLER

-

REMARKS / SOILS IDENTIFICATION

0'- 12' Black sand & red silty sand & weathered rock.



DWR-138 M
1/98

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MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53716

Atlas Sheet Coordinates 26 : 03 559

WELL IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6 / 23 / 99
DATE WELL COMPLETED 6 / 23 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 11' ft.
Well finished to 11' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 3 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	11'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	11'		Morie #2	
Grout	0'	1'		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Gravity
Drilling Method Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) John Vogt
Driller's Signature John Vogt
Registration No. J1544 Date 6 / 29 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

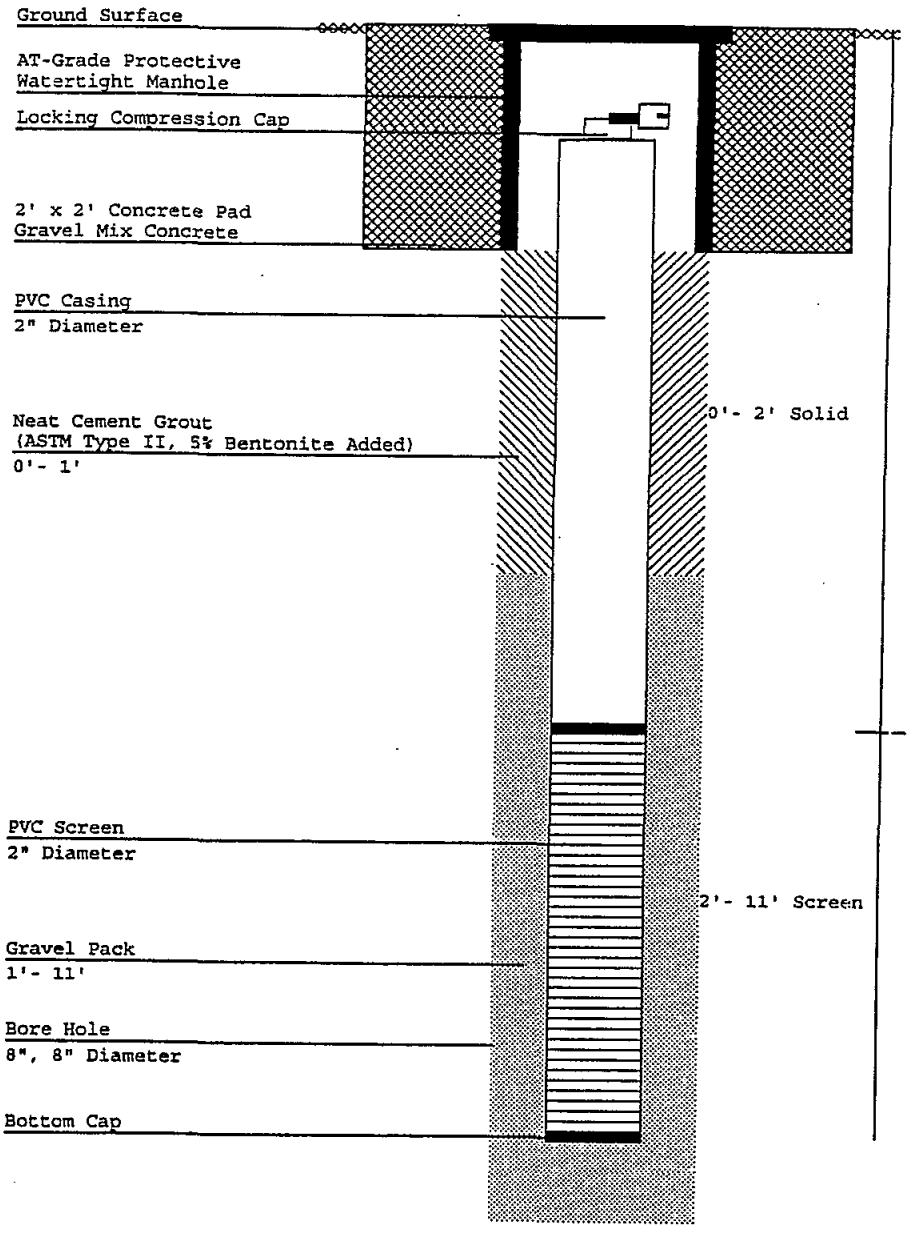
WELL: MW5 DATE DRILLED: 06/23/1999 COORD #1: 26.03.559 PERMIT #1: 26-53716
COORD #2: PERMIT #2:
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitor

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1: PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:		SCREEN TYPE 2:	SAMPLING METHOD:
LENGTH:	2'	LENGTH:		DIAMETER: 2"	HOLE DIA: 8", 8"
				LENGTH 1: 9'	TOTAL DEPTH: 11'
SET WELL:	11'	GAL PER MIN: 3		LENGTH 2:	
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 4'		SLOT SIZE: .020	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump		CASING SEAL: Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour		OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 5' Red sand, fill.
5'- 11' Decomposed rock.



DWR-138.M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53717

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address GREGG ST. BTWN. RT17 & GA

DATE WELL STARTED 6/ 23/ 99
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 6/ 23/ 99
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 14' ft.
Well finished to 14' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 3 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	1.5'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1.5'	14'	2"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	14'		Morie #2	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 6 / 29 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling

WELL LOG

WELL: MW6 DATE DRILLED: 06/23/1999 COORD #1: 26.03.559 PERMIT #1: 26-53717
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Gregg Street, Between Route 17 & Garibaldi Avenue, , Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitor

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 1.5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 12.5'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 14'

SET WELL: 14'
GRAVEL PK SZ: Morie #2
DRILLER: John Vogt
SURFACE COMPLETION: M

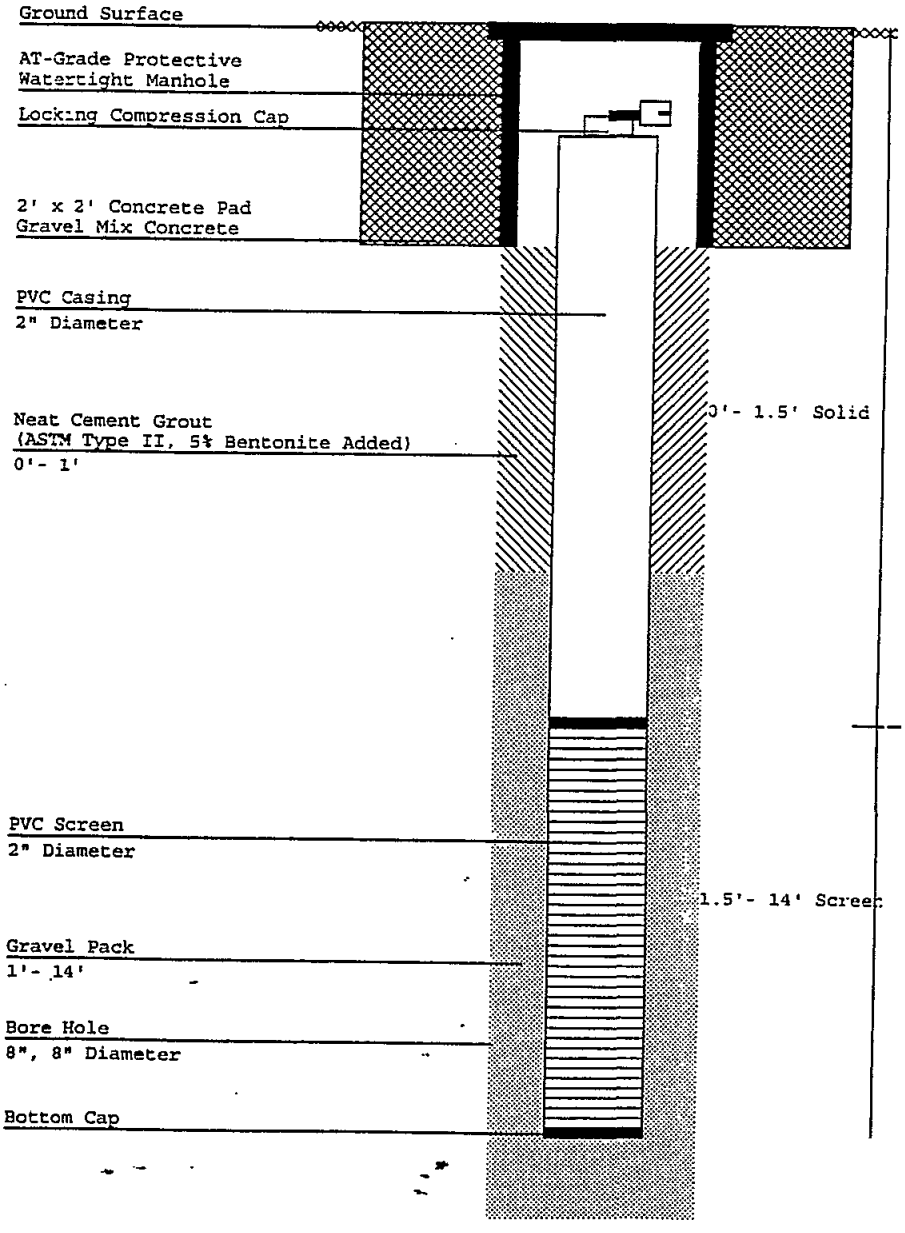
GAL PER MIN: 3
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 5' Red sand, fill.
5'- 11' Decomposed rock.



WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59851

Atlas Sheet Coordinates 26 : 03 558

[redacted]R IDENTIFICATION - Owner VITO STUMATO FAMILY LTD.

Address 76 SIDNEY STREET

City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW - 1

County BERGEN Municipality LODI BORO Lot No. 1,5 Block No. 164

Address 76 SIDNEY STREET

DATE WELL STARTED 12/12/00

DATE WELL COMPLETED 12/12/00

TYPE OF WELL (as per Well Permit Categories) MONITORING

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12.5 ft.
Well finished to 12.5 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

[redacted]el protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4 ft.

Water level was measured using tape

Well was developed for .5 hours at 2 gpm

Method of development 12V pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe 66

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	.2	2½	4	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 10 slot)	2½	12½	4	PVC	sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1½	12½		#1 Morie	
Grout	.2	1½		Neat Cement	44 lbs.
				Bentonite	5 lbs.

Grouting Method Pressure / Tremie

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0' - 6' fill, clay, stone

6' - 12½' fine sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company S & S SUBSURFACE INVEST.

Well Driller (Print) Arthur Salvatore

D[redacted]'s Signature

Registration No. MD 12604 Date 01/22/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57787

Atlas Sheet Coordinates 26 : 03 558

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 81
Address MAIN ST

DATE WELL STARTED 6/14/00
DATE WELL COMPLETED 6/14/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15½ ft.
Well finished to 15 ft.

Borehole diameter:
Top 9 in.
Bottom 9 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7.5 ft.

Water level was measured using MSconE

Well was developed for 1½ hours at up to ½ gpm

Method of development Centrifugal Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B-3500

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) (No. Used .020)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	15½	9	#1 Sand	325 lbs
Grout	0	2	9	Neat Cement / Bentonite	— lbs. / 70 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 15½ Misc. Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company C T & E ENVIRONMENTAL SERVICES
Well Driller (Print) James T. Lewis
Driller's Signature James T. Lewis
Registration No. J1017 Date 6/15/00

53037

COPIES: White - DEP Canary - Driller 286 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59852

Atlas Sheet Coordinates 26 . 03 558

OWNER IDENTIFICATION - Owner VITO STUMATO FAMILY LTD.

Address ~~76 SIDNEY STREET~~

City ~~LODI~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2

County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1,5~~ Block No. ~~164~~

Address ~~76 SIDNEY STREET~~

DATE WELL STARTED 12 / 12 / 00

DATE WELL COMPLETED 12 / 12 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12.5 ft.

Well finished to 12.5 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 14 ft.

Water level was measured using tape

Well was developed for .5 hours at 2 gpm

Method of development 12 V pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe 66

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	.2	2½	4	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 10 slot)	2½	12½	4	PVC	sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1½	12½		#1 Morie	
Grout	.2	1½		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Pressure / Tremie

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-6' fill, clay, stone

6'-12½' fine sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company S & S SUBSURFACE INVEST.

Well Driller (Print) Arthur Salvatore

Driller's Signature

Registration No. MD-1264 Date 01 / 22 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Form 87—5M-1-48

DEPARTMENT OF CONSERVATION
Division of Water Policy and Supply

Permit No. 26-32
Application No.
County Bergen

WELL RECORD Driller

1. OWNER Mr H Scholten ADDRESS
Owner's Well No. one SURFACE ELEVATION Feet (Above mean sea level)
2. LOCATION Rte 6 - Lodi
3. DATE COMPLETED 6/4/48 ADDRESS - DRILLER Rte 6 Lodi
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH 26 Feet
5. CASING: Type Steel Diameter 6 Inches Length 10 Feet
6. SCREEN: Type no Size of Opening Diameter Inches Length Feet
Range in Depth {Top Feet / Bottom Feet} Geologic Formation
Tail piece: Diameter Inches Length Feet
7. WELL FLOWS NATURALLY no Gallons per Minute at Feet above surface
Water rises to Feet above surface
8. RECORD OF TEST: Date 6/4/48 Yield 25 Gallons per minute
Static water level before pumping 12 Feet below surface
Pumping level 26 feet below surface after 2 hours pumping
Drawdown 14 Feet Specific Capacity 1.78 Gals. per min. per ft. of drawdown
How Pumped Reciprocating P How measured Barrel
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Jet Capacity 8 Gallons per minute
How Driven Elec Motor Horse Power 1/2 R.P.M. 3400
Depth of pump in well 22 Feet Depth of foot piece in well 22 Feet
10. USED FOR Human Consumption AMOUNT {Average ? Gallons Daily / Maximum ? Gallons Daily}
11. QUALITY OF WATER Good — Sample: Yes No
Taste OK Odor OK Color OK Temperature 57° °F
12. LOG See over Are samples available?
(Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA our Files —
14. DATA OBTAINED BY our Driller DATE 4/20/50

(Note:—Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

VR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59099

Atlas Sheet Coordinates 26 03 555

R IDENTIFICATION - Owner LODI BOROUGH
Address ONE MEMORIAL DRIVE
City LODI State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 17 S
ounty BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address MITCHELL STREET

DATE WELL STARTED 11 / 21 / 00
'PE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 11 / 21 / 00
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

tal depth drilled 11.5 ft.
ell finished to 10 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
) above land surface — ft.

s protective casing installed?
Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1 hours
1 gpm

ethod of development Submersible Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid — Type of Rig CME 75

ealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 0100)	4	10	2	PVC	sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	11.5	6	Morie 00	350 lbs
Grout	0	2	6	Neat Cement	¾ lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Silty Fine sand w clay
5
10
11.5 Red Shale Bedrock
EOH 11.5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.
ell Driller (Print) Steve Wolf
rill Signature Steve Wolf
egistration No. 1579 Date 1 / 23 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59100

Atlas Sheet Coordinates 26 : 03 555

)WNER IDENTIFICATION - Owner LODI BOROUGH
\ddress ONE MEMORIAL DRIVE
)ity LODI State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-17D
)ounty BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
\ddress MITCHELL STREET

DATE WELL STARTED 12/18/00
DATE WELL COMPLETED 12/20/00

'YPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

otal depth drilled 46 ft.
Vell finished to 46 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

/ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick ip) above land surface — ft.

/as steel protective casing installed? ☐ Yes ☒ No

tatic water level after drilling 6 ft.

/ater level was measured using Tape

/ell was developed for 2.5 hours
: 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	22	4	Steel	SCH 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	22	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	22	8	Neat Cement Bentonite	550 lbs. 25 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

/lethod of development Submersible Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity — gpm

'ump type: —

)rilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company H. LEONARD REXRODE, JR.

/ell Driller (Print) Steve Wolf

)riller's Signature Steve Wolf

legistration No. 1579 Date 2/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Blacktop
Medium Fine Red Brown
Silty Sand + Gravel
10 ↓
11
Red Shale w/ Sandstone
20 Bedrock
30
40
46 EOH 46'

COPIES: White - DEP Canary - Driller D-290 Pink - Owner Goldenrod - Health Dept.

WR-138 M
1'98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~59103~~

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~552~~

R IDENTIFICATION - Owner ~~LODI BOROUGH~~
ddress ~~ONE MEMORIAL DRIVE~~
ity ~~LODI~~ State ~~NJ~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-18D
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~ROW~~ Block No. ~~ROW~~
ddress ~~AVENUE C~~

DATE WELL STARTED 11/30/00
DATE WELL COMPLETED 12/1/00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

otal depth drilled 57 ft.
ell finished to 57 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) above land surface — ft.

el protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 5 ft.

ater level was measured using Tape

ell was developed for 3 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	32	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	32	57	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	32	8	Neat Cement Bentonite	800 lbs. 35 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

ethod of development Submersible Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME 75

ealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

ell Driller (Print) Steve Wolf

ri Signature Steve Wolf

egistration No. 1579 Date 2/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0–3 Brown fine sand — Water 5'
10 Medium Fine Red Silty Sand + Gr
20
22
30 Red Sandstone Bedrock
40
50
57
60 EOH 57'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2611035-1

APPLICATION NO. _____

COUNTY Bergen

26-03-553

WELL RECORD

1. OWNER: Fred C. Hart Assoc. ADDRESS 530 5th Ave. N.Y. - N.Y. - 10036
   Owner's Well No. M.W. 1 SURFACE ELEVATION _____ Feet
2. LOCATION 200 Gregg St. Lodi - N.J. 07644
3. DATE COMPLETED 7/27/87 DRILLER Summit Drilling TOTAL DEPTH 24' Feet
4. DIAMETER. Top 4" inches Bottom 4" inches Diam 4" Inches Length 5' Feet
5. CASING: Type PVC Diam 4" Inches Length 20' Feet
6. SCREEN: Type PVC Slot or Opening .020 Diam 4" Inches
   Kind in Dept: Top _____ Feet, Bottom _____ Feet
   Geologic Formation Sand & Gravel
   Tail Piece Diam N.A Inches Length _____ Feet
7. WELL FLOWS NATURALLY N.A Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST. Date 7/27/87 Yield 2 Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet; Specific Capacity 2 Gal. per min. per ft. of drawdown
   How pumped Air from rig How measured _____
   Depth intake set or bailer or well _____
9. PERMANENT PUMPING EQUIPMENT.
   Type N.A. Mfr. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet; Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet; Type of Water or Pump _____ Size _____ Inches
10. USED FOR Monitor AMOUNT Average _____ Gallons Daily, Maximum _____ Gallons Daily
    Finish: Yes ____ No ____
11. QUALITY OF WATER _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
    Are samples available? _____
12. LOG _____
13. SOURCE OF DATA _____ Date 8/5/87
14. DATA OBTAINED BY Summit Drilling

(NOTE: Use other side of this sheet for additional information such as log of material penetrated, etc.)

Summit Drilling Company, Inc.

26-03-55E

489 Union Avenue Bridgewater, N.J. 08807 Tel. (201) 722-4266 / 356-2700

BORING LOG

Well No. MW-1 Application No. _____ Permit No. 2611035
Date Drilled 7/27/87 County Bergen Use Monitor
Location 200 Gregg St. Lodi N.J. 07644
Owner Fred C Hart Assoc Address 530 5th Ave N.Y. N.Y. 10036
Drilling Method Air Rotary Sampling Method Split Spoon
Hole Diameter 8" Total Depth 24'

Casing:
Type P.V.C. Diameter 4" Length 5'

Screen:
Type P.V.C. Slot .020 Diameter 4" Length 20'
Gravel Pack Size # 2 Well Gravel Casing Seal Portland Bentonite
Static Water Level _____ Geologic Formation Sand & Gravel

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				6" Protective Pipe w/ lock
				Portland
				1'-6" Ben. Pelets Top Soil 0' to 1'
				-2'
				1' to 5'
				Gravel Lt. Br. silt & f. sand.
				5' to 6'
				Gray silty clay
				6' to 15'
			Screen	Gray c/f sand, little f. gravel, tr. silt
				15' to 24'
			Rock	Red. Brn. f. sand, some silt, tr. c/f Gravel,
				24' Poss. Rock
				-23'

Drilled to 24'
Set screen to 23'

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2611036-9

APPLICATION NO. _____

COUNTY Bergen

26-03-553

WELL RECORD

1. OWNER Frank C. Hart Assoc. ADDRESS 530 5th Ave. N.Y. N.Y. 10036
   Owner's Well No. MW2 SURFACE ELEVATION _____ Feet
2. LOCATION 200 Gregg St - Lodi, N.J. 07644
3. DATE COMPLETED 7/28/87 DRILLER Summit Drilling Co.
4. DIAMETER. Top 4" Inches Bottom 4" Inches TOTAL DEPTH 16' Feet
5. CASING: Type PVC Diameter 4" Inches Length 5' Feet
6. SCREEN. Type PVC Slot or Opening .020 Diameter 4" Inches Length 12' Feet
   Kept in Drill: Top _____ Feet; Bottom _____ Feet
   Geologic Formation Sand + Gravel
   Tail Pipe Diameter N.A. Inches Length _____ Feet below surface
7. WELL FLOWS NATURALLY NA Gallons per minute at _____
   Water rises to _____ Feet above surface
8. RECORD OF TEST. Date 7/28/87 Yield 2 Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet; Specific Capacity 2 Gall. per min. per ft. of drawdown
   How pumped Air from Rig How measured _____
   Depths strata encountered in well _____
9. PERMANENT PUMPING EQUIPMENT.
   Type N.A. Mfr. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet; Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet; Type of Water or Pump _____ Size _____ Inches
10. USED FOR Monitor AMOUNT Average _____ Gallons Daily; Maximum _____ Gallons Daily
    Sample: Yes ____ No ____
11. QUALITY OF WATER _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
    Any noticeable quality? _____
12. LOG _____
    (Give depths of strata penetrated, thickness and character of each, and depths of any water-bearing strata)
13. SOURCE OF DATA _____ Date 8/5/87
14. DATA OBTAINED BY Summit Drilling

(NOTE: Use other side of this form for additional information such as log of materials, method of test, location sketch, sketch of pump and casing arrangement, etc.)

Summit Drilling Company, Inc. 26-03-55

489 Union Avenue Bridgewater, N.J. 08807 Tel. (201) 722-4266 / 356-2700

BORING LOG

Well No. MW 2 Application No. _____ Permit No. 2611036
Date Drilled 7/25/87 County Bergen Use Monitor
Location 206 Gregg St Lodi, N.J. - 07644
Owner Fred Hart Assoc Address 530 5th Ave N.Y. N.Y. - 10036
Drilling Method Air Rotary Sampling Method N.R.
Hole Diameter 8" Total Depth 16'

Casing:
Type P.V.C Diameter 4" Length 5'

Screen:
Type P.V.C Slot .020 Diameter 4" Length 12'
Gravel Pack Size #2 Casing Seal Portland
Static Water Level _____ Geologic Formation _____

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				6" Prot. Stand Pipe w/ lock
				Portland
				1'-6" Ben Pelets
				2' Gravel
				3'
				Screen
				15
				0'-to 0'-6" Top Soil
				6" to 2'-0" Red. Br. f sand + silt, little c/f gravel
				2' to 5'-6" Black silty clay, little c/f sand
				6' to 7' Gray silty clay
				7' to 5' Gr. silty clay little c/f sand, tr. c/f gravel
				8' to 13' Brn. m/f sand, some silt, some c/f gravel
				13' to 15'-6" Red. Br. f. sand, some silt, little c/f gravel
				15'-6" to 16' Red. Sandstone
				Drilled to 16'
				Set screen at 15'

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 26-11037-

APPLICATION NO. _____

COUNTY Bergen

26-03-553
WELL RECORD

1. OWNER Fred C Hart Assoc ADDRESS 200 Gregg St. Lodi, N.J. 0764
   OWNER'S WELL NO. MW 3 SURFACE ELEVATION _____ Feet
2. LOCATION 530 5th Ave N.Y. N.Y. 10036
3. DATE COMPLETED 7/28/87 DRILLER Summit Drilling Co
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 23' Feet
5. CASING: Type PVC Diameter 4" Inches Length 5' Feet
6. SCREEN: Type P.V.C. Size of Opening .020 Diameter 4" Inches Length 20' Feet
   Kind and Depth: Top _____ Feet; Bottom _____ Feet
   Geologic Formation Sy G. Sandstone
   Tail Pipe: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY N.A. Gallons per minute at _____ Feet above surface
   Water rises to N.A. Feet above surface
8. RECORD OF TEST. Date 7/28/87 Yield 2 Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet; Specific Capacity 2 Gal. per min. per ft. of drawdown
   How pumped Air from rig How many hours _____
   Depths tested or pumped if not entire well _____
9. PERMANENT PUMPING EQUIPMENT.
   Type N.A. Mfr. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet; Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet; Type of Water Pump _____ Size _____ Inches
10. USED FOR Monitor AMOUNT Average _____ Gallons Daily; Maximum _____ Gallons Daily
    Sample: Yes _____ No _____
11. QUALITY OF WATER _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
    Any noticeable amount _____
12. LOG _____
    (Give depths of beds of formations passed through, thickness of each, character of each, and depths where water was found)
13. SOURCE OF DATA _____ Date 8/5/87
14. DATA OBTAINED BY Summit Drilling

(NOTE: Use other side of this form for additional information such as log of material passed through, method used, depth of seal of casing, accompanying pump, etc.)

Summit Drilling Company, Inc.

489 Union Avenue Bridgewater, N.J. 08807 Tel. (201) 722-4266 / 356-2700 26-03-55

BORING LOG

Well No. MW3 Application No. _____ Permit No. 26-11037
Date Drilled 7/25/87 County Bergen Use Monitor
Location 200 Gregg St. Lodi N.J. - 07644
Owner Fred Hart Assoc. Address 530 5th Ave N.Y. N.Y. - 10036
Drilling Method Auger & Air Rotary Sampling Method N.A.
Hole Diameter 8" Total Depth 23

Casing:
Type P.V.C. Diameter 4" Length 5'

Screen:
Type P.V.C Slot .020 Diameter 4" Length 20'
Gravel Pack Size #2 Casing Seal Ben + Portland
Static Water Level _____ Geologic Formation Sst & Cg - Red Sandstone

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				6" Prot. stand pipe w/ lock
				Portland 1'-6" to 0'
				Ben-Pelets 2' to 1'-6"
				Well gravel 23' to 2'
				Screen 23' to 3'
				0' to 1' Asphalt + Gravel
				1' to 3' Br. silty clay. little f. sand
				3' to 11' Red. Br. f. sand some silt. little c/f gravel
				11' to 23' Red Sandstone
				Drilled to 23'
				Set screen - 23'

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~19633~~
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : ~~553~~

OWNER IDENTIFICATION - Owner PERGAMENT, MURRAY
Address ~~1500 OLD NORTHERN BOULEBARD~~
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County Bergen Municipality Lot No. Block No.
Address 40 Industrial Rd. LODI BORO 04 205B

TYPE OF WELL (as per Well Permit Categories) Monitoring Date well completed 3/14/90
Regulatory Program Requiring Well MONITORING ECRA Case I.D. # Not available.
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Tele. # 390-5858

WELL CONSTRUCTION
Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	PVC Sch 40
Outer Casing (Not Protective Casing)	Not	Double cased	→	
Screen (Note slot size)	5	15	4	.010 Slot PVC
Tail Piece	None	→		
Gravel Pack	~~3~~ 3	15	#1	Sand Morie.
Annular Seal/Grout	~~0~~ 0	~~3~~ 3	—	Bentonite cement
Method of Grouting	Tremmie grouted. Pellets.			

Static water level after drilling 7.0' ft.
Water level was measured using N.A.
Well was developed for 1/2 hours at 1 gpm
Method of development Sub. pump.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method H.S.A.
Drilling Fluid N/A Type of Rig A.D. II.
Name of Driller Paul Keegan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5 1349
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Log Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Paul Keegan #5 1349 Date 4/30/90

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
3-14-90		0'	15'	Sun	70s

EMPIRE
SOILS INVESTIGATIONS INC.
FIELD LOG

HOLE NO. MW-1
GRD. ELEV. _____
2619633
26-03-553

PROJECT _____
LOCATION _____ Sheet _____ of _____

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
9-11	1	1	2				wet	Red/Brn	3"	fr sand + silt.		
			8	2								
11-13	2	1	2				"	"	4"			
		1	2	2			"	"				

DRILLERS CLASSIFICATION

well @ 13'
water 7'

Sand
Wet

NOTATION: SIZE (AUGERS) / CASING 6 1/4 SIZE SPOON _____
SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 12" WITH 140 lb. WEIGHT FALLING 30 " PER BLOW
C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 38992
Atlas Sheet Coordinates 26 : 03 : 053

OWNER IDENTIFICATION - Owner EXXON COMPANY, USA
Address 1900 LINDEN AVE P.O. BOX 730
City LINDEN State NJ Zip Code 07036

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6
County Bergen Municipality LODI BORO Lot No. _____ Block No. _____
Address 460 NORTH MAIN STREET LODI NJ

TYPE OF WELL (as per Well Permit Categories) MON. TORING Date well completed 3/28/95
Regulatory Program Requiring Well UST Case I.D. # 90-06-04 0920
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HANDEX OF NEW JERSEY Tele. # 908 536-5200

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.
Borehole diameter:
Top 8 3/4 in.
Bottom 8 3/4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	5	25	4	SCH 40 .020 SLOT PVC
Tail Piece	—	—	—	—
Gravel Pack	3	25	8	#1 MOBILE
Annular Seal/Grout	0	3	8	Portland/Bentonite
Method of Grouting	PREMIE PIPE			

Static water level after drilling 12 ft.
Water level was measured using ORS INTERFACE PROBE
Well was developed for 1/2 hours at 2 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AIR ROTARY
Drilling Fluid — Type of Rig MOBILE B-80
Name of Driller Vincent Tarrot
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 31533
Name of Drilling Company Handex Corp

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Blacktop
2-4 Roadbase
4-9 TAN/Red F-M SAND trace silt
9-25 Red Shale w/ sandstone layers.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 3.31.95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 38993
Atlas Sheet Coordinates 26 : 03 : 553

OWNER IDENTIFICATION - Owner EXXON COMPANY, USA
Address 1900 LINDEN AVE P.O BOX 730
City LINDEN State NJ Zip Code 07036

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7
County Bergen Municipality LODI BORO Lot No. _____ Block No. _____
Address 465 NORTH MAIN STREET LODI N.J

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/28/95
Regulatory Program Requiring Well UST Case I.D. # 90-06-04-0920
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex of New Jersey Tele. # 908-536-5200

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.
Borehole diameter:
Top 8 3/8 in.
Bottom 8 3/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface – ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1	4	SCH 40 PVC
Outer Casing (Not Protective Casing)	–	–	–	–
Screen (Note slot size)	1	18	4	SCH 40 .020 PVC
Tail Piece	–	–	–	–
Gravel Pack	.5	18	8	#1 MORIE
Annular Seal/Grout	0	.5	8	Bentonite/Bentonite
Method of Grouting	Tremie Pipe			

Static water level after drilling 11.5 ft.
Water level was measured using ORS INTERFACE PROBE
Well was developed for 1/2 hours at 2 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity – gpm
Pump type: –
Drilling Method Air Rotary
Drilling Fluid – Type of Rig MOBILE B-80
Name of Driller Vincent Tarbet
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 11533
Name of Drilling Company Handex Corp.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Blacktop fill
2-4 Roadbase
4-14 Red F-m Sand
14-18 Shale Red w/Sandstone layers.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 3-31-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

VR-138 M
'98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ -59102

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~553~~

WNER IDENTIFICATION - Owner ~~LODI BOROUGH~~
ldress ~~ONE MEMORIAL DRIVE~~
:y ~~LODI~~ State ~~NJ~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-18S
unty ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~ROW~~ Block No. ~~ROW~~
ldress ~~AVENUE C~~

'PE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 11 / 20 / 00
DATE WELL COMPLETED 11 / 20 / 00
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

al depth drilled 20.5 ft.
ell finished to 14 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

nished above grade, casing height (stick) above land surface — ft.

s steel protective casing installed?
Yes ☒ No

tic water level after drilling 5 ft.

ter level was measured using Tape

ell was developed for 1 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	20.5	6	Morie 0	700 lbs
Grout	0	2	6	Neat Cement Bentonite	~~94~~ lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

ethod of development Submersible Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

mp capacity — gpm

mp type: —

illing Fluid — Type of Rig CME 75

ealth and Safety Plan submitted? ☒ Yes ☐ No

vel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

illing Company H. LEONARD REXRODE, JR.
ell Driller (Print) Steve Wolf
iller's Signature Steve Wolf
egistration No. 1579 Date 1 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Red Silty Clay + Sand
5 w/ Cobbles
10
15
20
21 Red Shale
EOH 21'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57857

Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner ~~N.J.D.O.T.~~

Address ~~1035 PARKWAY AVE.~~

City ~~TRENTON~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW15

County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. MW15 1A Block No. 147

Address ~~GREGG ST.~~

DATE WELL STARTED 6/30/00

DATE WELL COMPLETED 6/30/00

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~Drasdner Robin Environmental Mgmt, Inc.~~ Tele. #

WELL CONSTRUCTION

Total depth drilled 19' ft.

Well finished to 19' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	9'	4"	~~PVC~~	~~sch. 40~~
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	9'	19'	4"	PVC	.010 ~~sch. 40~~
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	19'		Morie #1	
Grout	0'	6'		Neat Cement Bentonite	~~94~~ lbs. ~~5~~ lbs.

Grouting Method tremie

Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Jim Burton

Driller's Signature Jim Burton

Registration No. J13752 Date 7/12/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling

WELL LOG

WELL: MW14 DATE DRILLED: 06/30/2000 COORD #1: 26.03.567 PERMIT #1: 26-57856
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 9'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 3", 8"
TOTAL DEPTH: 19'

SET WELL: 19'
GRAVEL PK SZ: Morie #1
DRILLER: Jim Burton
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 11'

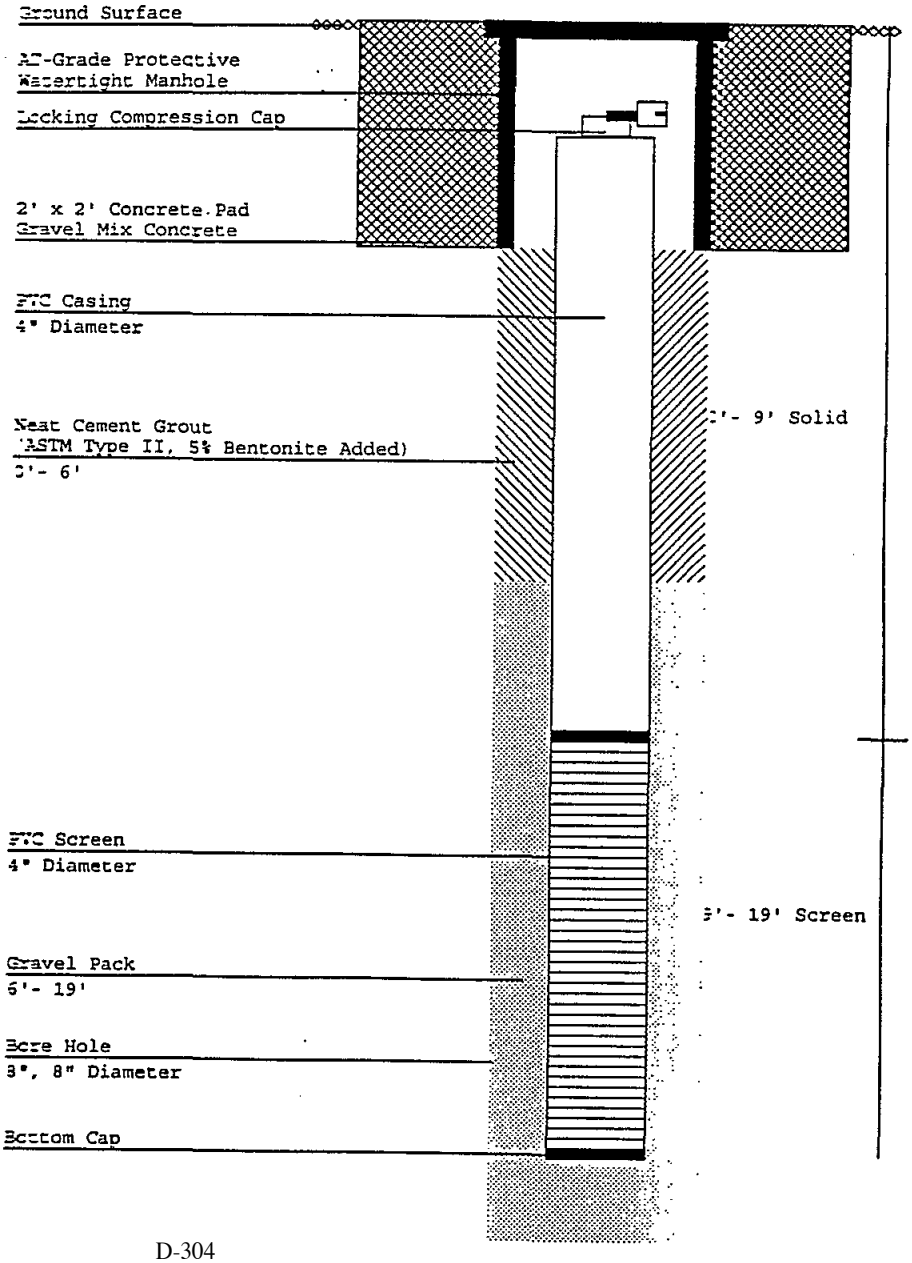
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6" Asphalt.
6"- 2' Fill material.
2'- 11' Red-brown medium sand some gravel.
11'- 19' Bedrock, sanmdstone.



DWR-138 M
11/98

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57856

Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW14
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG ST.

DATE WELL STARTED 6/30/00
DATE WELL COMPLETED 6/30/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 19' ft.
Well finished to 19' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	9'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	9'	19'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	19'		Morie #1	
Grout	0'	6'		Neat Cement Bentonite	~~94~~ lbs. ~~5~~ lbs.

Grouting Method tremie
Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Jim Burton

Driller's Signature Jim Burton

Registration No. J13752 Date 7 / 12 /00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW13 DATE DRILLED: 06/30/2000 COORD #1: 26.03.567 PERMIT #1: 26-57855
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 9'

SET WELL: 19'
GRAVEL PK SZ: Morie #1
DRILLER: Jim Burton
SURFACE COMPLETION: M

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 1/2
STAT H2O LVL: 11'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

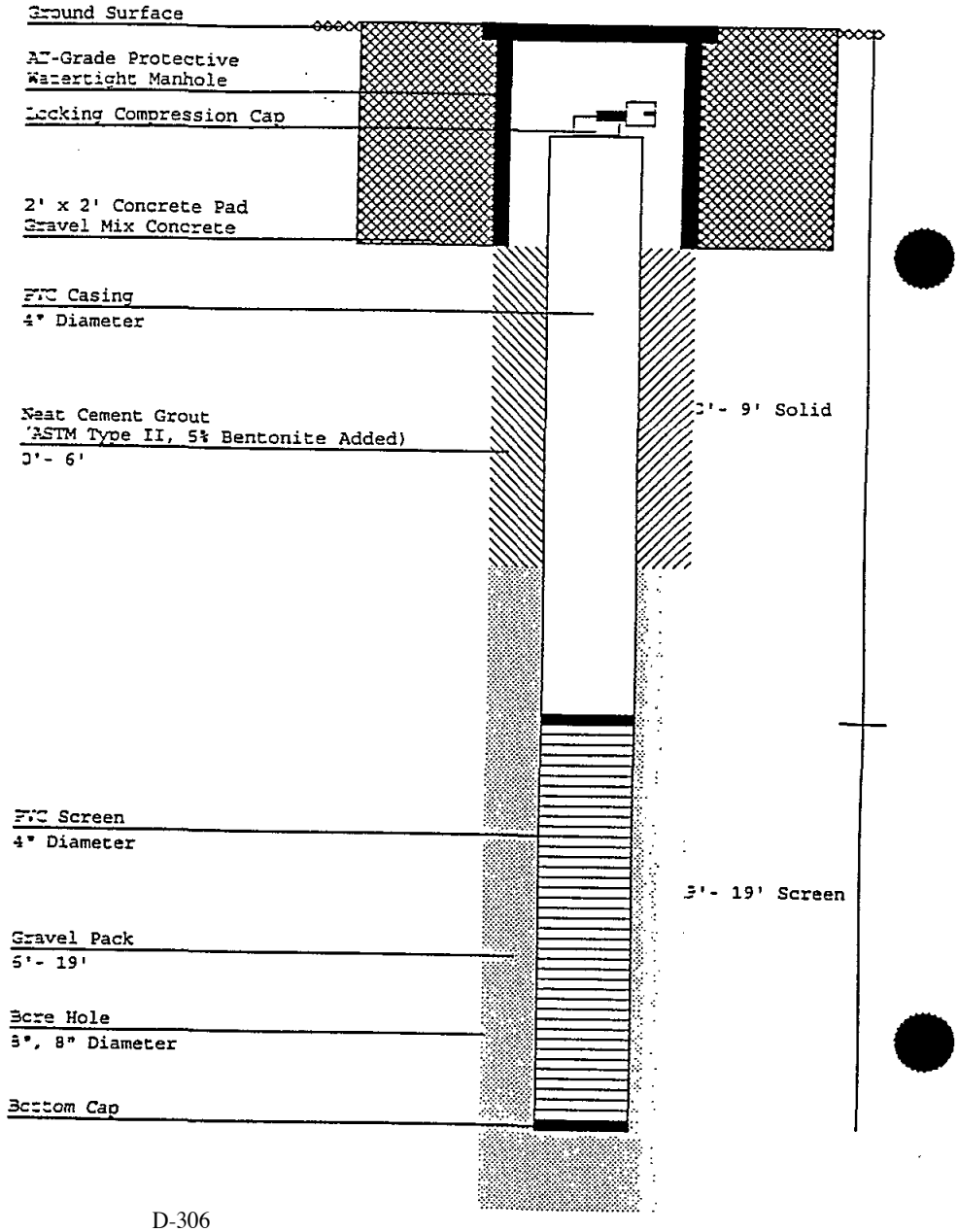
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 19'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6" Asphalt.
6"- 2' Fill material.
2'- 11' Red-brown medium sand some gravel.
11'- 19' Bedrock, sanmdstone.



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SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

WELL LOG

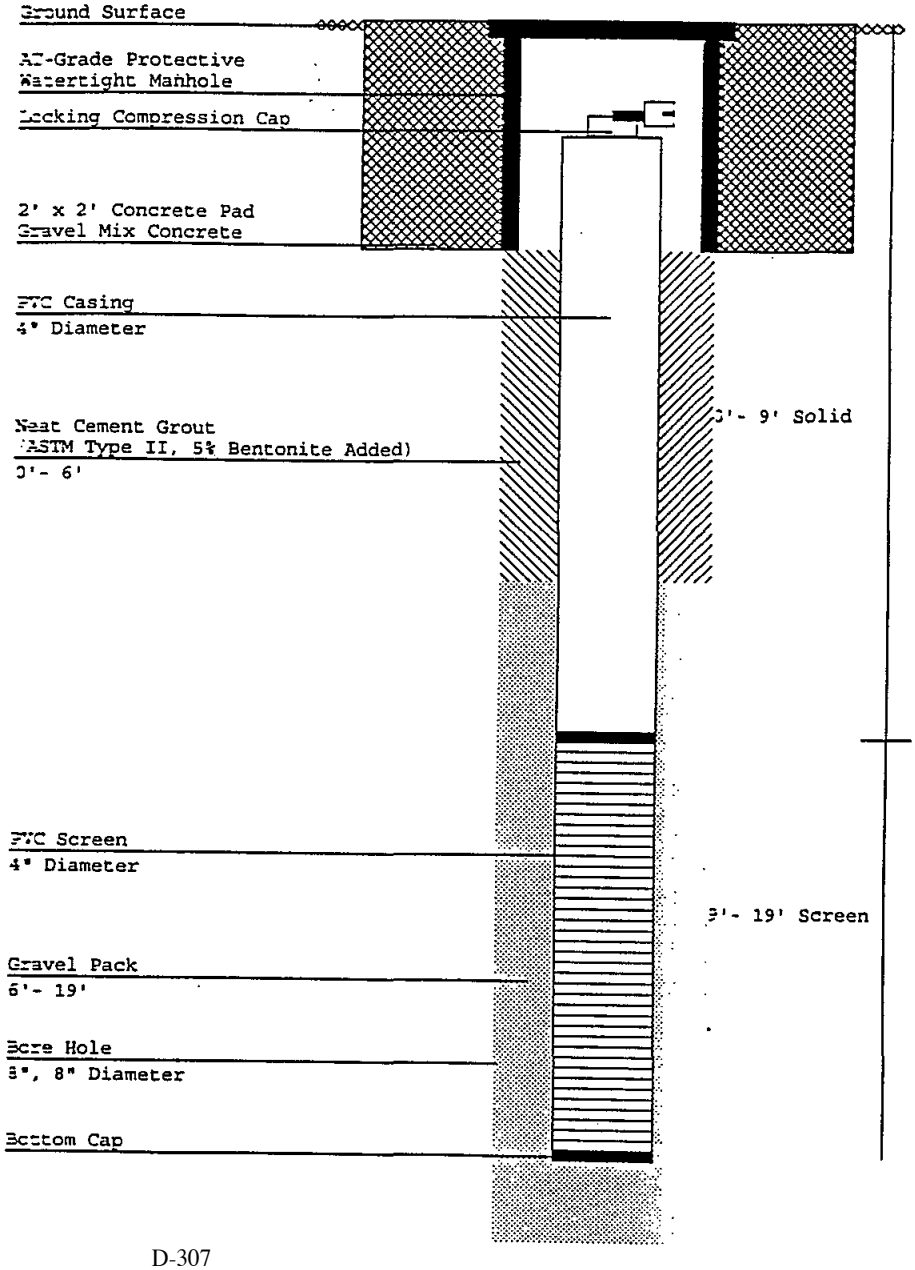
WELL: MW12 DATE DRILLED: 06/30/2000 COORD #1: 26.03.567 PERMIT #1: 26-57854
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC		DRILLING METHOD: Air Rotary
DIAMETER: 4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH: 9'	LENGTH:	DIAMETER: 4"		HOLE DIA: 8", 8"
		LENGTH 1: 10'		TOTAL DEPTH: 19'
SET WELL: 19'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ: Morie #1	STAT H2O LVL: 11'	SLOT SIZE: .010		
DRILLER: Jim Burton	DEVELOPMENT METHOD: Pump	CASING SEAL: Portland		
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1/2 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6" Asphalt.
6"- 2' Fill material.
2'- 11' Red-brown medium sand some gravel.
11'- 19' Bedrock, sanmdstone.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57855

Atlas Sheet Coordinates 26 : 03 : 58

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW13
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG ST.

DATE WELL STARTED 6/30/00
DATE WELL COMPLETED 6/30/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 19' ft.
Well finished to 19' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	9'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	9'	19'	4"	PVC	.010 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	19'		Morie #1	
Grout	0'	6'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method tremie
Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Jim Burton

Driller's Signature Jim Burton

Registration No. J13752 Date 7 / 12 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57854

Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW12
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG ST.

DATE WELL STARTED 6/30/00
DATE WELL COMPLETED 6/30/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 19' ft.
Well finished to 19' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	9'	4"	PVC	Sch 40 sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	9'	19'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	19'		Morie #1	
Grout	0'	6'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method tremie
Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Jim Burton

Driller's Signature Jim Burton

Registration No. J13752 Date 7 / 12 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.

WELL LOG

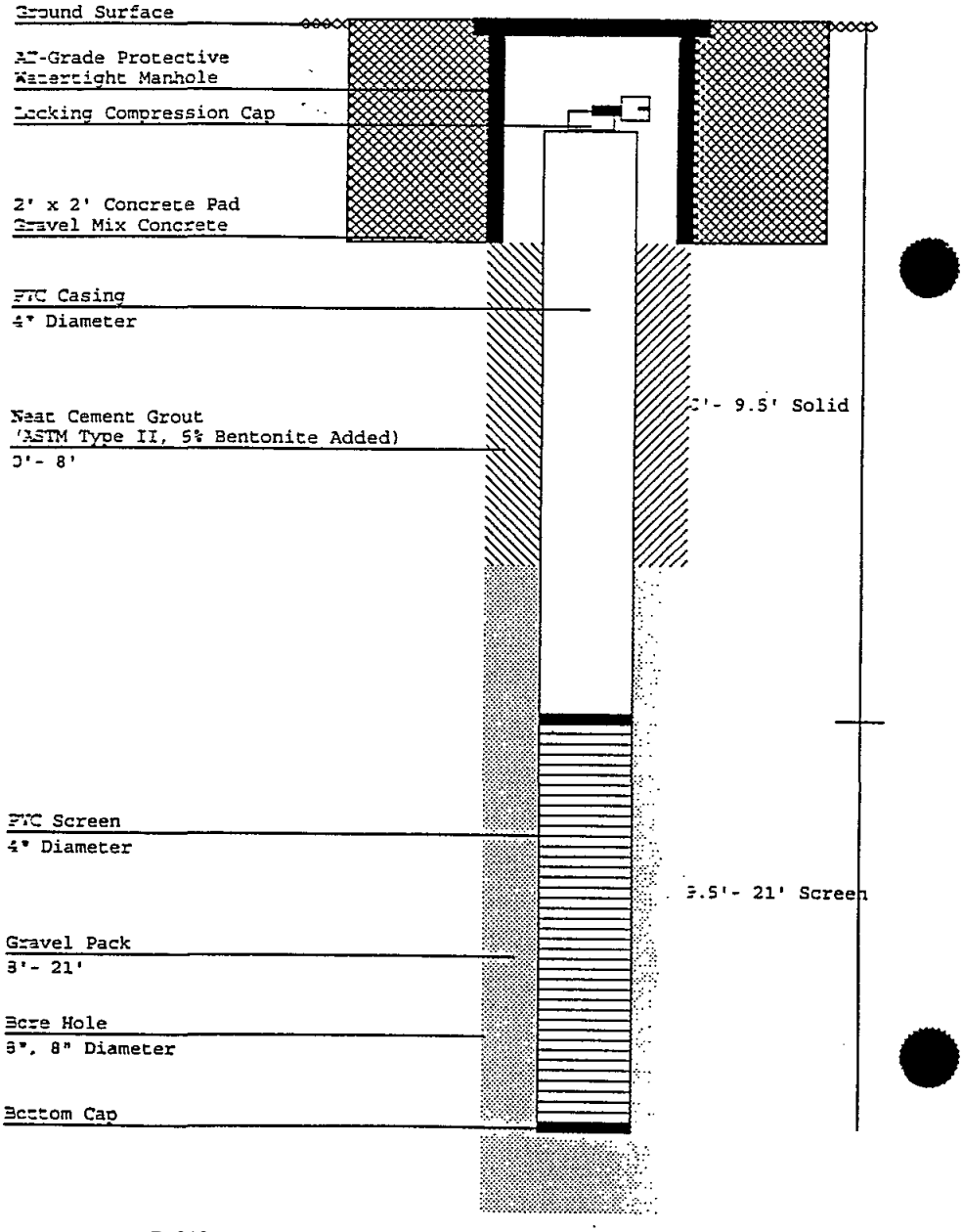
WELL: MW11 DATE DRILLED: 06/28/2000 COORD #1: 26.03.567 PERMIT #1: 26-57853
COORD #2: PERMIT #2: COUNTY: Bergan
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 USE: Monitoring

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Air Rotary
DIAMETER:	4"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	9.5'	LENGTH:		DIAMETER:	4"	HOLE DIA:	8", 8"
				LENGTH 1:	11.5'	TOTAL DEPTH:	21'
SET WELL:	21'	GAL PER MIN:	1/2	LENGTH 2:			
GRAVEL PK SZ:	Morie #1	STAT H2O LVL:	11'	SLOT SIZE:	.010		
DRILLER:	Todd Naugle	DEVELOPMENT METHOD:	Pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1/2 Hour	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
2' - 4'	10-11-9-18
4' - 6'	21-24-23-18
6' - 8'	90-100/4"
8' - 10'	100/4"
10' - 12'	100/0"

REMARKS / SOILS IDENTIFICATION

0'- 6' Red-brown silty sand.
6'- 21' Weathered shale/sandstone.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57853

Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW11
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG ST.

DATE WELL STARTED 6 / 28 / 00
DATE WELL COMPLETED 6 / 28 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 21' ft.
Well finished to 21' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	9.5'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	9.5'	21'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	8'	21'		Morie #1	
Grout	0'	8'		Neat Cement Bentonite	~~188~~ lbs. ~~10~~ lbs.

Grouting Method tremie
Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 7 / 12 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller MW11 Pink - Owner Goldenrod - Health Dept.

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

INC.

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4
Toll Free: (800) 242-
FAX: (908) 356-1

26-46525

COUNTY: Bergan
XSTREET:
USE: Monitoring

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIA: 10"
TOTAL DEPTH: 20'

0
SEAL: Portland
OLE:

WELL LOG

COORD #1: 26.03.567
COORD #2:
reet, Lodi, NJ
renton, NJ 08625

PERMIT #1: 26-46526
PERMIT #2:

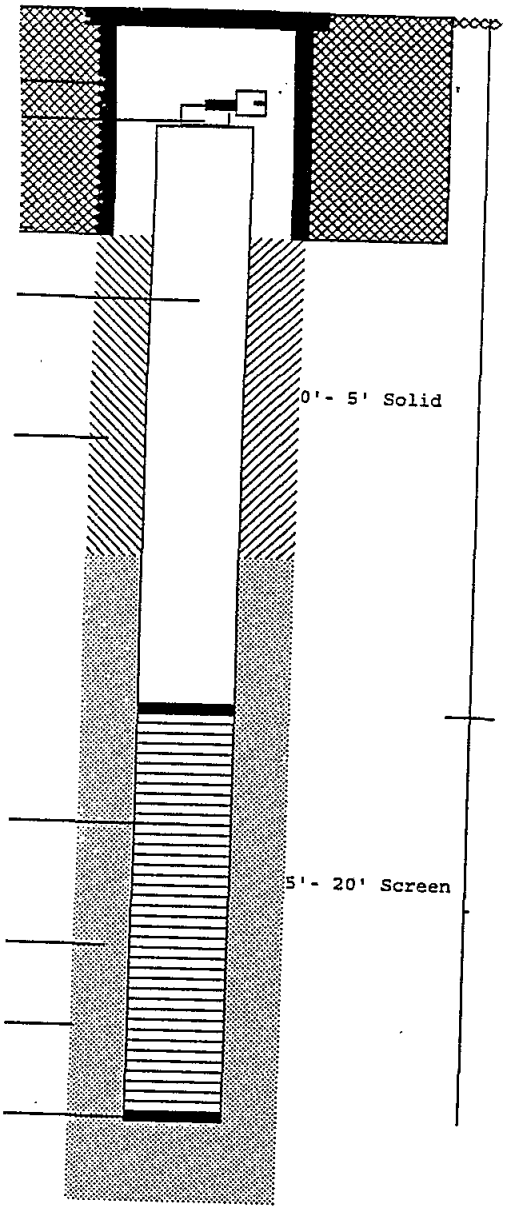
COUNTY: Bergan
XSTREET:
USE: Monitoring

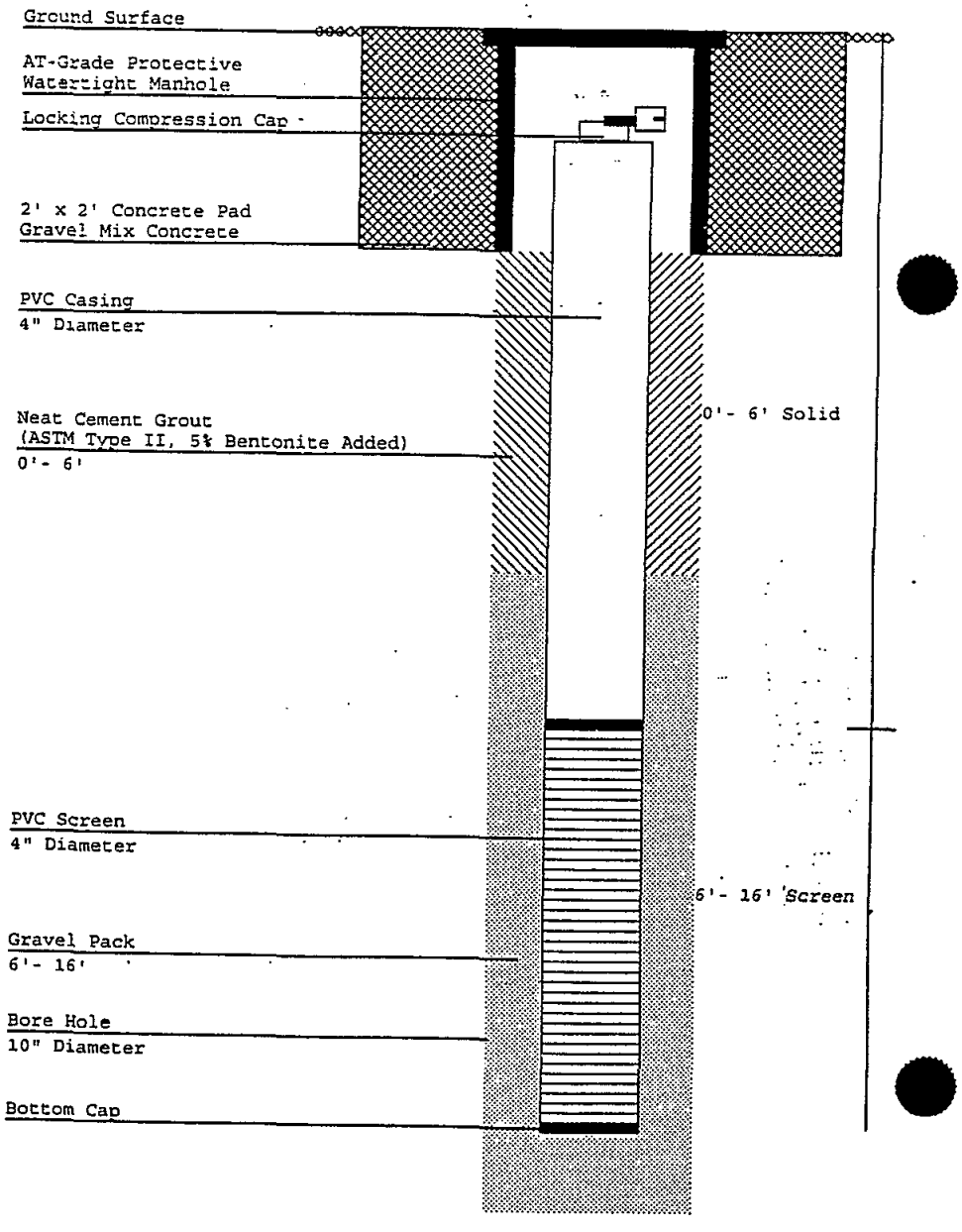
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIA: 10"
TOTAL DEPTH: 16'

ENT METHOD: Pump
ENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:





Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

46526

03 567

WELL LOG

DATE DRILLED: 01/28/1997 COORD #1: 26.03.567 PERMIT #1: 26-46525
COORD #2: PERMIT #2:
COUNTY: Bergan
XSTREET:
USE: Monitoring

tenance, Facility, Gregg Street, Lodi, NJ
5 Parkway Avenue, CN 600, Trenton, NJ 08625

lock No. 147
D 1/28/97
D 1/28/97
93011

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 4
STAT H2O LVL: 9'

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 15'
LENGTH 2:
SLOT SIZE: .020

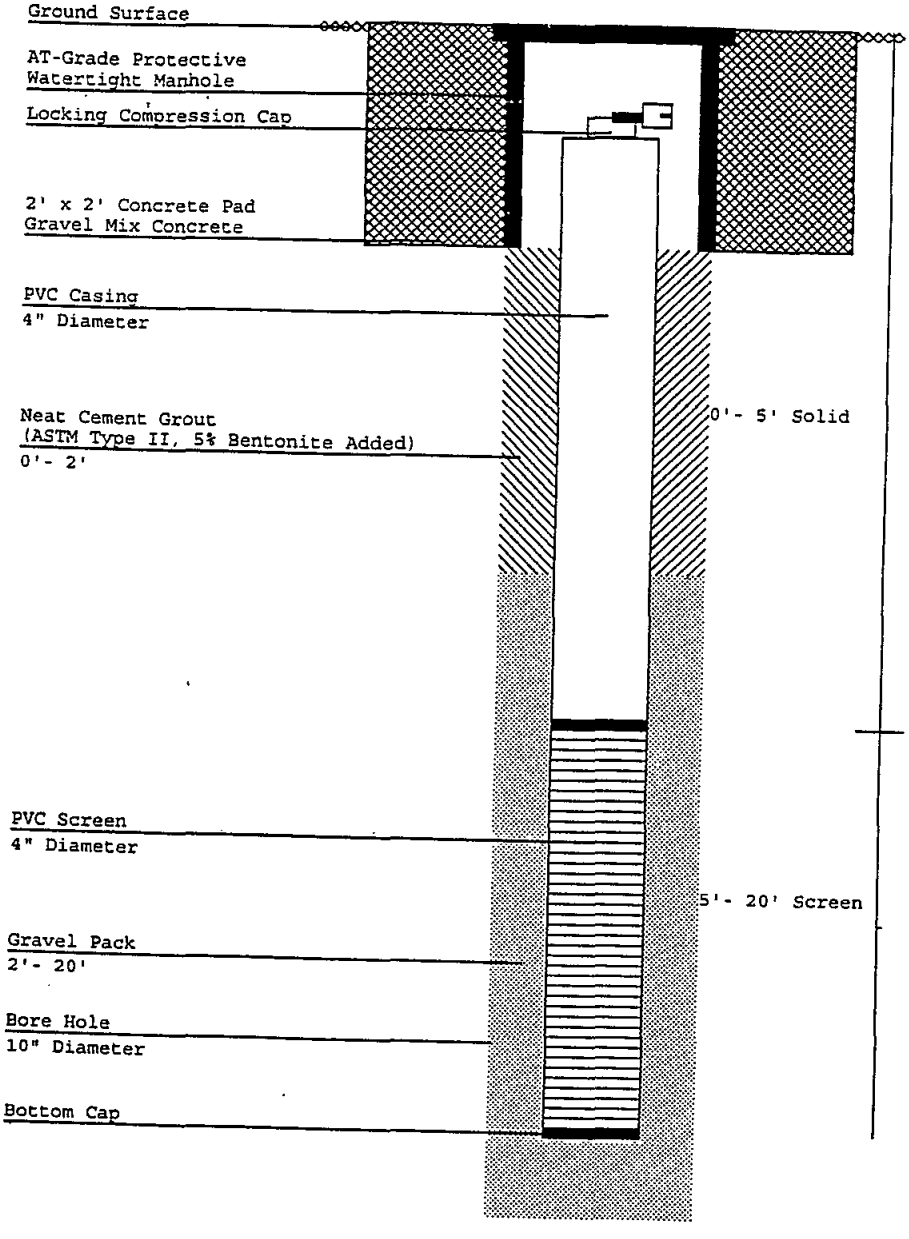
DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIA: 10"
TOTAL DEPTH: 20'

DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour
CASING SEAL: Portland
OPEN HOLE:

LOWS PER 6"
SAMPLER

	Wgt./Rating (lbs/sch no.)
	Sch 40
	.020 Sch 40
ent	lbs.
e	5 lbs.

ed in consolidated



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 46525

Atlas Sheet Coordinates 26 : Ø3 : [illegible]

OWNER IDENTIFICATION - Owner ~~N J D O T~~
Address ~~1035 PARKWAY AVE~~
City ~~TRENTON~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 7
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147
Address ~~GREGG ST~~

DATE WELL STARTED 1/28/97
DATE WELL COMPETED 1/28/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 95-Ø1-31-Ø93Ø11

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt. Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 9 ft.

Water level was measured using tape

Well was developed for 1 hours at 4 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5	20	4	PVC	.020 Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	20		Morie #1	
Grout	0	2		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method gravity
Drilling Method Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) John Vogt
Driller's Signature John Vogt
Registration No. J1544 Date 2/4/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW6 DATE DRILLED: 6/11/1996 COORD #1: 26.03.567 PERMIT #1: 26-42536
COORD #2: PERMIT #2: COUNTY: Bergan
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIAMETER: 10"
TOTAL DEPTH: 13'

SET WELL: 13'
GRAVEL PK SZ: Morie #1
DRILLER: Matthew Raab
SURFACE COMPLETION: M

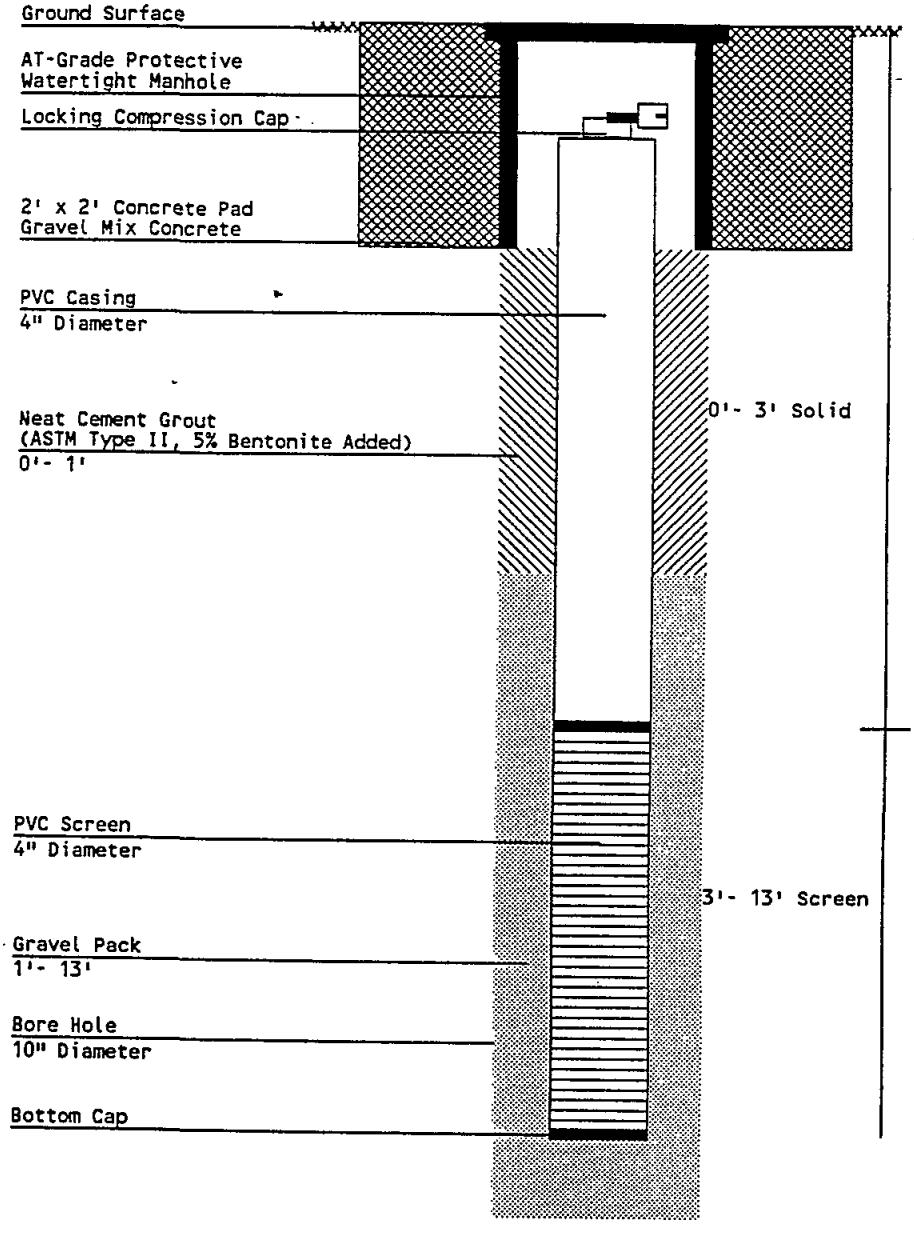
GAL PER MIN: 1
STAT H2O LVL: 10'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	5-9-9-10
3' - 5'	9-10-10-12
5' - 7'	10-12-12-50/5"
7' - 9'	6-24-50/4"
9' - 11'	7-11-15-22
11' - 13'	10-15-50/3"

REMARKS / SOILS IDENTIFICATION

0' - 1' Asphalt & stone.
1' - 2' Brown sand & gravel fill.
2' - 5' Tan silt & clay.
5' - 13' Red-brown m/f sand some silt little f/m gravel w/ shale fragments.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

DWR

MONITORING WELL RECORD

Well Permit No. 26 - 42536
Atlas Sheet Coordinates 26 : Ø3 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1Ø35 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 6
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/11/96
Regulatory Program Requiring Well UST Case I.D. # 95-1-31-0930-11
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	13	4	Sch 40 PVC .010
Tail Piece				
Gravel Pack	1	13		Morie #1
Annular Seal/Grout	0	1		Portland
Method of Grouting				gravity

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig B-59
Name of Driller Matthew Raab
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 000315
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matthew Raab Date 6-19-96

COPIES: White - DEP Canary - Driller 19316 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42535
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/11/96
Regulatory Program Requiring Well UST Case I.D. # 95-1-31-0930-11
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	4	Sch40 PVC.010
Tail Piece				
Gravel Pack	3	15		Morie #1
Annular Seal/Grout	0	3		Portland
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-59
Name of Driller Matthew Raab
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000315
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matthew Raab Date 6-19-96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42534
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/11/96
Regulatory Program Requiring Well UST Case I.D. # 95-1-31-0930-11
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	4	Sch40 PVC .010
Tail Piece				
Gravel Pack	3	15		Morie #1
Annular Seal/Grout	0	3		Portland
Method of Grouting				gravity

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig B-59
Name of Driller Matthew Raab
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000315
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matthew Raab Date 6-19-96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

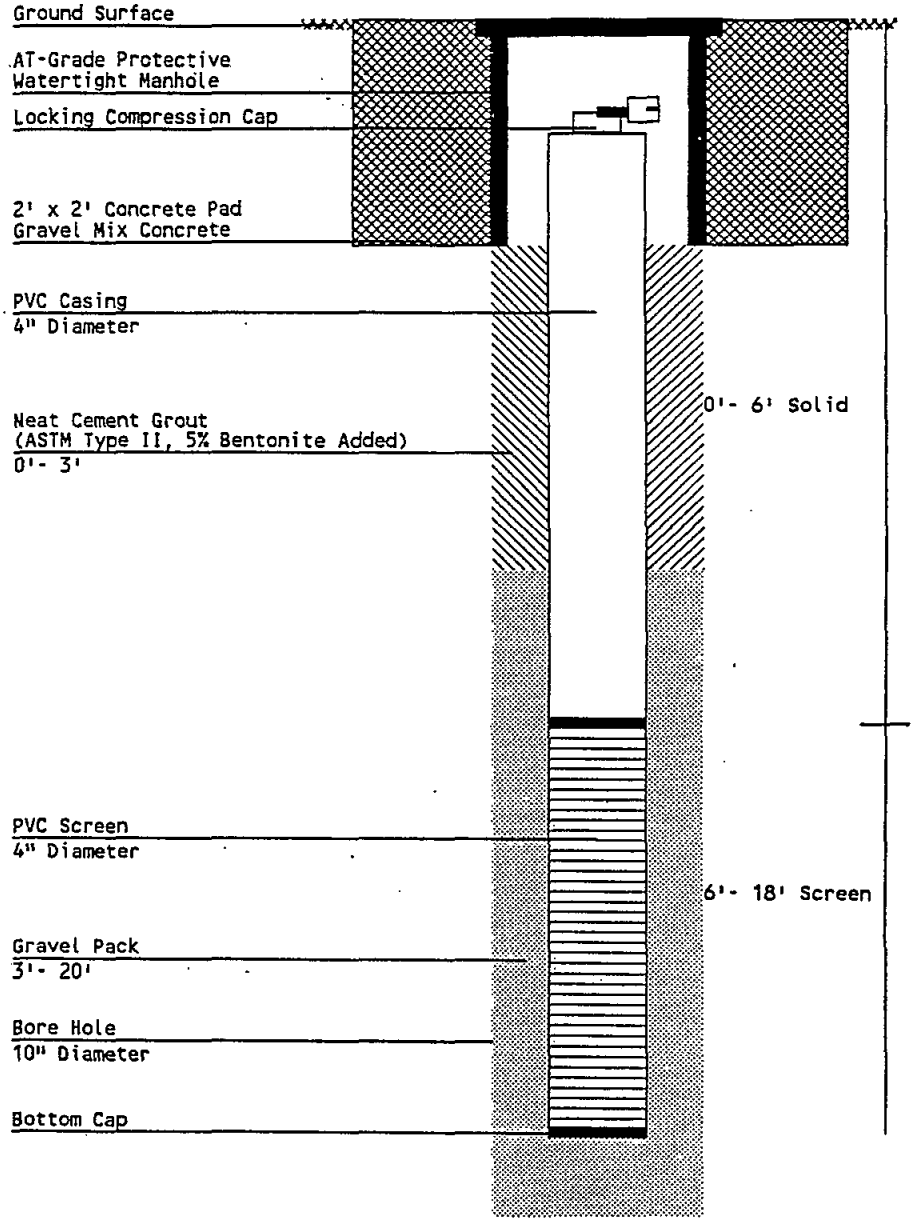
WELL: MW3 DATE DRILLED: 1/22/1996 COORD #1: 26.03.567 PERMIT #1: 26-42533
COORD #2: PERMIT #2: COUNTY: Bergan
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitoring

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD: S/S
LENGTH:	6'	LENGTH:	DIAMETER:	4"	HOLE DIAMETER: 10"
			LENGTH 1:	12'	TOTAL DEPTH: 20'
SET WELL:	18'	GAL PER MIN: 3	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 12'	SLOT SIZE:	.020	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
2' - 4'	4-6-11-9
4' - 6'	7-4-18-25
6' - 8'	25-33-25-32
8' - 10'	28-40-55-62
10' - 12'	28-36-50-55
12' - 14'	20-27-30-31
14' - 16'	44-50-28-20
16' - 18'	18-20-27-28
18' - 20'	100/4"

RE[redacted] / SOILS IDENTIFICATION

0' - 18' Red sand & silt & weathered rock.



DWP 138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

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DMR

MONITORING WELL RECORD

Well Permit No. 26 - 42533
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address ~~GREGG STREET~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/22/96
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~95-1-31-0930-11~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc. Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 18 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	18	4	Sch 40 PVC, .020
Tail Piece				
Gravel Pack	3	20		Morie #1
Annular Seal/Grout	0	3		Portland
Method of Grouting	gravity			

Static water level after drilling 12 ft.
Water level was measured using tape
Well was developed for 1 hours at 3 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig B-57
Name of Driller John Vogt
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000279
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Vogt Date 1/31/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42532
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address ~~GREGG STREET~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/22/96
Regulatory Program Requiring Well UST Case I.D. # 95-1-31-0930-11
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc. Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft..
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	2	16		Morie #1
Annular Seal/Grout	0	2		Portland
Method of Grouting				Gravity

Static water level after drilling 12 ft.
Water level was measured using tape
Well was developed for 1 hours at 3 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-57
Name of Driller John Vogt
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 001279
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Vogt Date 1/31/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42525
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MEW1
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11,8,95
Regulatory Program Requiring Well UST Case I.D. # 95-1-31-0930-11
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin & Assoc. Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6.5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6.5	13.5	4	Sch 40 PVC .010
Tail Piece				
Gravel Pack	4	13.5		Morie #1
Annular Seal/Grout	0	4		Portland
Method of Grouting				gravity

Static water level after drilling 9 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig B-57
Name of Driller Jim Burton
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. _____
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jim Burton Date 11/16/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 51005

Atlas Sheet Coordinates 26 : 03 566

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW9
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

DATE WELL STARTED 7 / 6 /98
DATE WELL COMPETED 7 / 6 /98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well WATER/HAZ ENF Case I.D.# 95-01-31-093011

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt. Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 20' ft.
Well finished to 20' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	10'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	10'	20'	4"	PVC	.020 Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	7'	20'		Morie #2	
Grout	0'	7'		Neat Cement Bentonite	188 lbs. 10 lbs.

Grouting Method Tremie
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Matthew Raab

Driller's Signature Matthew Raab

Registration No. J1577 Date 7 / 10 /98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009

WELL LOG

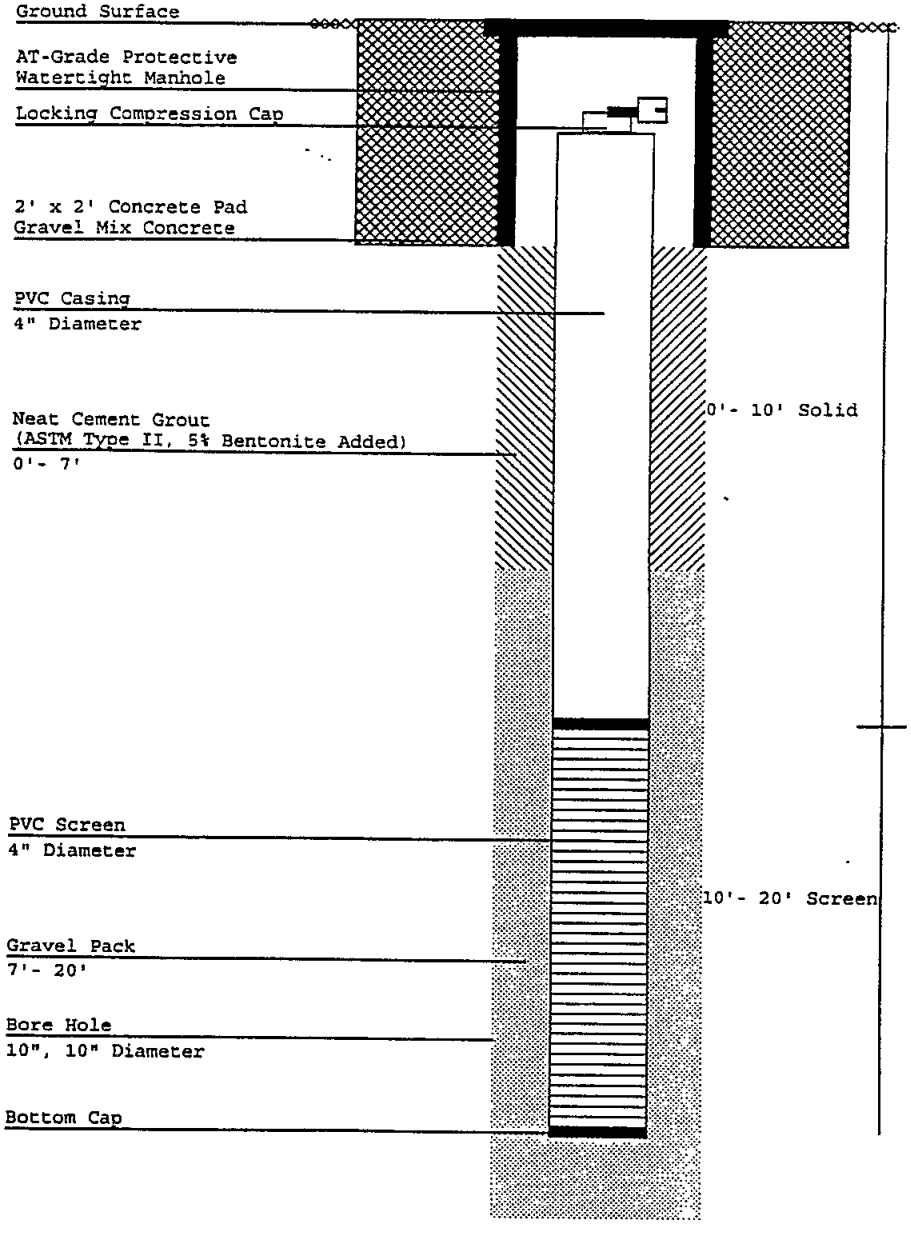
WELL: MW9 DATE DRILLED: 07/06/1998 COORD #1: 26.03.566 PERMIT #1: 26-51005
COORD #2: PERMIT #2: COUNTY: Bergan
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitoring

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Auger
DIAMETER:	4"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	10'	LENGTH:		DIAMETER:	4"	HOLE DIA:	10", 10"
				LENGTH 1:	10'	TOTAL DEPTH:	20'
SET WELL:	20'	GAL PER MIN:	1	LENGTH 2:			
GRAVEL PK SZ:	Morie #2	STAT H2O LVL:	11'	SLOT SIZE:	.020		
DRILLER:	Matthew Raab	DEVELOPMENT METHOD:	Pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1 Hour	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
10' - 12'	9-9-60-91
12' - 14'	45-27-17-9
14' - 16'	6-12-12-20

REMARKS / SOILS IDENTIFICATION

0'- 1' Asphalt & stone.
1'- 5' Dark brown silt & sand fine gravel.
5'- 20' Red-brown clayey silt some f/m sand trace f/m gravel with shale fragments.



DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 25 19855
Atlas Sheet Coordinates 26 22 564

OWNER IDENTIFICATION - Owner 193 REALITY CORP.
Address 199 GARIBALDI AVE.
City [illegible] State [illegible] Zip Code 07724

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County _____ Municipality [illegible] Lot No. 1 Block No. 234
Address _____

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/5/90
Regulatory Program Requiring Well UST Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Tele. # 201-927-0346

WELL CONSTRUCTION

Total depth drilled 12.10 ft.
Well finished to 12.75 ft.
Borehole diameter:
Top 12" in.
Bottom 12" in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	.75'	2.75'	4"	PVC SCH 40 FJT
Screen (Note slot size)	2.75'	12.75'	4"	PVC SCH 40 .10 SLOT
Tail Piece	None.			
Gravel Pack	2.33'	13'	12"	#2 Well Gravel
Annular Seal/Grout	1.33' 0	2.33' 1.33'	12"	Portland with 5% bent.
Method of Grouting	Placed by hand			

Static water level after drilling 4.0 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method H.S. Auger
Drilling Fluid Water Type of Rig Mobil B-57
Name of Driller George Van Ness
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 12606 JERSEY BORING
Name of Drilling Company [illegible]

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-26" Brown F Sand some sandstone Fill
26"-6' Black cinders and Organic silt
6'-13.0' Red Brown silty gravelly CF sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [illegible] Date 4-5-90

OWR-138 M
12/91

614

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 29468
Atlas Sheet Coordinates 26 : 03 : 564

OWNER IDENTIFICATION - Owner AIRCO GASES INC.
Address 575 MOUNTAIN AVENUE
City MERRY HILL State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County Municipality Lot No. Block No.
Address LODI BORO 26 2050

TYPE OF WELL (as per Well Permit Categories)
Date well completed 5/18/92
Regulatory Program Requiring Well MONITORING UST
Case I.D. # 91-10-30-0954-0
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	4	.010 PVC
Tail Piece				
Gravel Pack	3	15	11	#1 Morie
Annular Seal/Grout	0	3	11	Bentonite
Method of Grouting	Tremmie			

Static water level after drilling 8 ft.
Water level was measured using Tape
Well was developed for .25 hours at 2 gpm
Method of development Bailor
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig B-53
Name of Driller Ken Cox
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1145
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Med Sand
2-5 Green Silty Sand
5-10 Med Sand
10-15 Fine-Med Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Ken Cox Date 5/26/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

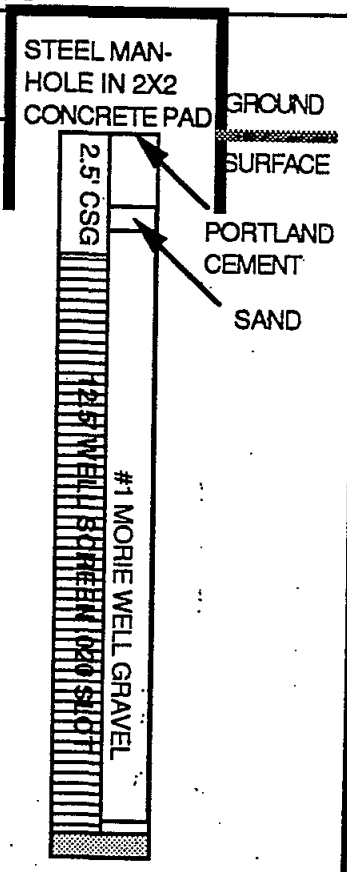
PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94		COORDINATE: 26 03 564
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: PORTLAND CEMENT/SAND		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL DESIGN



LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94	COORDINATE: 26 03 564	
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: PORTLAND CEMENT/SAND	

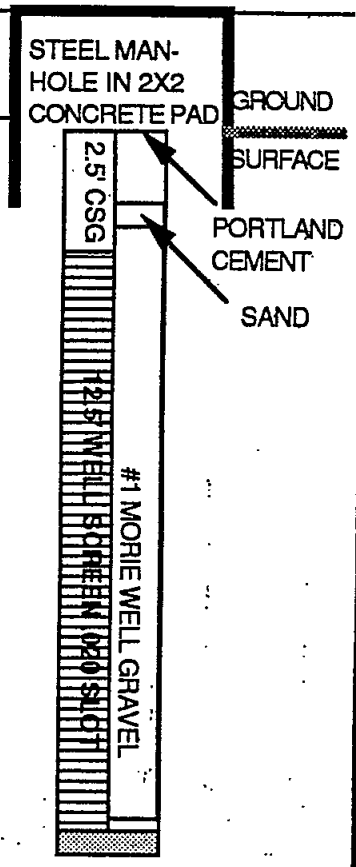
DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL SET AT 15'

WELL DESIGN



LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

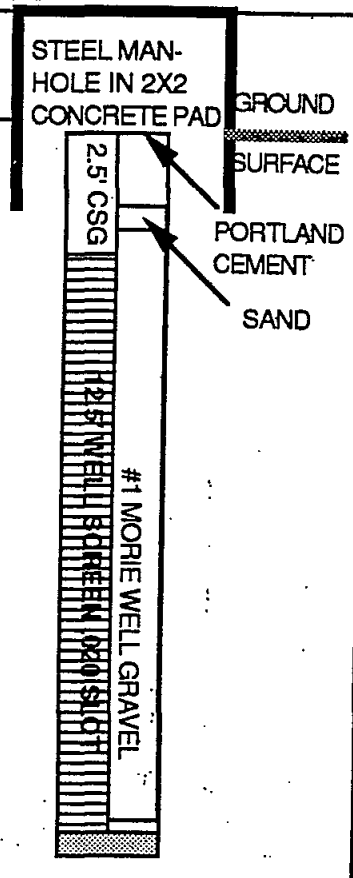
PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94	COORDINATE: 26 03 564	
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: PORTLAND CEMENT/SAND		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL DESIGN



LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

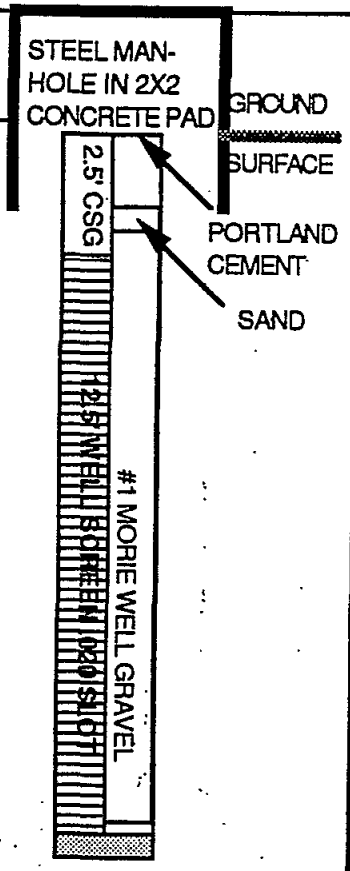
PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94	COORDINATE: 26 03 564	
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: PORTLAND CEMENT/SAND	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL DESIGN



Z ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
)862-6633

WELL LOG

JECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94		COORDINATE: 26 03 564
CATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
NER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
LLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
SING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
REEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
MPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
AVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: PORTLAND CEMENT/SAND		

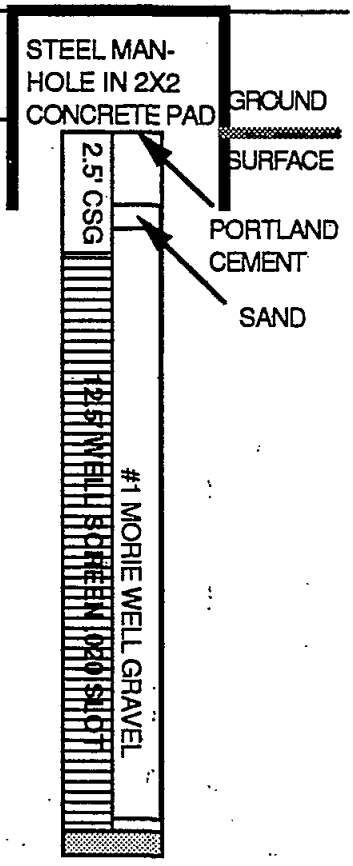
PTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL SET AT 15'

WELL DESIGN



LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

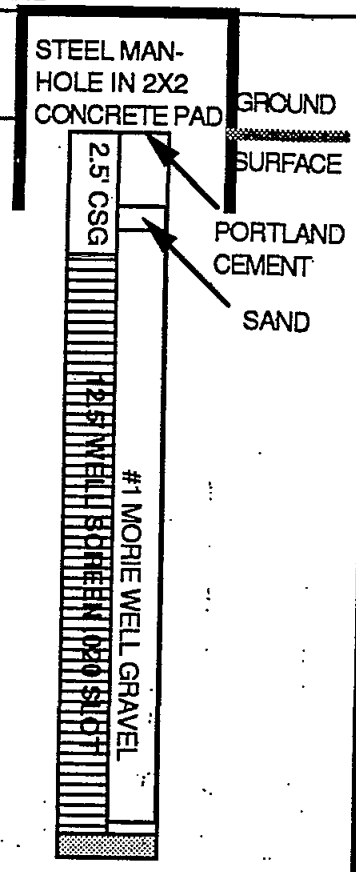
PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94	COORDINATE: 26 03 564	
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: PORTLAND CEMENT/SAND	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL DESIGN



WELL SET AT 15'

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 39023
Atlas Sheet Coordinates 26 03 564

OWNER IDENTIFICATION - Owner KLEIN, HARRY
Address 60 INDUSTRIAL ROAD
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #4
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~4D~~ Block No. ~~205B~~
Address D. KLEIN & SONS, INC., 60 INDUSTRIAL ROAD, LODI, NJ

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 12/21/94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) RT ENVIRONMENTAL Tele. # (610) 265-1510

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	2½'	4"	PVC BEDROCK FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2½'	XX 15'	4"	PVC, SLOT .020 BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	2'	15'	ANNULUS	#1 MORIEM WELL GRAVEL
Annular Seal/Grout	GRADE	2'	ANNULUS	PORTLAND CEMENT/SAND
Method of Grouting	TREMMY			

Static water level after drilling APRX. 5 ft.
Water level was measured using STEEL TAPE
Well was developed for 5 hours at 11 gpm
Method of development PUMPED
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method 6¼" ID ;H.S.A.
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Timothy Westover Date 1-17-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

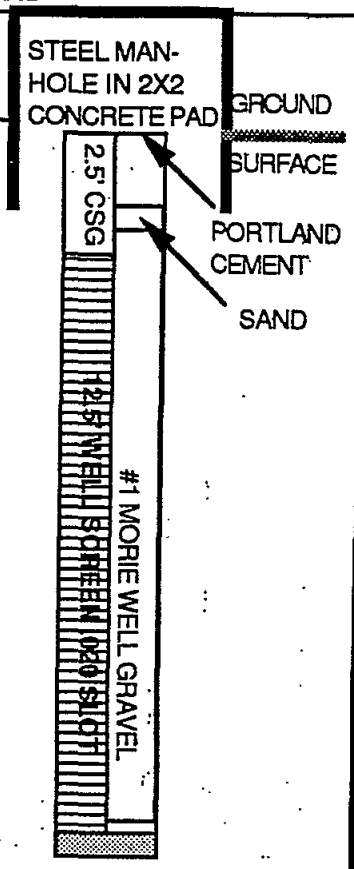
PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94		COORDINATE: 26 03 564
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39023	WELL NO: MW #4	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: PORTLAND CEMENT/SAND		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		N
		O
		S
		P
		O
		O
		N
		S

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL DESIGN



WR-13E M
2/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E
CL

MONITORING WELL RECORD

Well Permit No. 26- 39Ø22
Atlas Sheet Coordinates 26 Ø3 564

OWNER IDENTIFICATION - Owner KLEIN, HARRY
Address 6Ø INDUSTRIAL ROAD
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #3
County BERGEN Municipality LODI BORO Lot No. 4D Block No. 2Ø5B
Address D. KLEIN & SONS, INC., 60 INDUSTRIAL ROAD, LODI, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 21 / 94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) RT ENVIRONMENTAL Tele. # (610) 265-1510

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	GRADE	2½'	4"	PVC BEDROCK FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2½'	15'	4"	PVC, SLOT .Ø2ØØ BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	2'	15'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	2'	ANNULUS	PORTLAND CEMENT/SAND
Method of Grouting	TREMMY			

Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD
Static water level after drilling APRX. 5 ft.
Water level was measured using STEEL TAPE
Well was developed for 2 hours at 2 gpm
Method of development PUMPED
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method 6¼" ID H.S.A.
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date 1-17-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 39020
Atlas Sheet Coordinates 26 - 03 - 564

OWNER IDENTIFICATION - Owner KLEIN, HARRY
Address 60 INDUSTRIAL ROAD
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #1
County BERGEN Municipality LODI BORO Lot No. 4D Block No. 205B
Address D. KLEIN & SONS, INC., 60 INDUSTRIAL ROAD, LODI, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 21 / 94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) RT ENVIRONMENTAL Tele. #(610) 265-1510

WELL CONSTRUCTION

Total depth drilled XX 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETEPAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	2½'	4	W PVC BEDROCK FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2½'	15'	4"	SLOT .020, PVC BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	2'	15'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	2'	ANNULUS	PORTLAND CEMENT/SAND
Method of Grouting	TREMMY			

Static water level after drilling APRX. 5 ft.
Water level was measured using STEEL TAPE
Well was developed for 5 hours at 17 gpm
Method of development PUMPED
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method 6¼" ID H.S.A.
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date 1-17-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: D. KLEIN & SONS, INC.	DATE DRILLED: 12/21/94		COORDINATE: 26 03 564
LOCATION: 60 INDUSTRIAL ROAD LODI, NJ	PERMIT #: 26-39020	WELL NO: MW #1	DEPTH: 15'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 11"
OWNER: H. KLEIN	ADDRESS: 60 INDUSTRIAL ROAD, LODI, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: 6-1/4" ID H.S.A.
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2-1/2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 12-1/2'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: PORTLAND CEMENT/SAND	

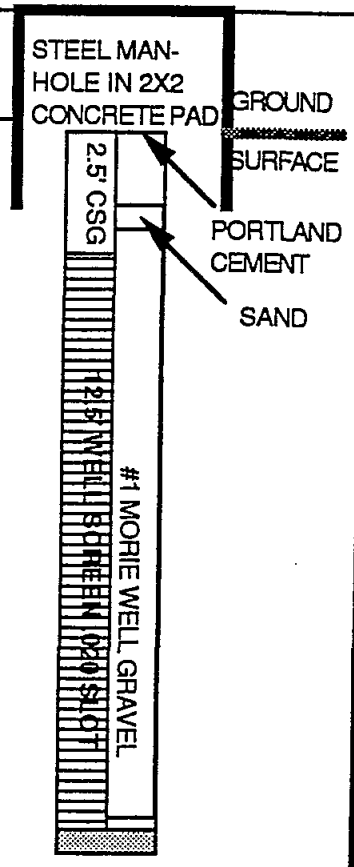
DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER
		NO SPOONS

0" - 15'

LOOSE BROWN & RED/BROWN SANDS & SILTS WITH A COBBLE LAYER AROUND 12'

WELL SET AT 15'

WELL DESIGN



)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61657

Atlas Sheet Coordinates 26 : 03 564

)WNER IDENTIFICATION - Owner
Address NYS&W RAILROAD CORP.
City PO BOX 439 State BUTLER NJ Zip Code 07405

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. Site GB-20
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address RT. 17 & MAIN ST.

DATE WELL STARTED 7/9/01
DATE WELL COMPLETED 7/9/01

TYPE OF WELL (as per Well Permit Categories) BORING
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) YU & ASSO. Tele. # 1-201-791-00

WELL CONSTRUCTION
Total depth drilled 41.5 ft.
Well finished to — ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8 ft.

Water level was measured using TAPE

Well was developed for — hours at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	___ lbs. ___ lbs.

Grouting Method Trem. with Pump
Drilling Method Mud Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Bentonite Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING

Well Driller (Print) Michael Blowers

Driller's Signature Michael Blowers

Registration No. B0185 Date 7/24/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0" to 6" Top Soil
6" to 9' misc fill
9' to 15' Brn cl FSD & cl Fgvl
15' to 35' Brn cl FSD Tr Silt
35' to 41½" Red Brn cl FSD Tr Silt w/ cl Fgvl

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___ ° ___ ' ___.___ " LONGITUDE: ___ ° ___ ' ___.___ "

COPIES: White - DEP Canary - Driller P-338 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30665
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11-E
County Bergen Municipality ~~LODI BORO~~ Lot No. 1 Block No. ~~205~~
Address 35 Industrial Ave

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/2/92
Regulatory Program Requiring Well ECRA Case I.D. # 90717
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ecolscience Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 9.5/8 in.
Bottom 9.5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	3	10	4	Sch 40 pvc 0.20 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	10	95/8	#2 well gravel
Annular Seal/Grout	0	2	95/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 4 ft.
Water level was measured using Tape drop line
Well was developed for 1 hours at .25 gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Augr
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller Ronald Juckett
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1474
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to4' Red Sd & Silt
4'to6' gry m/F Sd
6'to8' Red m/F Sd
8'to 10' Red Sd & gl Acial Till

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Ronald H Juckett Date 9/12/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30666
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner VISCONTI, NANCY ESTATE
Address 161 MADISON AVE.
City MORRISTOWN State NJ Zip Code 07960

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12-7
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1~~ Block No. ~~205~~
Address 35 Industrial Ave.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/2/92
Regulatory Program Requiring Well ECRA Case I.D. # ~~90717~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcolScience Tele. # 201-366-9500

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	3	11	4	Sch 40 PVC 0.20 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	11	9 5/8	#2 well gravel
Annular Seal/Grout	0	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 4 ft.
Water level was measured using Tape drop line
Well was developed for 1 hours at .5 gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig Acker Soil Max
Name of Driller Ronald Juckett
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1474
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6' Rd Sty Clay
6' to 8' Gry m/sd
8' to 10' Gry Sand
10' to 11' Red Till

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Ronald R. Juckett Date 9/12/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31990
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW40
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 1.5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red
11 sand gravel & silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 31991
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-41
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/6/93
Regulatory Program Requiring Well ~~RCRA~~ Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 range to red
11 sand gravel & pellets

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31992
Atlas Sheet Coordinates ~~26~~ : ~~Ø3~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-42
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/28/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 range to red
11 sand gravel & silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31993
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-43
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/29/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Ritzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31994
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-44
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	FLUSHMOUNT concrete			

Static water level after drilling 5 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for .5 hours at 125 gpm
Method of development AIR INJECTION
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-G1
Name of Driller KARL D HITZELBERGER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red Sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31995
Atlas Sheet Coordinates ~~26~~ : ~~05~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-45
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/2/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Rutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red
11 sand gravel & silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Rutzelberger Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

C

MONITORING WELL RECORD

Well Permit No. 26 - 31996
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-46
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzlberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 31997
Atlas Sheet Coordinates 26 : Ø3 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-47
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/6/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hutzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to red sand & gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

C

MONITORING WELL RECORD

Well Permit No. 26 - 31998 *
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-48
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Ritzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 range to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 31999
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-49
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☒ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5 orange to red
9-23-93
WELL SEALED
11 sand gravel & slats

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

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Bureau of Water Allocation

C

MONITORING WELL RECORD

Well Permit No. 26 - 31998
Atlas Sheet Coordinates 26 : Ø3 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-48
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Ritzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

C

MONITORING WELL RECORD

Well Permit No. 26 - 31999
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-49
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/5/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☒ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5 orange to red
9-23-93
WELL SEALED
11 sand gravel & slats

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

2

MONITORING WELL RECORD

Well Permit No. 26 - 32000
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-01
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 7 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ruci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount			Concrete

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red
sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

OWR-138 M
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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32001
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-02
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1,7,83
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Ritzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red
11 sand gravel & silts

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32002
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-03
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	Flushmount concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Nitzelberger Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32003
Atlas Sheet Coordinates ~~26 : 03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-04
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Vapex Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9		Ricci #1
Annular Seal/Grout	1	3		Pellets
Method of Grouting	flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using electric tape
Well was developed for .5 hours at .25 gpm
Method of development air injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig BG1
Name of Driller Karl D. Nitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 orange to red sand gravel & silts
11

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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E

MONITORING WELL RECORD

Well Permit No. 26 - 32005
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-06
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/7/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VARE X Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed?
☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Size #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ~~☐ Yes~~ ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5' ORANGE to Red SAND GRAVEL silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitz Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32006
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-07
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1,7,93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) APEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed?
☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flush mount / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hoffmeyer
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black Fill dirt
5'
Orange to Red
Sand Gravel silt

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D Hoffmeyer Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32007
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VLC-08
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/30/92
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Size #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmounts / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hotzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black topsoil
Fill Dirt
5+
ORANGE TO RED
SAND GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hotzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept

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E

MONITORING WELL RECORD

Well Permit No. 26 - 32008
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-09
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 12/30/82
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ ~~flush~~ mounted
If finished above grade, casing height (stick up) above land surface ~~———~~ ft.
Was steel protective casing installed? ☒ ~~Yes~~ ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Fleishmann + Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hatzelberger
Health and Safety Plan submitted? ☒ ~~Yes~~ ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill Dirt
5' 7'
ORANGE TO RED
SAND GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hatzelberger Date 1/14/83

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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E

MONITORING WELL RECORD

Well Permit No. 26 - ~~32009~~ 26 ~~03~~ 565

Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.

Address UNITED TECHNOLOGY BLDG.

City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-10

County Municipality LODI BORO Lot No. 1A Block No. 147A

Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 12/30/92

Regulatory Program Requiring Well ECRA Case I.D. # 85564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.

Well finished to 9 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellet
Method of Grouting	Flushmount			Concrete

Static water level after drilling 5 ft.

Water level was measured using Electric tape

Well was developed for 15 hours at .25 gpm

Method of development Air Injection

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Method HSA

Drilling Fluid NONE Type of Rig B-61

Name of Driller Kurt D. Hoeberger

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

N.J. License No. J-7530

Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill Dirt

5' ORANGE TO RED SAND GRAVEL & SILT

11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Kurt D. Hoeberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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E

MONITORING WELL RECORD

Well Permit No. 26 - 32010
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-11
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/8/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller KARL D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1538
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill Dirt
5' ORANGE TO RED SAND GRAVEL & SILTS
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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E

MONITORING WELL RECORD

Well Permit No. 26 - 32011
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-12
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1,8,83
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Rice #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric Tape
Well was developed for 5 hours at 125 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5'
ORANGE to RED SAND GRAVEL & SILT
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32012
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-13
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/12/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) UNDEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Rock #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for 1.5 hours at 1.25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Heeberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill dirt
5' Orange to Red Sand Gravel Silts
11' WELL SEALED 1-03-93

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Heeberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32013
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-14
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1, 8, 93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5' ORANGE & RED SAND gravel & silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 32014
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-15
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~GAS VENT~~ Date well completed 1/8/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ ~~Yes~~ ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Silica #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ ~~Yes~~ ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1330
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey Fill dirt
5' Orange to Red Sand gravel & silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32015
Atlas Sheet Coordinates 26 : 03 : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address UNITED TECHNOLOGY BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. UW-16
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1/11/93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC .010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	1	3	8	Pellets
Method of Grouting	Flushmount / concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at 125 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1530
Name of Drilling Company ~~TABASCO DRILLING CORP.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Black to grey fill dirt
5 Orange to Red sand and gravel silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32016
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 565

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address ~~UNITED TECHNOLOGY BLDG.~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-17
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) GAS VENT Date well completed 1, 12, 93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) VAPEX Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 9 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ~~—~~ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	9	2	PVC, 010
Tail Piece				
Gravel Pack	3	9	8	Ricci #1
Annular Seal/Grout	,	3	8	Pellets
Method of Grouting	Flush mounts / Concrete			

Static water level after drilling 5 ft.
Water level was measured using Electric tape
Well was developed for .5 hours at .25 gpm
Method of development Air Injection
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig B-61
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5-1530
Name of Drilling Company TABASCO DRILLING CORP

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Black to grey Fill dirt
5' Orange to Red Sand gravel & silts
11'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D. Hitzelberger Date 1/14/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DV.R-138 M
11/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57858

Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ~~MW16~~ MW16
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG ST.

DATE WELL STARTED 6/30/00
DATE WELL COMPLETED ~~6/30/00~~

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt. Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	6'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6'	16'	4"	PVC	.010 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	16'		Morie #1	
Grout	0'	3'		Neat Cement Bentonite	~~94~~ lbs. 5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Jim Burton

Driller's Signature Jim Burton

Registration No. J13752 Date 7 / 12 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling

WELL LOG

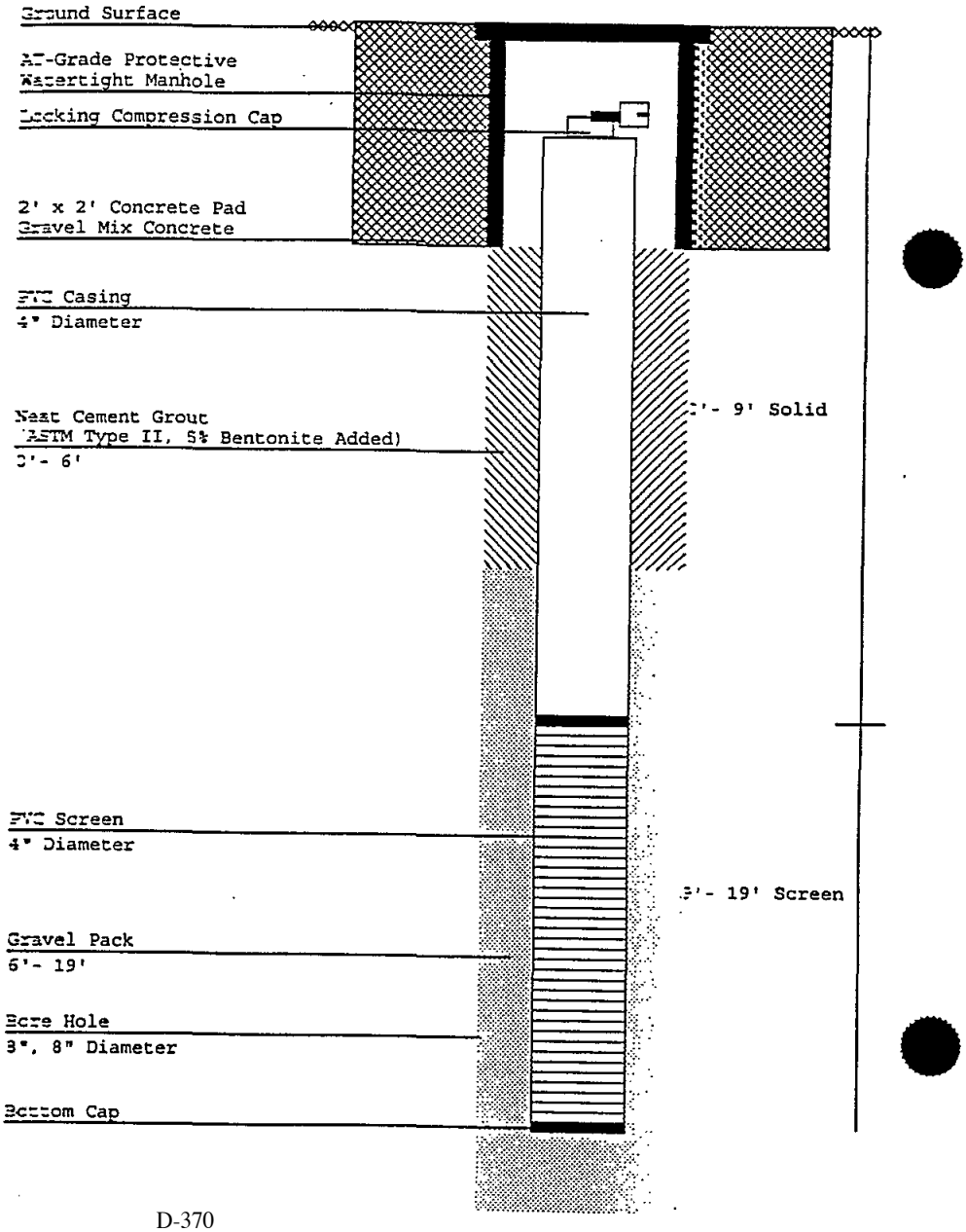
WELL: MW15 DATE DRILLED: 06/30/2000 COORD #1: 26.03.567 PERMIT #1: 26-57857
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC		DRILLING METHOD: Air Rotary
DIAMETER: 4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH: 9'	LENGTH:	DIAMETER: 4"		HOLE DIA: 8", 8"
		LENGTH 1: 10'		TOTAL DEPTH: 19'
SET WELL: 19'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ: Morie #1	STAT H2O LVL: 11'	SLOT SIZE: .010		
DRILLER: Jim Burton	DEVELOPMENT METHOD: Pump		CASING SEAL: Portland	
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1/2 Hour		OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6" Asphalt.
6'- 2' Fill material.
2'- 11' Red-brown medium sand some gravel.
11'- 19' Bedrock, sanmdstone.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW4 DATE DRILLED: 6/11/1996 COORD #1: 26.03.567 PERMIT #1: 26-42534
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIAMETER: 10"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #1
DRILLER: Matthew Raab
SURFACE COMPLETION: M

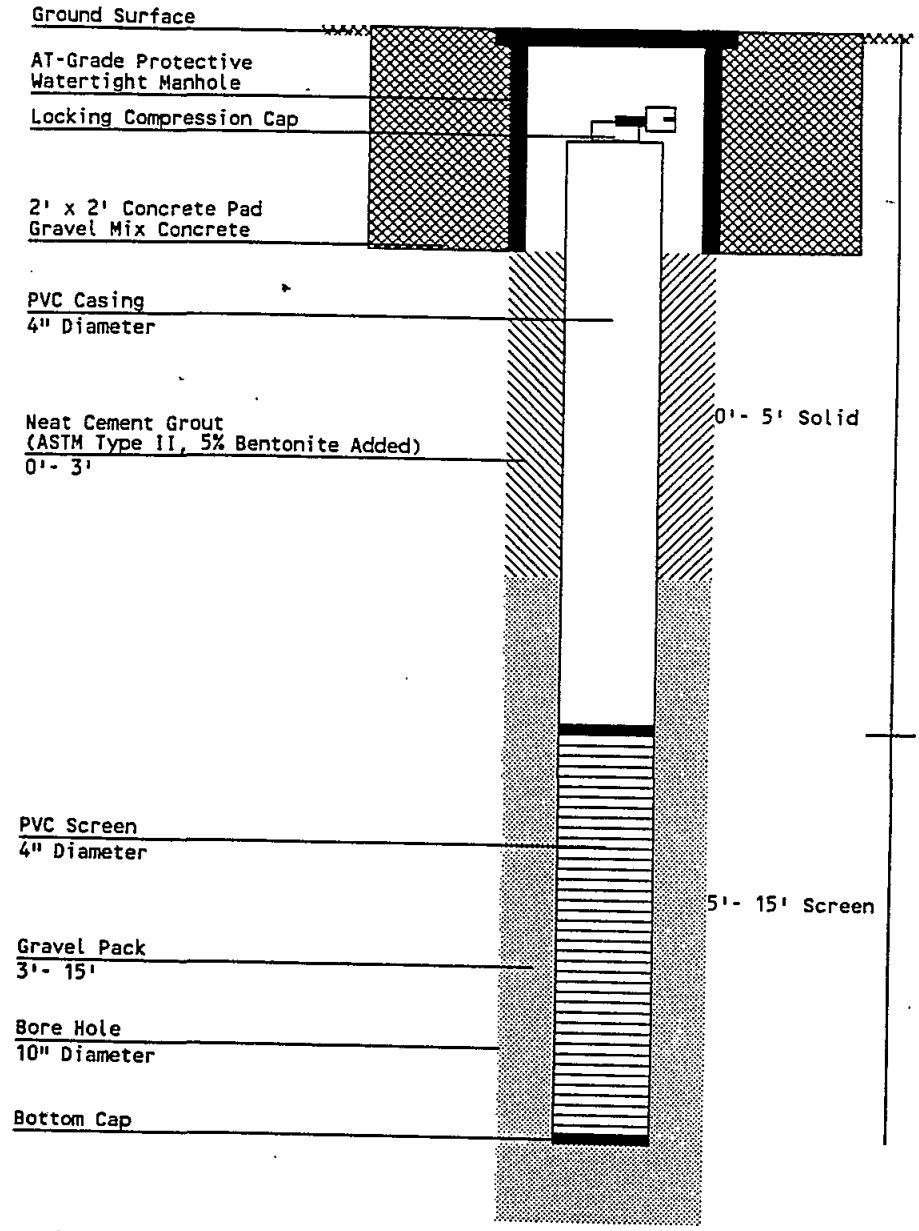
GAL PER MIN: 1
STAT H2O LVL: 10'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	12-14-18-9
3' - 5'	9-8-7-11
5' - 7'	8-2-5-8
7' - 9'	22-48-50/3"
9' - 11'	29-37-36-50/2"
11' - 13'	11-14-14-15
13' - 15'	22-29-37-50/4"

REMARKS / SOILS IDENTIFICATION

- 6" Asphalt & stone.
6" - 3' Black & brown sand silt & gravel fill.
3' - 15' Red-brown fine sand some silt w/ shale fragments & little f/m sand.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW5 DATE DRILLED: 6/11/1996 COORD #1: 26.03.567 PERMIT #1: 26-42535
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIAMETER: 10"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #1
DRILLER: Matthew Raab
SURFACE COMPLETION: M

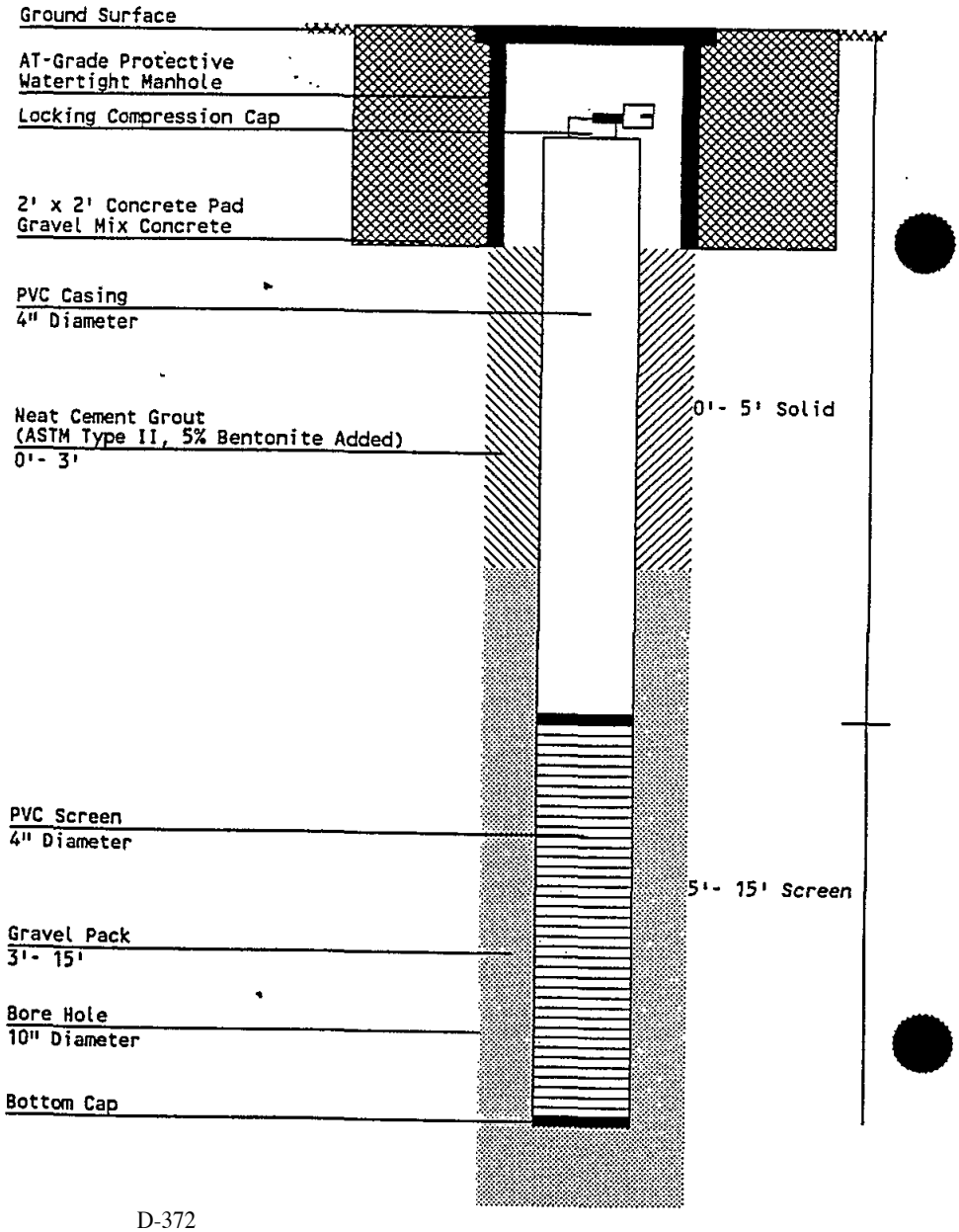
GAL PER MIN: 1
STAT H2O LVL: 10'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	6-8-8-6
3' - 5'	2-1-2-2
5' - 7'	3-5-5-8
7' - 9'	10-10-12-14
9' - 11'	12-18-22-20
11' - 13'	16-16-17-18
13' - 15'	19-22-28-50/5"

REMARKS / SOILS IDENTIFICATION

0' - 6" Asphalt & stone.
6" - 3' Black & brown sand silt & gravel fill.
3' - 15' Red-brown fine sand some silt w/ shale fragments & little f/m sand.



SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

L: MW2 DATE DRILLED: 1/22/1996 COORD #1: 26.03.567 PERMIT #1: 26-42532
COORD #2: PERMIT #2:
COUNTY: Bergan
XSTREET:
USE: Monitoring

E: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ
IER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625

IER CASING: PVC
\METER: 4"
NGTH: 4'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIAMETER: 10"
TOTAL DEPTH: 16'

T WELL: 14'
AVEL PK SZ: Morie #1
ILLER: John Vogt
RFACE COMPLETION: M

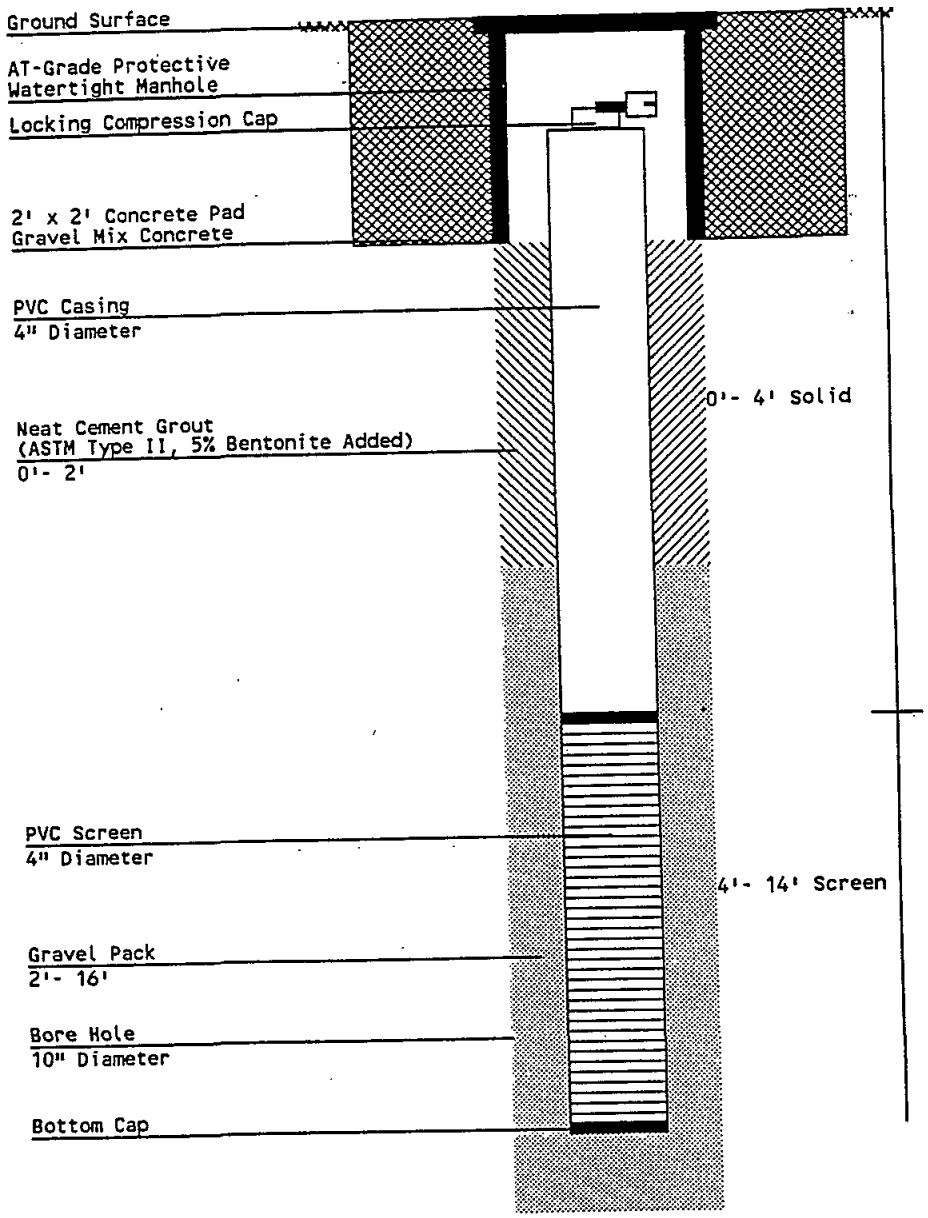
GAL PER MIN: 3
STAT H2O LVL: 12'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
2' - 4'	25-23-15-9
4' - 6'	6-4-10-11
6' - 8'	11-12-18-24
8' - 10'	12-16-19-25
10' - 12'	15-25-41-38
12' - 14'	43-52-53-70
14' - 16'	50/5"

EM[redacted] SOILS IDENTIFICATION

' - 12' Brown sand & cobbles.
2' - 14' Weathered rock.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

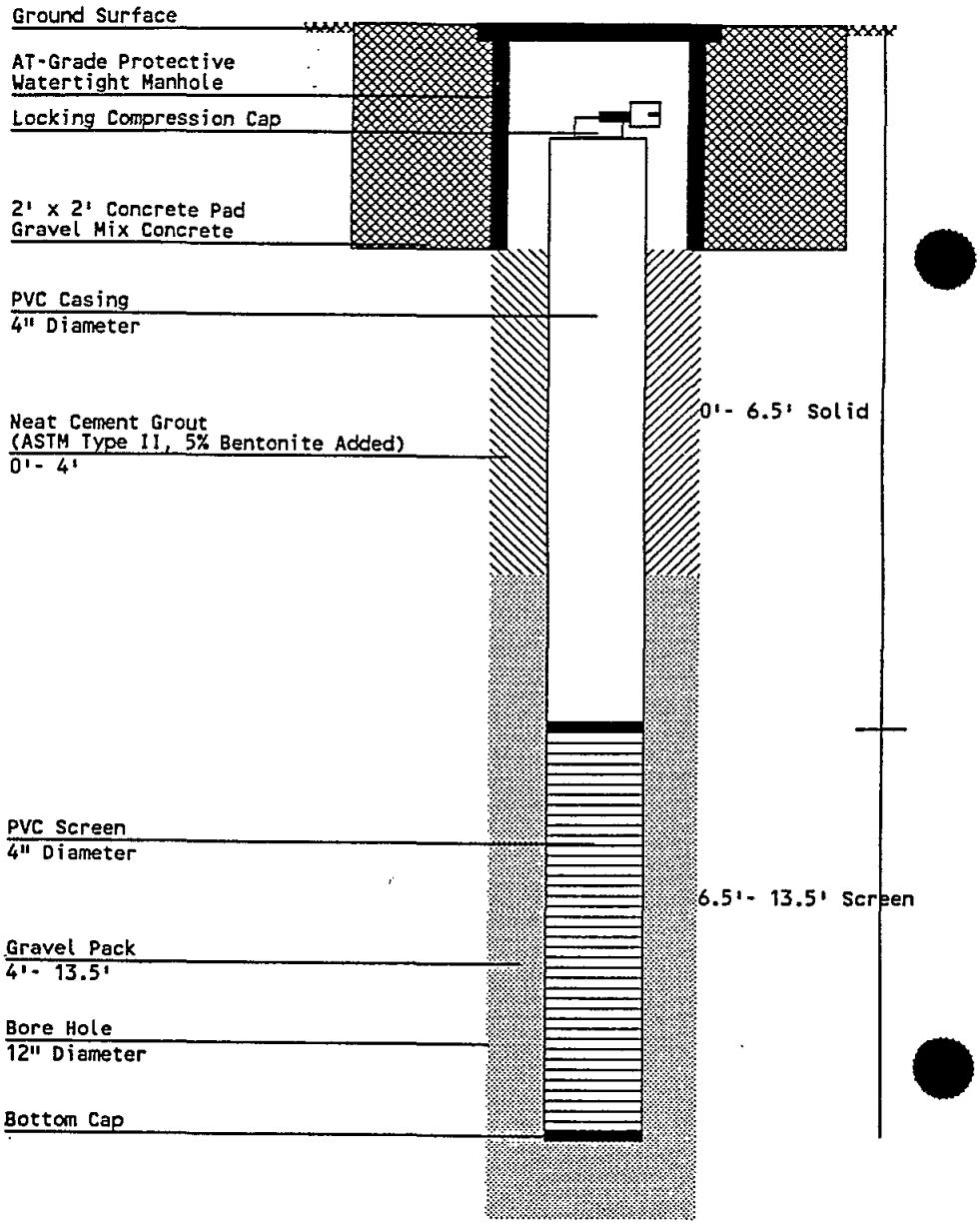
WELL: MEW1 DATE DRILLED: 11/08/1995 COORD #1: 26.03.567 PERMIT #1: 26-42525
COORD #2: PERMIT #2: COUNTY: Bergan
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitoring

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1: PVC	DRILLING METHOD: Auger
DIAMETER:	4"	DIAMETER:		SCREEN TYPE 2:	SAMPLING METHOD: S/S
LENGTH:	6.5'	LENGTH:		DIAMETER: 4"	HOLE DIAMETER: 12"
				LENGTH 1: 7'	TOTAL DEPTH: 13.5'
SET WELL:	13.5'	GAL PER MIN: 1		LENGTH 2:	
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 9'		SLOT SIZE: .010	
DRILLER:	Jim Burton	DEVELOPMENT METHOD: Pump		CASING SEAL: Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour		OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
0' - 2'	6-8-7-7
2' - 4'	6-5-5-5
4' - 6'	3-4-3-3
6' - 8'	4-4-5-5
8' - 10'	5-5-4-5
10' - 12'	8-9-17-21
12' - 14'	18-25-37-100/3"

REMARKS / SOILS IDENTIFICATION

0' - 13' Fill material.
13' - 13'6" Rock (shale).



DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18944
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner ~~BERGEN CABLE TECHNOLOGIES~~
Address 170 GREGG ST.
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 113 Block No. 205
Address 170 GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 02/23/90
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~89-11-01-116~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) AGUILAR - DOUG HARM Tele. # 290-7850

WELL CONSTRUCTION

Total depth drilled 11.5 ft.
Well finished to 11.5 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	1.5	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1.5	11.5	4	PVC .020
Tail Piece	NONE	—	—	—
Gravel Pack	1	11.5	—	#2 MORIE
Annular Seal/Grout	0	1	—	BPELLETS + PORT.
Method of Grouting	TREMIE			

Static water level after drilling 1.5 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller CARMINE DE CORSO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 03/06/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

BORING LOG

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. MW - 1 Coordinate No. 26.03.5.66 Permit No. 26-18944-5
Date Drilled 02/23/90 County Bergen Use Monitor
Location Bergen Cable Technologies, 170 Gregg St., Lodi, NJ 07644
Owner Same
Drilling Method Air rotary Sampling Method none
Hole Diameter 8" Total Depth 11.5'
Casing: Type PVC Diameter 4" Length 1.5'
Screen: Type PVC Slot .020 Diameter 4" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets, grout
Static Water Level 1.5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
			0' - .5' GROUT	0' - 2' Gravel driveway, fill
			.5' - 1.5' SOLID	2' - 11.5' Red-or. m/f sand, tr. silt
			1.5' - 1' PELLETS	
			1' - 11.5' GRAVEL	
			1.5' - 11.5' SCREEN	
			11.5' SET WELL	
			GPM	
10'				
20'				
30'				
40'				

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26. 41499
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N. & ESSEX ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 08 8 95
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~90-10-01-1004~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) LIHITMAN CO. Tele. #

WELL CONSTRUCTION

Total depth drilled 11'6" ft.
Well finished to 11'6" ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	1'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)			—	
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0.6"	11'6"	Annul.	#2 MORIE
Annular Seal/Grout	0'	0.6"	Annulus	Cement
Method of Grouting	gravity			

Static water level after drilling 3'6" ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 3 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller B.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1290
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Backfill
2-10 gray silty clay + sand
10'-12' coarse sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature B.M. Strzelczyk Date 08.28.95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26- 41500
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address ~~RT 17 N. & ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 08/8/95
Regulatory Program Requiring Well UST Case I.D. # ~~90-10-01-1004~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN CO. Tele. #

WELL CONSTRUCTION
Total depth drilled 11'6" ft.
Well finished to 11'6" ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	11'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0'6"	11'6"	Annul.	#2 MORIE
Annular Seal/Grout	0'	0'6"	Annul.	Cement
Method of Grouting	Gravity			

Static water level after drilling 3'6" ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 3 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller B.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1290
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Backfill
2-10 Gray silty clay + sand
10-11'6" Decomposed bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature B.M. Strzelczyk Date 08/28/95

COPIES: White - DEP | Canary - Driller | Pink - Owner | Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26- 41501
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address ~~RT 17 N. & ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING UST Date well completed 08,28,95 ~~90-10-01-1004~~
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitmen Co. Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 11'6" ft.
Well finished to 11'6" ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	1'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)			—	
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0'6"	11'6"	Annul.	#2 morie
Annular Seal/Grout	0	0'6"	Annul.	Cement
Method of Grouting			Gravity	

Static water level after drilling 3' ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 5 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller B.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1280
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-3' Backfill
3'-9' Gray silty sand fine to medium.
9'-11'6" decomposed rock (Red shale).

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature B. M. Strzelczyk Date 08/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 .33149
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner HASCOLD REALTY
Address P.O. BOX 4069, NORTH STATION
City WINSTON-SALEM State NC Zip Code 27115

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW # 1
County BERGEN Municipality ~~EDDI BORO~~ Lot No. ~~5-B~~ Block No. ~~224~~
Address 39 ROBINSON RD.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/19/93
Regulatory Program Requiring Well UST Case I.D. # 027446
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN CO. INC. Tele. # 908-390-5858

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	1'	4"	SCH. .40 P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'	10'	4"	.20 SCH. .40 P.V.C.
Tail Piece				
Gravel Pack	6"	10'		#2 MORIE
Annular Seal/Grout	0'	6"		2'X2' PAD
Method of Grouting	GRAVITY			

Static water level after drilling 2 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1/2 hours at 5 gpm
Method of development SUB. PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H. S. A.
Drilling Fluid — Type of Rig SIMCO 2800 HS/HT
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1486
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 1' (6" ASPHALT, 6" LG. GRAVELS (G.P.)
1' - 3' - MED. SANDS W/- LITTLE SILT
3 - 10' - RED/BRN. MED./SANDS W/ SOME SILTS AND LITTLE CLAY
26. COBBLES (SANDSTONE) @ 10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Laura Date 4-20-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-.38 M
11/96

ENTERED

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 51006

Atlas Sheet Coordinates 26 : 03 566

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW10
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

DATE WELL STARTED 7 / 6 /98
DATE WELL COMPETED 7 / 6 /98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well WATER/HAZ ENF Case I.D.# 95-01-31-093011

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt, Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 18' ft.
Well finished to 18' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Steel protective casing installed?
Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	8'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8'	18'	4"	PVC	.020 Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5'	18'		Morie #2	
Grout	0'	5'		Neat Cement Bentonite	188 lbs. 10 lbs.

Grouting Method Tremie
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Matthew Raab

Driller's Signature Matthew Raab

Registration No. J1577 Date 7 / 10 /98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 25 - 33150
Atlas Sheet Coordinates 25 : 03 : 54

OWNER IDENTIFICATION - Owner HASTOLD REALTY
Address P.O. BOX 4069, NORTH STATION
City WINSTON-SALEM State NC Zip Code 27115

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW # 2
County BERGEN Municipality LODI BORO Lot No. 5-B Block No. 224
Address 39 ROBINSON RD. LODI N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/19/93
Regulatory Program Requiring Well UST Case I.D. # 027446
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN Co. Tele. # 908-390-5858

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	2'	4"	SCH. 40 P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	.020) SCH. 40 P.V.C.
Tail Piece				
Gravel Pack	1'	12'	#2	MORIE
Annular Seal/Grout	0'	1'	PORT. BENT.	2'x2' PAD
Method of Grouting	GRAVITY			

Static water level after drilling 3 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1/2 hours at 5 gpm
Method of development SUB. PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A.
Drilling Fluid — Type of Rig SIMCO 2800 HS/HT
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1486
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8' - MED. SANDS w/SOME SILT

8-12' - RED/BRN. CLAYEY SILT AND MED. SANDS

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Laura Date 4-20-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22729
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner U.T.C. CORP.
Address 200 GREGG ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-2
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A 77
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/15/90
Regulatory Program Requiring Well ECRA Case I.D. # 85864
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.C. HART Tele. # 212 - 447-1480

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14		020 PVC
Tail Piece				
Gravel Pack	2	14		#1
Annular Seal/Grout	6	2		
Method of Grouting	POUR			

Static water level after drilling 5.25 ft.
Water level was measured using SOUNDING TAPE
Well was developed for 2 hours at 1 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☑ Yes ☐ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method H.S.A.
Drilling Fluid NONE Type of Rig GUS DECK
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Fill + Black Top
6"-12' Red silt + stone
12'-14' Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles Kramer Date 11-26-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2901
Application No. P-149
County Bergen

Red #

WELL RECORD

1. OWNER Charles F Fields ADDRESS 199 Garibaldi Ave
   Owner's Well No. 3 SURFACE ELEVATION 40' Feet (Above mean sea level)
2. LOCATION Lodi Bergen Co N.J.
3. DATE COMPLETED April 1 1965 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 10 Inches Bottom 10 Inches TOTAL DEPTH 400 Feet
5. CASING: Type steel Diameter 10 Inches Length 20 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
   Range in Depth { Top ___ Feet / Bottom ___ Feet } Geologic Formation ___
   Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
   Water rises to ___ Feet above surface
8. RECORD OF TEST: Date April 1 1965 Yield 110 Gallons per minute
   Static water level before pumping 17 Feet below surface
   Pumping level 195 feet below surface after 8 hours pumping
   Drawdown 178 Feet Specific Capacity ___ Gals. per min. per ft. of drawdown
   How Pumped Turbine How measured Orific
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Mfrs. Name Deming
   Capacity 110 G.P.M. How Driven Electric H.P. 20 R.P.M. 1750
   Depth of Pump in well 200 Feet Depth of Footpiece in well ten Feet
   Depth of Air Line in well 200 Feet Type of Meter on Pump no Size ___ Inches
10. USED FOR Plant production AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily }
11. QUALITY OF WATER ___ Sample: Yes x No. ___
    Taste no Odor no Color clear Temp. 54 °F
12. LOG 17 hard pan ,383 red rock Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date April 10 1965

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22730
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner U.T.C. CORP.
Address 200 GREGG ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-4
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A-77
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/6/90
Regulatory Program Requiring Well ECRA Case I.D. # 85864
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.C. HART Tele. # 212-447-1480

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☑ flush mounted
Finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	13	6	PVC .020
Tail Piece				
Gravel Pack	2	13		#1
Annular Seal/Grout	6"	2'		BENTONITE
Method of Grouting	POUR			

Static water level after drilling 4.2 ft.
Water level was measured using TAPE
Well was developed for 2 hours at 1 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method H.S.A
Drilling Fluid NONE Type of Rig GUS PECK
Name of Driller MARK McGINNS
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1295
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-11' Red silt
11-13 Weath Rock

Certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 11-26-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22731
Atlas Sheet Coordinates 26 : 03 : 567

OWNER IDENTIFICATION - Owner U.T.C. CORP.
Address 200 GREGG ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBS S
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-77
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/6/90
Regulatory Program Requiring Well MONITORING ECRA Case I.D. # 85864
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.C. HART Tele. # 212-447-1480

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 12 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	6	020 PVC
Tail Piece				
Gravel Pack	2	14		#1
Annular Seal/Grout	6"	2		BENTONITE
Method of Grouting	POUR			

Static water level after drilling 4.9 ft.
Water level was measured using TAPE
Well was developed for 2 hours at 5 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☑ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method H.S.A.
Drilling Fluid NONE Type of Rig CME 75 Truck
Name of Driller MARK Mc GINNS
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6"	Black Top + Rocks
6" 12	Red silt + stone
12-14	Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 11-26-96

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16429-9.
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. HMW 8-A SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/20/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 103 feet

5. CASING: Type Steel Diameter 6 inches Length 22' (set 23) feet

6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. Horsepower _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Donald Grahamer Jr.

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 3-A Coordinate No. 26.03.5.37 Permit No. 2616428-1
Date Drilled Start 06/21 - Finish 06/22/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Air, water to core Sampling Method Cuttings, core
Hole Diameter 0 - 29'= 10", 29' - 103'= 6" Total Depth 103'
Casing: Type Steel Diameter 6" Length 28' (set 29)
Screen: Type Slot Diameter Length
Gravel Pack Size Casing Seal Portland, Bentonite
Static Water Level 2' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				0' - 1' Asphalt & gravel
				1' - 3' Gray/brown silty clay
				3' - 9' Gray c/f sand tr. silt
				9' - 20' Red/brown silty f/sand some c/f gravel tr. cobbles
				20' - 22' Weathered sandstone
				22' - 103' Sandstone
10'				40 - 45 GPM Core NX 23' -28'
20'				
30'				
40'				

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16430-2
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. HMW 4 SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/21/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 11 inches Bottom 11 inches TOTAL DEPTH 13.5 feet

5. CASING: Type PVC Diameter 4 inches Length 4 feet

6. SCREEN: Type PVC Size of Opening .010 Diameter 4 inches Length 9 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____

   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc. D-389

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 8-A Coordinate No. 26.03.5.37 Permit No. 2616429-9
Date Drilled Start-6/14, Finish-6/20/89 County Bergen Use Rock monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Air, water to core Sampling Method Cuttings, core
Hole Diameter 0 - 23', 10" 23' - 103', 6" Total Depth 103'
Casing: Type Steel Diameter 6" Length 22' (set 23)
Screen: Type Slot Diameter Length
Gravel Pack Size Casing Seal Portland, Bentonite
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				0' - 1' Asphalt - gravel
				1' - 13' Red/brown silty f/sand, some c/f gravel, tr. cobbles
				13'- 18' weathered sandstone
				18'- 103' sandstone
				Core NX 18' - 103'
				25 - 30 GPM
10'				
20'				
30'				
40'				

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16431-1
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. HMW 5 SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/12/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 11 inches Bottom 11 inches TOTAL DEPTH 12 feet

5. CASING: Type PVC Diameter 4 inches Length 6 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 4 inches Length 8 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 3 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY _____

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 4 Coordinate No. 26.03.5.37 Permit No. 2616430-2
Date Drilled 06/21/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Auger Sampling Method Split spoon
Hole Diameter 11" Total Depth 13.5'
Casing: Type PVC Diameter Length 4'
Screen: Type PVC Slot .010 Diameter 4" Length 9'
Gravel Pack Size Morie #2 Casing Seal Portland, Bentonite
Static Water Level 1' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
1' - 3'	1	8-16-17-12
3' - 5'	2	7-15-15-23
5' - 7'	3	7-6-11-28
7' - 9'	4	28-17-31-38
9' -11'	5	15-21-27-28
13'	6	100/0"

Well Design

0' - 2'	Grout	
2' - 3.5'	Pellets	
3.5' - 13.5'	Gravel	
4.5' - 13.5'	Screen	
13.5'	Set Well	

Identification of Soils / Remarks

0' - 1'	Asphalt & gravel
1' - 2'	Gray silty clay
2' - 8'	Gray m/f sand, little silt
8' - 8.5'	Gray c/f sand
8.5' - 9'	Gray c/f sand & gravel, little silt
9' - 13.5'	Red/brown f/sand, some c/f gravel, little silt, tr. cobbles & boulders (Possible rock at 13.5')

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16432-9
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. HMW 6 SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/13/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 11 inches Bottom 11 inches TOTAL DEPTH 16.5 feet

5. CASING: Type PVC Diameter 4 inches Length 8.5 feet

6. SCREEN: Type PVC Size of Opening .010 Diameter 4 inches Length 10 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches. Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 11.5 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Size of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc. D-393

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 5 Coordinate No. 26.03.5.37 Permit No. 2616431-1
Date Drilled 06/12/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Auger Sampling Method Split spoon
Hole Diameter 11" Total Depth 12'
Casing: Type PVC Diameter 4" Length 6'
Screen: Type PVC Slot .020 Diameter 4" Length 8'
Gravel Pack Size Morie #2 Casing Seal Portland, Bentonite
Static Water Level 3' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	3-6-9-7
2' - 4'	2	1-1-3-7
4' - 6'	3	11-12-12-13
6' - 8'	4	2-4-5-6
10'-12'	5	14-16-12-10

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-16433-7
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart ADDRESS 530 5th Avenue, New York, NY 10036

   Owner's Well No. HMW 7 SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg Street, Lodi, NJ 07664

3. DATE COMPLETED 6/14/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer Jr. #1212

4. DIAMETER: Top 11 inches Bottom 11 inches TOTAL DEPTH 13 feet

5. CASING: Type PVC Diameter 4 inches Length 7 feet

6. SCREEN: Type PVC Size of Opening .010 Diameter 4 inches Length 8 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level *before pumping* 11.5 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter or Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

Summit Drilling Company, Inc.

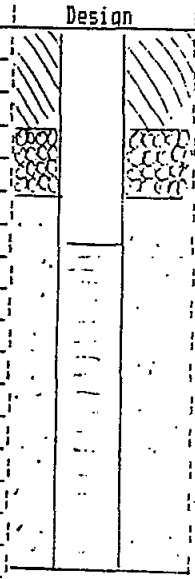
BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 6 Coordinate No. 26.03.5.37 Permit No. 2616432-9
Date Drilled 06/13/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Auger Sampling Method Split spoon
Hole Diameter 11" Total Depth 16.5'
Casing: Type PVC Diameter Length 8.5'
Screen: Type PVC Slot .010 Diameter 4" Length 10'
Gravel Pack Size Morie #2 Casing Seal Portland, Bentonite
Static Water Level 11.5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	1-3-2-5
2' - 4'	2	3-6-50/3"
4' - 6'	3	100/3"
6' - 8'	4	9-22-48-50
8' -10'	5	58-12-41-35
10'-12'	6	10-12-15-14
12'-14'	7	15-24-30-25
14'-16'	8	14-27-38-56
20'		
30'		
40'		

Well Design



0' - 3' Grout
3' - 5' Pellets
5' - 16.5' Gravel
16.5'-16.5' Screen
16.5' Set Well

1 GPM

Identification of Soils / Remarks

0' - 1' Top soil
1' - 16.5' Red/ brown silty f/sand some c/f gravel, tr. cobbles

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-17686-6
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart Assoc. ADDRESS 530 5th Ave., New York, NY 10036

   Owner's Well No. MW 1-B SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg St., Lodi, NJ

3. DATE COMPLETED 09/27/89 DRILLER Summit Drilling Co., Inc., Mark Laura Lic. #1486

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 15 feet

5. CASING: Type PVC Diameter 4 inches Length 5 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 4 inches Length 10 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____

   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

   RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

Summit Drilling Company, Inc.

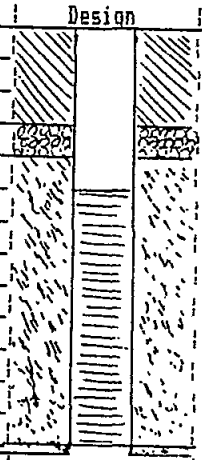
BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 7 Coordinate No. 26.03.5.37 Permit No. 2616433-7
Date Drilled 06/14/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St, Lodi, NJ 07664
Owner Fred C Hart, 530 5th Avenue, New York, NY 10036
Drilling Method Auger Sampling Method Split spoon
Hole Diameter 11" Total Depth 13'
Casing: Type PVC Diameter 4" Length 7'
Screen: Type PVC Slot .010 Diameter 4" Length 8'
Gravel Pack Size Morie #2 Casing Seal Portland, Bentonite
Static Water Level 11.5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	1-1-2-3
2' - 4'	2	3-9-21-30
4' - 6'	3	100/4"
6' - 8'	4	21-24-50/1"
8' -10'	5	100/6"
10'-12'	6	31-50/3"

Well Design



0' - 3'	Grout	
3' - 4'	Pellets	
4' - 13.5'	Gravel	
5' - 13'	Screen	
13'	Set Well	

Drill to 13.5'

Identification of Soils / Remarks

0' - 1'	Top soil
1' - 2'	Brown silty clay
2' - 13.5'	Red/brown silty f/sand, some c/f gravel, tr. cobbles

Possible rock....13.5'

20'

30'

40'

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-17687-4
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart Assoc. ADDRESS 530 5th Ave., New York, NY 10036

   Owner's Well No. HMW 9 SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg St., Lodi, NJ

3. DATE COMPLETED 09/28/89 DRILLER Summit Drilling Co., Inc., Mark Laura Lic. #1486

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 12 feet

5. CASING: Type PVC Diameter 4 inches Length 4 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 4 inches Length 8 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY _____

Summit Drilling Company, Inc.

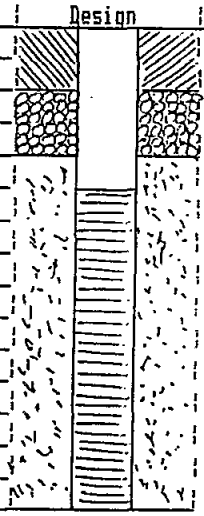
BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. MW 1-B Coordinate No. 26.03.5.37 Permit No. 26-17686-6
Date Drilled 09/27/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St., Lodi, NJ 07664
Owner Fred C. Hart Assoc., 530 5th Ave., New York, NY 10036
Drilling Method Auger Sampling Method split spoon
Hole Diameter 12" Total Depth 15'
Casing: Type PVC Diameter 4" Length 5'
Screen: Type PVC Slot .020 Diameter 4" Length 10'
Gravel Pack Size Morie # 2 Casing Seal Bentonite pellets
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	16-18-23-32
2' - 4'	2	14-65/1"
4' - 6'	3	14-16-26-30
6' - 8'	4	13-18-17-18
8'-10'	5	12-13-16-20
10'-12'	6	10-10-15-22
12'-14'	7	9-16-19-23
20'		
30'		
40'		

Well Design



0' - 2'	GROUT
0' - 5'	SOLID
2' - 4'	PELLETS
4' - 15'	GRAVEL
5' - 15'	SCREEN
15'	SET WELL

Identification of Soils / Remarks

0' - 3.5' Top soil, fill

3.5' - 9.5' Red/brn. silt w/ some f/ sand

9.5' - 14' Red/brn. f/m sand

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-17688-2
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart Assoc. ADDRESS 530 5th Ave., New York, NY 10036

   Owner's Well No. HMW 4A SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg St., Lodi, NJ

3. DATE COMPLETED 10/09/89 DRILLER Summit Drilling Co., Inc., Carmine DeCorso, Jr. Lic. #1210

4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 52 feet

5. CASING: Type Steel Diameter 6 inches Length 24 feet

6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____

   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Carmine DeCorso

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 9 Coordinate No. 26.03.5.37 Permit No. 26-17687-4
Date Drilled 09/28/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St., Lodi, NJ 07654
Owner Fred C. Hart Assoc., 530 5th Ave., New York, NY 10036
Drilling Method Auger Sampling Method split spoon
Hole Diameter 12" Total Depth 12'
Casing: Type PVC Diameter 4" Length 4'
Screen: Type PVC Slot .020 Diameter 4" Length 8'
Gravel Pack Size Morie # 2 Casing Seal Bentonite pellets
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	26-22-24-25
2' - 4'	2	14-8-6-8
4' - 6'	3	3-4-4-7
6' - 8'	4	8-14-26-28
8'-10'	5	14-18-40-28
10'-12'	6	14-16-18-15
12'-14'	7	26-32-65/3"

Well Design

0' - 2'	GROUT	
0' - 4'	SOLID	
2' - 3'	PELLETS	
3' - 12'	GRAVEL	
4' - 8'	SCREEN	
12'	SET WELL	

Identification of Soils / Remarks

0' - 3.5' Top soil; fill

3.5' - 9.5' Red/brn. silt w/ some f/ sand

9.5' - 14' Red/brn. f/m sand

20'

30'

40'

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.37
Permit No. 26-17689-1
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Fred C. Hart Assoc. ADDRESS 530 5th Ave., New York, NY 10036

   Owner's Well No. HMW 9A SURFACE ELEVATION _____

2. LOCATION United Technology, 200 Gregg St., Lodi, NJ

3. DATE COMPLETED 10/05/89 DRILLER Summit Drilling Co., Inc., Carmine DeCorso, Jr. Lic. #1210

4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 42 feet

5. CASING: Type Steel Diameter 6 inches Length _____ feet

6. SCREEN: Type _____ Size of Opening _____ Diameter _____ inches Length _____ feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping _____ feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Carmine DeCorso (Lic. # 1210)

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 4A Coordinate No. 26,03,5,37 Permit No. 26-17688-2
Date Drilled 10/09/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St., Lodi, NJ 07644
Owner Fred C. Hart Assoc., 530 5th Ave., New York, NY 10036
Drilling Method Mud & air rotary Sampling Method no sampling
Hole Diameter 0'-24'=10" , 24'-52'=6" Total Depth 52'
Casing: Type 6" Steel Diameter 6" Length 24'
Screen: Type rock well Slot Diameter Length
Gravel Pack Size Casing Seal 6" casing , grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				GROUT 0' - 1' Asphalt, roadstone
				SOLID 1' - 19' Red/br. c/f sand and c/f gravel, tr.
				PELLETS cobbles & boulders
				GRAVEL
				SCREEN
				SET WELL
				25-30 GPM
10'				10" casing had to be grouted with 6" casing
				10" casing 0' - 18'
				6" casing 0' - 24'
				rock hole 24' - 52'
				19' - 52' Sandstone
20'				
30'				
40'				

TO 52'

#1800

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47999

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ATLANTIC DETROIT DIESEL
Address 180 ROUTE 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 2A Block No. 177
Address 180 ROUTE 17 SOUTH

DATE WELL STARTED 7/14/97
DATE WELL COMPETED 7/14/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 97-1-15-0822-44

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ACTIVE TANK Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1 hours at 2 gpm

Method of development 2" Whaler pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	-0-	3	+4	4" PVC Casing	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	13'	+4	4" PVC Screen	Sch. 40 .010 Slot
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	13'	10"	#1 well gravel	
Grout	0	2'		Neat Cement	76 lbs.
				Bentonite	2 lbs.

Grouting Method placement
Drilling Method 6¼ HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type:

Drilling Fluid N/A Type of Rig D-120

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.

Well Driller (Print) JOHN J CAYLE

Driller's Signature

Registration No. WD-1343 Date 7/14/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-1' Asphalt, Road Stone
1'-8' MF Sand green some silt.
8'-13' MF Sand silty clay Brn.

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

J# 1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48627

Atlas Sheet Coordinates 26 : 08 : 539

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 100 WEST HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-1
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 WEST HUNTER AVE.

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 2 gpm

Method of development Sub. Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	13.5	2	PVC	Sch. 40 .10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3.0	13.5	8	#00 + #1	Morie
Grout	0	3	8	Neat Cement Bentonite	20 lbs. ___ lbs.

Grouting Method Pumped in place
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-7' Black Fill
7-10 Reddish Clay
10-13.5 Soft Shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.
Well Driller (Print) Charles Hitzelberger
Driller's Signature Charles Hitzelberger
Registration No. WP 1066 Date 9/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0491

VR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58376

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
ddress ~~1 FINANCIAL PLAZA MAIL STOP~~
ty ~~HARTFORD~~ State ~~CT~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MPE-1
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p[illegible]e land surface ____ ft.
as steel protective casing installed?
☐ Yes ☒ No
atic water level after drilling 6 ft.
ater level was measured using Tape
ell was developed for 1/2 hours
1-2 gpm
lethod of development

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	161 16/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
ump capacity NA gpm
ump type: NA
rilling Fluid HSA Type of Rig
ealth and Safety Plan submitted? ☐ Yes ☒ No
evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
riller's Signature
egistration No. 0022211 Date 6/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand.

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

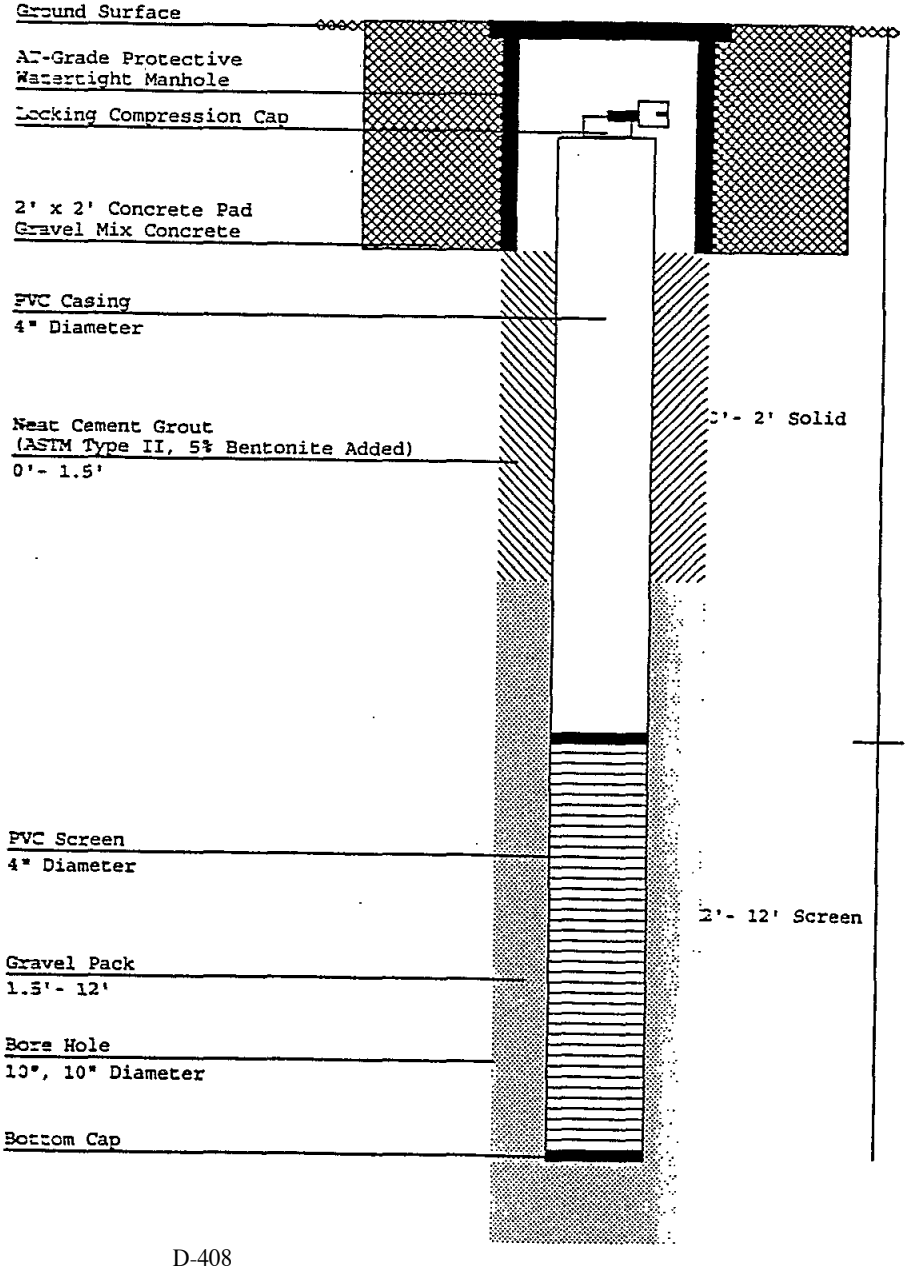
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.c

WELL LOG

WELL: MW7AR DATE DRILLED: 09/06/2000 COORD #1: 26.03.563 PERMIT #1: 26-58541
COORD #2: PERMIT #2:
SITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
OWNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	2'	LENGTH:	DIAMETER:	4"	HOLE DIA: 10", 10"
			LENGTH 1:	10'	TOTAL DEPTH: 12'
SET WELL:	12'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 3'	SLOT SIZE:	.010	
DRILLER:	Rich Gurczynski	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION: M		DEVELOPMENT TIME: 1/2 hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 7'		Fill material.
7'- 12'		Mediium sand some silt.



WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58541

Atlas Sheet Coordinates 26 : 03 563

WNER IDENTIFICATION - Owner KOLITCH, STEVEN
ddress 411 STATE ROUTE 17 SUITE 110
ity HASBROUCK HEIGHTS State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7AR
ounty BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
ddress RT 17 N @ ESSEX ST

YPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 9/ 6/ 00
DATE WELL COMPLETED 9/ 6/ 00
egulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

otal depth drilled 12' ft.
/ell finished to 12' ft.

orehole diameter:
Top 10" in.
Bottom 10" in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick
ip[redacted]e land surface _____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 3' ft.

/ater level was measured using Tape

/ell was developed for 1/2 hour hours
t 1/2 gpm

/lethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

?ump capacity _____ gpm

?ump type: _____

Drilling Fluid _____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

.evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

/Ne[redacted]ller (Print) Rich Gurczynski

Driller's Signature Rich Gurczynski

Registration No. J1570 Date 9/ 14/ 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.c
email: info@summitdrilling.c

WELL LOG

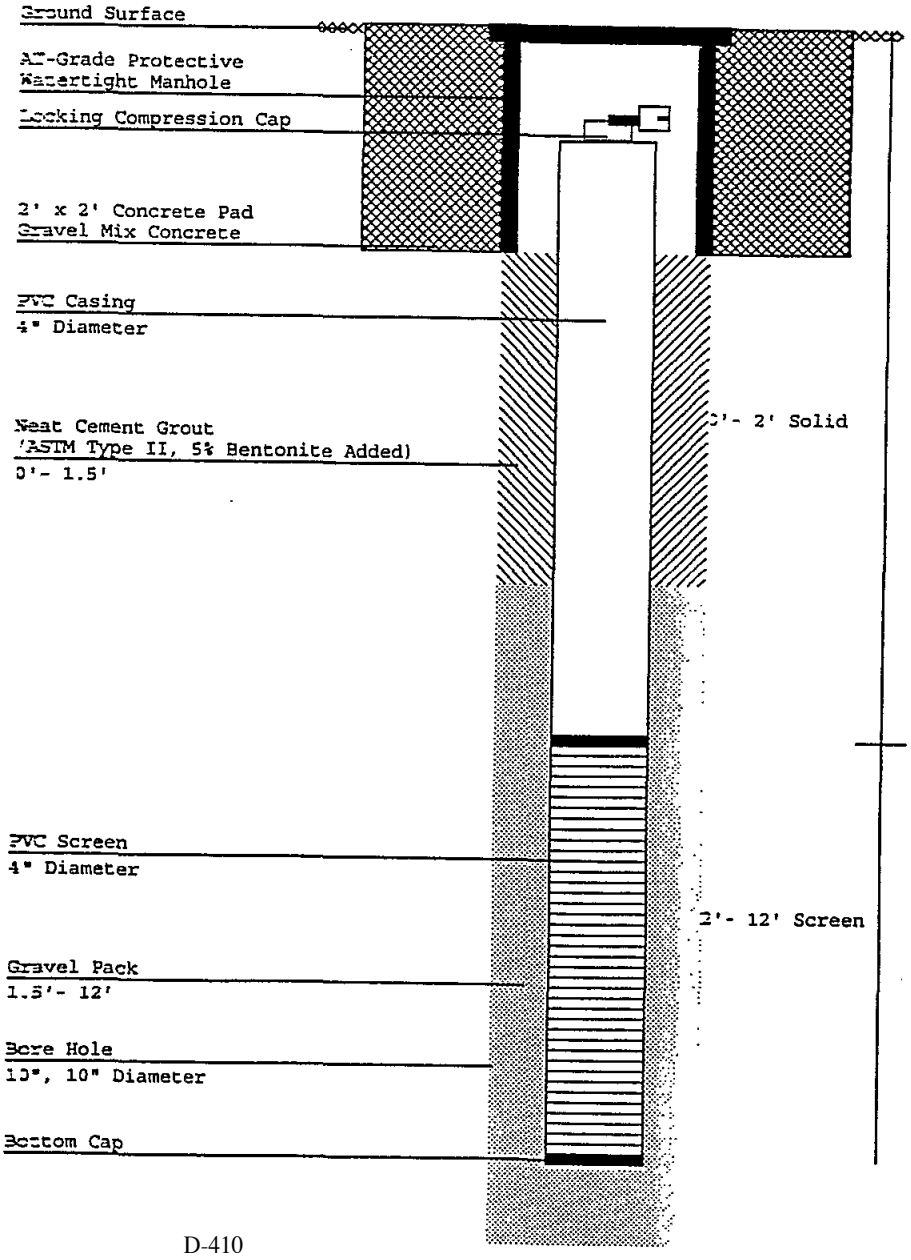
ELL: MW6AR DATE DRILLED: 09/06/2000 COCRD #1: 26.03.563 PERMIT #1: 26-58540
COCRD #2: PERMIT #2:
ITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
WNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

NNER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
IAMETER: 4" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
ENGTH: 2' LENGTH: DIAMETER: 4" HOLE DIA: 10", 10"
LENGTH 1: 10' TOTAL DEPTH: 12'
ET WELL: 12' GAL PER MIN: 1/2 LENGTH 2:
RAVEL PK SZ: Morie #1 STAT H2O LVL: 3' SLOT SIZE: .010
RILLER: Rich Gurczynski DEVELOPMENT METHOD: Pump CASING SEAL: Portland
URFACE COMPLETION: M DEVELOPMENT TIME: 1/2 hour OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

EMARKS / SOILS IDENTIFICATION

'- 7' FIll material.
'- 12' Mediium sand some silt.



VR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58540

Atlas Sheet Coordinates 26 : 03 563

WNER IDENTIFICATION - Owner KOLITCH, STEVEN
ddress 411 STATE ROUTE 17 SUITE 110
ity HASBROUCK HEIGHTS State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6AR
ounty BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
ddress RT 17 N @ ESSEX ST

DATE WELL STARTED 9/ 6/ 00
YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 9/ 6/ 00
egulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

otal depth drilled 12' ft.
'ell finished to 12' ft.

orehole diameter:
Top 10" in.
Bottom 10" in.

'ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p[illegible]e land surface ____ ft.

'as steel protective casing installed?
☐ Yes ☒ No

:atic water level after drilling 3' ft.

'ater level was measured using Tape

'ell was developed for 1/2 hour hours
1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity ____ gpm

'ump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

.evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Ve[illegible]ler (Print) Rich Gurczynski

Driller's Signature Rich Gurczynski

Registration No. J1570 Date 9 / 14 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.c

WELL LOG

ELL: MW5R DATE DRILLED: 09/06/2000 COORD #1: 26.03.563 PERMIT #1: 26-58539
COORD #2: PERMIT #2:
ITE: Former Sunoco, Route 17 at Essex Street, , Lodi, NJ COUNTY: Bergen
WNER: Kolitch, Steven, 411 State Rte 17- Ste 110, , Hasbrouk Heights, NJ 07604 XSTREET: (Susquehanna Railro
USE: Monitoring

NNER CASING: PVC
IAMETER: 4"
ENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 10"
TOTAL DEPTH: 12'

ET WELL: 12'
RAVEL PK SZ: Morie #1
RILLER: Rich Gurczynski
URFACE COMPLETION: M

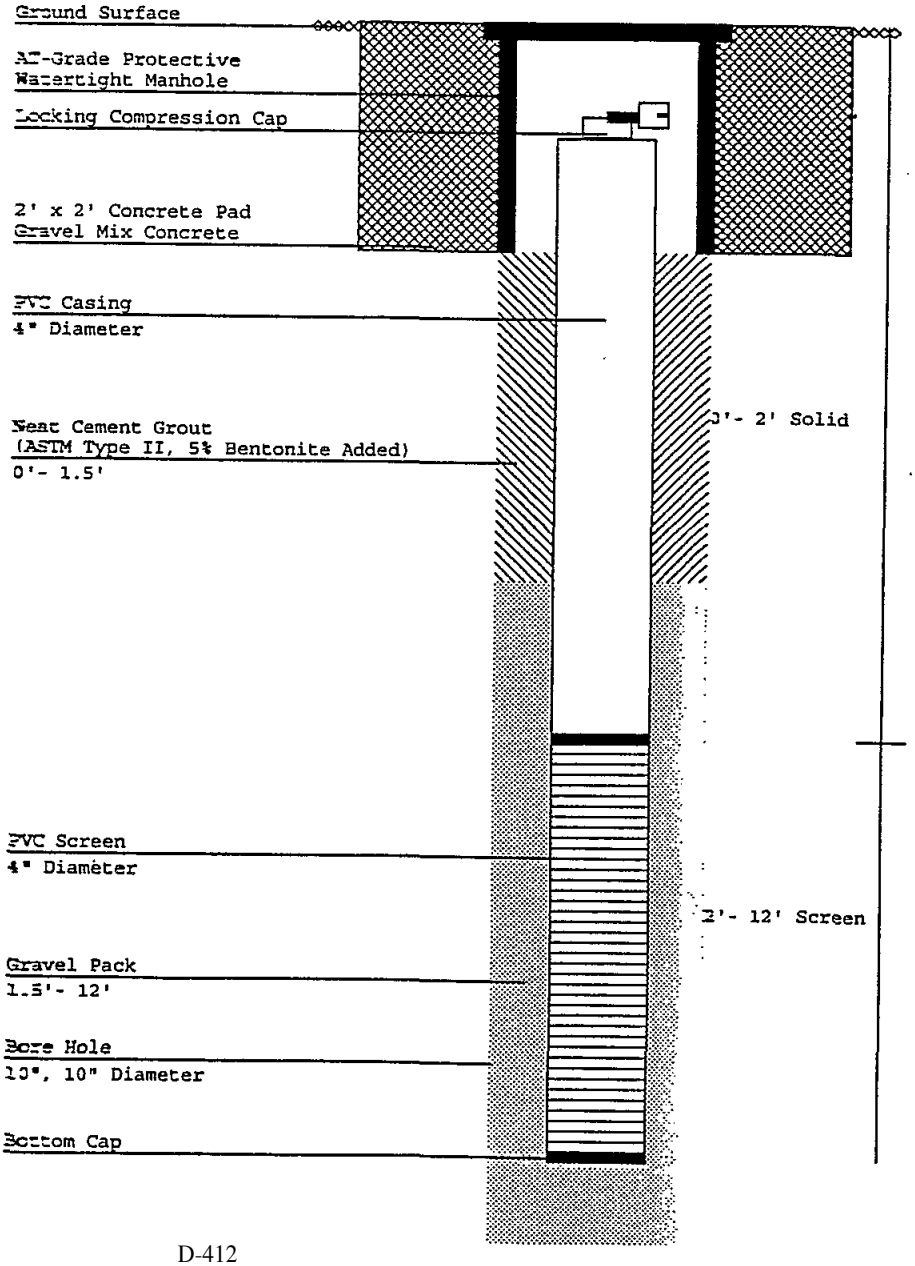
GAL PER MIN: 1/2
STAT H2O LVL: 3'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

EMARKS / SOILS IDENTIFICATION

'- 7' FIll material.
'- 12' Medium sand some silt.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60060

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP516
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW-29R
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 5 / 3 / 01
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. #(609)584 89CC

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Is steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	30455	1.61 #
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.5	11	6	MORIE	#1
Grout	0	.5	6	Neat Cement Bentonite	25 lbs. ____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature [signature]
Registration No. I22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 11 BROWN FINE SILTY SAND WITH GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 56936

Atlas Sheet Coordinates 26 03 561

OWNER IDENTIFICATION - Owner N Y S & W RAILWAY CORP
Address PO BOX 439
City BUTLER State NJ Zip Code 07405

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Site GB-15
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address RT 17 TO MAIN ST

TYPE OF WELL (as per Well Permit Categories) BORING
DATE WELL STARTED 6/20/00
DATE WELL COMPLETED 6/20/00
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Yu & Assoc. Tele. # 1-201-791-007

WELL CONSTRUCTION

Total depth drilled 47 ft.
Well finished to — ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement / Bentonite	___ lbs. / ___ lbs.

Grouting Method Tremie with pump
Drilling Method Mud Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) Michael Bylewas
Driller's Signature Michael Bylewas
Registration No. B0185 Date 9/11/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0 to 3" BLK TOP
3" to 20' Fill wood, cobbles Brwn Sd & gravel
20 to 35' Rd Brn C/F gravel C/F Sd Tr Silt
37 to 39' Boulder
39 to 40' Rd Brn C/F Sd & C/F gravel
40' to 47' Decomp Shale

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60058

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP516
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. IT-36
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
DATE WELL COMPLETED 5 / 3 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1.5	2	304SS	1.61 #
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1.5	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1	12	6	MORIE	#1
Grout	0	1	6	Neat Cement Bentonite	25 lbs. ____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature [signature]
Registration No. J22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 3'	DARK GREY FINE/MEDIUM/COARSE SAND SILTY SAND WITH SMALL GRAVEL
3 - 7'	LIGHT GREY FINE SANDY SILTY CLAY
7 - 9'	LIGHT GREY SILTY FINE SAND
9 - 12'	BROWN SILTY FINE SAND AND GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60059

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP516
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW-32
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 5 / 3 / 01
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	30455	1.61 #
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.5	11	6	MORIE	#1
Grout	0	.5	6	Neat Cement Bentonite	25 lbs. ____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME-75

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature [signature]
Registration No. J 22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-11' BROWN FINE SILTY SAND WITH GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59095

Atlas Sheet Coordinates 26 03 562

OWNER IDENTIFICATION - Owner NJ DEPT. OF TRANSPORTATIO
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15 S
County BERGEN Municipality LODI BORO Lot No. 1.05 Block No. 205.02
Address HANCOCK & INDUSTRIAL ROAD

DATE WELL STARTED 11 / 17 / 00
DATE WELL COMPLETED 11 / 17 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 19 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.8 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	14	19	2	PVC	Sch 40
Gravel Pack	2	24	6	Morie 0	800 lbs
Grout	0	2	6	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 23 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Red Silty Clay
5
10 Red Brown Medium Fine Silty Sand + Gravel
15
20 Weathered Red Shale
24 EOH 24'

COPIES: White - DEP Canary - Driller P-417 Pink - Owner Goldenrod - Health Dept.

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11/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~59096~~

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~562~~

OWNER IDENTIFICATION - Owner ~~NJ DEPT. OF TRANSPORTATIO~~
Address ~~1035 PARKWAY AVE.~~
City ~~TRENTON~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15D
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1.05~~ Block No. ~~205.02~~
Address ~~HANCOCK & INDUSTRIAL ROAD~~

DATE WELL STARTED 11 / 17 / 00
DATE WELL COMPLETED 11 / 21 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 61 ft.
Well finished to 61 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 6 hours at 7 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	36	4	steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	36	61	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	36	8	Neat Cement Bentonite	900 lbs. 45 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Block Top	
	Medium Red Brown	Water 5
10	Silt, Clay, Sand + Gravel w/ Cobbles	
20	↓	
26		
30	Weathered Bedrock	
36	↓	
40	Competent Red Shale	
50	↓	
60		
61	EOH 61	

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 2 / 6 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59049

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner WELLINS, ROBERT
Address 411 ROUTE 17
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 14 D
County BERGEN Municipality LODI BORO Lot No. 2.04 Block No. 205.03
Address 100 W. HUNTER AVENUE

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 29 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 216 6618

WELL CONSTRUCTION

Total depth drilled 52 ft.
Well finished to 52 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	27	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
(Open Hole) or Screen (No. Used)	27	52	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	27	8	Neat Cement Bentonite	650 lbs. 35 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Medium Fine Red Silty
10 Sand & Gravel
16 ↓
20
Red Shale Bedrock
30
40
50
EOH 52'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~59053~~

Atlas Sheet Coordinates 26 03 562

OWNER IDENTIFICATION - Owner ~~WELLINS, ROBERT~~
Address ~~411 ROUTE 17~~
City ~~HASBROUCK HEIGHTS~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14S
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~2.04~~ Block No. ~~205.03~~
Address ~~HANCOCK ST. & INDUSTRIAL~~

DATE WELL STARTED 11/13/00
DATE WELL COMPLETED 11/13/00

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 22 ft.
Well finished to 20 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 5 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	14	20	2	PVC	Sch 40
Gravel Pack	2	22	6	Morie 0	400 lbs
Grout	0	2	6	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
5 Medium Fine Red Silty Sand w/ Gravel + Cobbles
10
15
20 Weathered Rock
22 Red Shale / Sandstone
EOH 22

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1/23/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58404

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C-24
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/18/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1 1/2 hours at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6-10.5' REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature [signature]

Registration No. 0022211 Date 6/21/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58405

Atlas Sheet Coordinates 26 : 03 56

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. A17
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	30455	1.61 16/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6-10.5' REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature
Registration No. 0022211 Date 6 / 21 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58402

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 22
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1 1/2 hours
at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	30455	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6'	LOOSE FILL CONSTRUCTION MATERIAL DEBRIS CONCRETE AND CEMENT CHUNKS
6-10.5'	REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58403

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 23
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/18/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/21/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6'	LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS
6-10.5'	REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58400

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner-please give address. Owner's Well No. C 20
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6 LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT TRUCK'S

6-10.5 REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6 / 21 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58401

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 21
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 10.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#2
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature Norman Crane

Registration No. 0022211 Date 6 / 21 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT TRUCKS

6-10.5 REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58398

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-21
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/27/00
DATE WELL COMPLETED 4/17/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8901

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	304SS	1.61 16/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6/22/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 6' FILL LOOSE CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS

6 - 11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58399

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. C 19
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 18 / 00
DATE WELL COMPLETED 4 / 18 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 10 1/2 ft.
Well finished to 10 1/2 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 1/2 ft.

Water level was measured using

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	304 SS	SCH 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	10.5	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4.5	10.5	6	MORIE	#1
Grout	0	4.5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' FILL BRICK CONSTRUCTION DEBRIS CEMENT AND CONCRETE CHUNKS

6-10.5' REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) NORMAN CRANE
Driller's Signature Norman Crane
Registration No. 0022211 Date 6 / 21 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58396

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. D-16
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12 / 27 / 00
DATE WELL COMPLETED 4 / 17 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Heaith and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 002221 Date 6 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT CHUNKS'

6-11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58397

Atlas Sheet Coordinates 26 . 03 . 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. D-17
County BERGEN Municipality LODI BORO Lot No. ~~1.01~~ Block No. ~~177~~ .01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12 / 27 / 00
Regulatory Program Requiring Well DATE WELL COMPLETED 4 / 17 / 0
Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. #(609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 1617
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE, CEMENT SAND

6-11' REDDISH BROWN SILTY SAND

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22944
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner McLAREN / HART
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 3
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address Tondy Dr. - Lodi, NJ. 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/19/90
Regulatory Program Requiring Well EERA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2"	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2"	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Bent Pellets
Method of Grouting				

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 12 hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine DeCarlo
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCarlo Date 1/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 3 Coordinate No. 26.03.5.37 Permit No. 26-22944
Date Drilled 11/19/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 6" Total Depth 12'
Casing: Type PVC Diameter 2" Length 2'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks
			no grout	GROUT	0' - 12'	red/ brn. clay silt, tr. m/f sand, tr. f/ gravel some small cobbles
			0' - 2'	SOLID		
			.5' - 1'	PELLETS		
			1' - 12'	GRAVEL		
			2' - 12'	SCREEN		
			12'	SET WELL		
				GPM		
				STNDP. OR		
10'			X	MANHOLE		
20'						
30'						
40'						

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22943
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ~~McLAREN / HART~~
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-2
County Bergen Municipality Lot No. 1A Block No. ~~147A~~
Address Trudy Dr. Lodi, NJ. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/19/90
Regulatory Program Requiring Well ~~EDRA~~ Case I.D. # ~~85664~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2	2"	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2"	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Bent Pelets
Method of Grouting	—			

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 1/14/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - [illegible]

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 2 Coordinate No. 26.03.5.37 Permit No. 26-22943
Date Drilled 11/19/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 6" Total Depth 12'
Casing: Type PVC Diameter 2" Length 2'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks
				no grout	GROUT	0' - 12' red/ brn. clay silt, tr. m/f sand, tr. f/ gravel some small cobbles
				0' - 2'	SOLID	
				.5' - 1'	PELLETS	
				1' - 12'	GRAVEL	
				2' - 12'	SCREEN	
				12'	SET WELL	
					GPM	
					STNDP. OR	
				X	MANHOLE	
10'						
20'						
30'						
40'						

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22942
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner McLAREN / HART
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-1
County Bergen Municipality Lot No. 1A Block No. 147A
Address Trudy Drive, Lodi NJ. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Bent. Pelets
Method of Grouting	—			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 2 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine DeCarso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 12.10
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCarso Date 1/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Well D

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WELL LOG

Well No. PZ - 1 Coordinate No. 26.03.5.37 Permit No. 26-22942
Date Drilled 11/19/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 6" Total Depth 12'
Casing: Type PVC Diameter 2" Length 2'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks
				no grout	GROUT	0' - 12' red/ brn. clay silt, tr. m/f sand, tr. f/ gravel some small cobbles
				0' - 2'	SOLID	
				.5' - 1'	PELLETS	
				1' - 12'	GRAVEL	
				2' - 12'	SCREEN	
				12'	SET WELL	
					GPM	
					STNDP. OR	
				X	MANHOLE	
10'						
20'						
30'						
40'						

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22855-6
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner MCLAREN/HART
Address 470 PARK AVE. SO. 11TH FL.
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10C
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address Taub Dr. Lodi, N.J. 07644

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/20/90
Regulatory Program Requiring Well ECRA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 215 ft.
Well finished to 215 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	200	2	PVC.
Outer Casing (Not Protective Casing)	0 0	19 170	8 6	Steel Steel
Screen (Note slot size)	200	215	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	195	215	6	Morie #2
Annular Seal/Grout	190 C	195 190	6 6	Bag Pellets Portland
Method of Grouting	Tremie			

Static water level after drilling 20 ft.
Water level was measured using tape
Well was developed for 1 hours at 5 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air + Mud Rotary
Drilling Fluid Bentonite Type of Rig Gus Tech
Name of Driller Carmine De Cresce
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 12/0
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Cresce Date 5/21/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Municipal

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WELL LOG

Well No. HMW - 10C Coordinate No. 26.03.537 Permit No. 26-22855-6
Date Drilled 11/20/90 County Bergen Use recovery
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park AVenue South, 11th Floor, New York, NY
Drilling Method Air Rotary Sampling Method none
Hole Diameter 0' - 19' = 12", 19' - 180' = 8", 180' - 215' = 6" Total Depth 215'
Casing: Type see below Diameter 2", 6", 8" Length see below
Screen: Type PVC Slot .020 Diameter 2" Length 200' - 215'
Gravel Pack Size #2 Casing Seal pellets & grout
Static Water Level 20' Geologic Formation bedrock

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
100'			
200'			
300'			
400'			

0' - 195'	GROUT	
0' - 200'	SOLID	
190' - 195'	PELLETS	
195' - 215'	GRAVEL	
200' - 215'	SCREEN	
	OPEN HOLE	
215'	SET WELL	
	GPM	
	STNDP.	
X	MANHOLE	
	VAULT	
the above info. is for 2" PVC		

Identification of Soils / Remarks

0' - 14' red/brn. clay silt, tr. m/f sand, tr. f/ gravel & cobbles
14' - 19' silt, stone
This hole later to be truned into triple cased well (we pumped last gallon of grout, casing broke at joint 155'. Redrill at later date to 215')
12" hole 0' - 19'
8" steel grouted to 19'
8" hole in rock to 180'
4" PVC set at 180'
PVC broke at joint while grouting
Drilled out PVC to 180'
Attempt to set 6" steel to 180', could only set to 170' - grouted
Drilled 6" hole to 215' & set 2" well 215'

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD 26 22854

Well Permit No. ~~25~~ - ~~22854~~
Atlas Sheet Coordinates ~~25~~ : ~~15~~ : ~~537~~ 26 03 537

OWNER IDENTIFICATION - Owner MCLAREN/HART
Address 470 PARK AVE. SO. 11TH FL.
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address Trudy Dr Lodi N.J. 07644

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/12/90
Regulatory Program Requiring Well ECRA Case I.D. # 95664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	21.5	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	21.5	40		open hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0.5	21.5	-	Portland Grout
Method of Grouting	Tremie			

Static water level after drilling 27 ft.
Water level was measured using tape
Well was developed for 1 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 12110
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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WELL LOG

Well No. MW - 13A Coordinate No. 26.03.5.37 Permit No. 26-22854-8
Date Drilled 11/12/90 County Bergen Use monitor
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary w/ 10" casing Sampling Method from cuttings
Hole Diameter 0' - 21.5' = 10" Total Depth 40'
Casing: Type steel Diameter 6" Length 21' set 21.5'
Screen: Type open hole Slot .020 Diameter 6" Length 18.5'
Gravel Pack Size Morie #2 Casing Seal pellets & grout
Static Water Level ____ Geologic Formation ____

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

		Identification of Soils / Remarks	
0' - 21.5'	GROUT	0' - 1'	top soil
6" - 21.5'	SOLID PELLETS	1' - 12'	red/brn. silty f/ sand, some c/f gravel
	GRAVEL		
21.5' - 40'	OPEN HOLE		
40'	SET WELL		
	GPM		
	STNDP. OR		
X	MANHOLE		
		12' - 15'	weathered red sandstone
		15' - 21.5'	sandstone
		21' - 40'	sandstone

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

26- 22853-0

Well Permit No. 26 - 22853-0
Atlas Sheet Coordinates 26 : 03 : 537
26 03 537

OWNER IDENTIFICATION - Owner MCLAREN/HART
Address 470 PARK AVE. SO. 11TH FL.
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-1
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address UTC/BASF Trudy Dr. Lodi, N.J. 07644

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/16/90
Regulatory Program Requiring Well MONITORING ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 100 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	17	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	17	100	6	Open hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	17		Portland Grout
Method of Grouting	Tremie			

Static water level after drilling 13 ft.
Water level was measured using Tape
Well was developed for 2 hours at 5 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 1/14/91

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/14/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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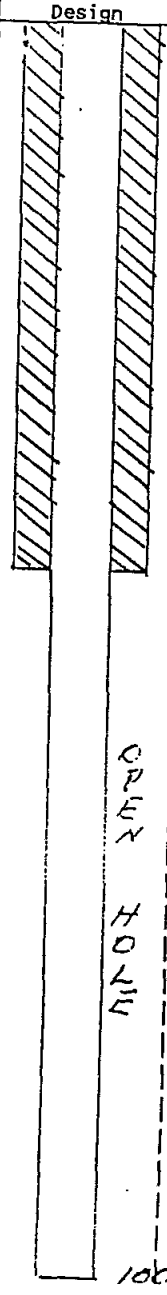
WELL LOG

Well No. HMW - 1 Coordinate No. 26.03.5.37 Permit No. 26-22853-0
Date Drilled 11/16/90 County Bergen Use recovery
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 0' - 17' = 10" 17' - 100' = 6" Total Depth 100'
Casing: Type 6" steel Diameter 6" Length 17'
Screen: Type rock well open hole Slot ____ Diameter ____ Length ____
Gravel Pack Size ____ Casing Seal casing & grout
Static Water Level 18' Geologic Formation bedrock

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



Identification of Soils / Remarks	
0' - 17'	red/ brn. clay silt, tr. m/f sand, tr. f/ gravel some small cobbles
	This hole was hot break threw on respirator

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22950
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ~~McLAREN / HART~~
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-9
County Bergen Municipality Lot No. 1A Block No. ~~147A~~
Address Truly Dr. Lodi NJ. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85664~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1/2	2	—	Bag Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 12110
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/5/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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WELL LOG

Well No. PZ - 9 Coordinate No. 26.03.5.37 Permit No. 26-22950
Date Drilled 11/21/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method augers Sampling Method none
Hole Diameter 6" Total Depth 13.5'
Casing: Type PVC Diameter 2" Length 3.5'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets & grout
Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		

Well Design

0' - 1'	GROUT
0' - 3.5'	SOLID
1' - 2'	PELLETS
2' - 13.5'	GRAVEL
3.5' -13.5'	SCREEN
13.5'	SET WELL
.5	GPM
	STNDP. OR
X	MANHOLE

Identification of Soils / Remarks

0' - 13.5' red/ brn. sand, silt

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22949
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ~~McLAREN / HART~~
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-5
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address Teddy Dr. Lodi N.J. 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85664~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1/0	2/1	—	Bent. Pellets / Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Mech.
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/8/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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FAX: (908) 356-1009

WELL LOG

Well No. PZ - 8 Coordinate No. 26.03.5.37 Permit No. 26-22949
Date Drilled 11/21/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method augers Sampling Method none
Hole Diameter 6" Total Depth 13.5'
Casing: Type PVC Diameter 2" Length 3.5'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets & grout
Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design		Identification of Soils / Remarks
			0' - 1'	GROUT	0' - 13.5' red/ brn. sand, silt
			0' - 3.5'	SOLID	
			1' - 2'	PELLETS	
			2' - 13.5'	GRAVEL	
			3.5' -13.5'	SCREEN	
			13.5'	SET WELL	
			.5	GPM	
				STNDP. OR	
			X	MANHOLE	
10'					
20'					
30'					
(0'					

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22948
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner McLAREN / HART
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-7
County Bergen Municipality Lot No. 1A Block No. 147A
Address Tidy Pk. - Lodi N.J. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/90
Regulatory Program Requiring Well ECRA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1/2	2	—	Bent Pellets Portland grout
Method of Grouting	GRAVITY			

Static water level after drilling 10 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 1/5/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Well Permit

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 7 Coordinate No. 26.03.5.37 Permit No. 26-22948
Date Drilled 11/21/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method augers Sampling Method none
Hole Diameter 6" Total Depth 13.5'
Casing: Type PVC Diameter 2" Length 3.5'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets & grout
Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		

Well Design

0' - 1'	GROUT	
0' - 3.5'	SOLID	
1' - 2'	PELLETS	
2' - 13.5'	GRAVEL	
3.5' -13.5'	SCREEN	
13.5'	SET WELL	
.5	GPM	
	STNDP. OR	
X	MANHOLE	

Identification of Soils / Remarks

0' - 13.5' red/ brn. sand, silt

FORM 87-10M

26-03-563 D

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2171
Application No. _____
County _____

WELL RECORD

1. OWNER Lodi Shopping Center, Inc. ADDRESS Essex St., Route 17, Lodi, N.J.
   Owner's Well No. 2 SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Modell's Shoppers World-Route 17, Lodi, N.J.
3. DATE COMPLETED 4/15/60 DRILLER Burrows Well Drilling Co., Inc.
4. DIAMETER: top 8 Inches Botton 8 Inches TOTAL DEPTH 300 Feet
5. CASING: Type Steel Diameter 8 Inches Length 22 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range { Top _____ Feet Bottom _____ Feet } Geologic Formation _____
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date 4/11/60 Yield 290 Gallons per minute
   Static water level before pumping 2 Feet below surface
   Pumping level 56 feet below surface after 24 hours pumping
   Drawdown 54 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Turbine pump How measured orifice
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type no pump on this well Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet _____ Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet _____ Depth of Meter on Pump _____
10. USED FOR Diffusion well AMOUNT Average _____ Gallons Daily
    Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. x
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG over Are samples available No
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Drillings
14. DATA OBTAINED BY Burrows Well Drilling Co., Inc. Date 4/20/60

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 1804

26-03.563

Form 87-5M

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 26-1356
Application No. _____
County _____

1. OWNER Lodi Shopping Center ADDRESS _____
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet
   (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED _____ DRILLER _____
4. DIAMETER: Top _____ Inches Bottom _____ Inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet Geologic Formation _____
   Bottom _____ Feet
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ Feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Capacity _____ Gallons per minute
   How Driven _____ Horse Power _____ R.P.M. _____
   Depth of pump in well _____ Feet Depth of Foot piece _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily
    Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ DATE _____

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 083 1803

26-03-563 [9]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Red #

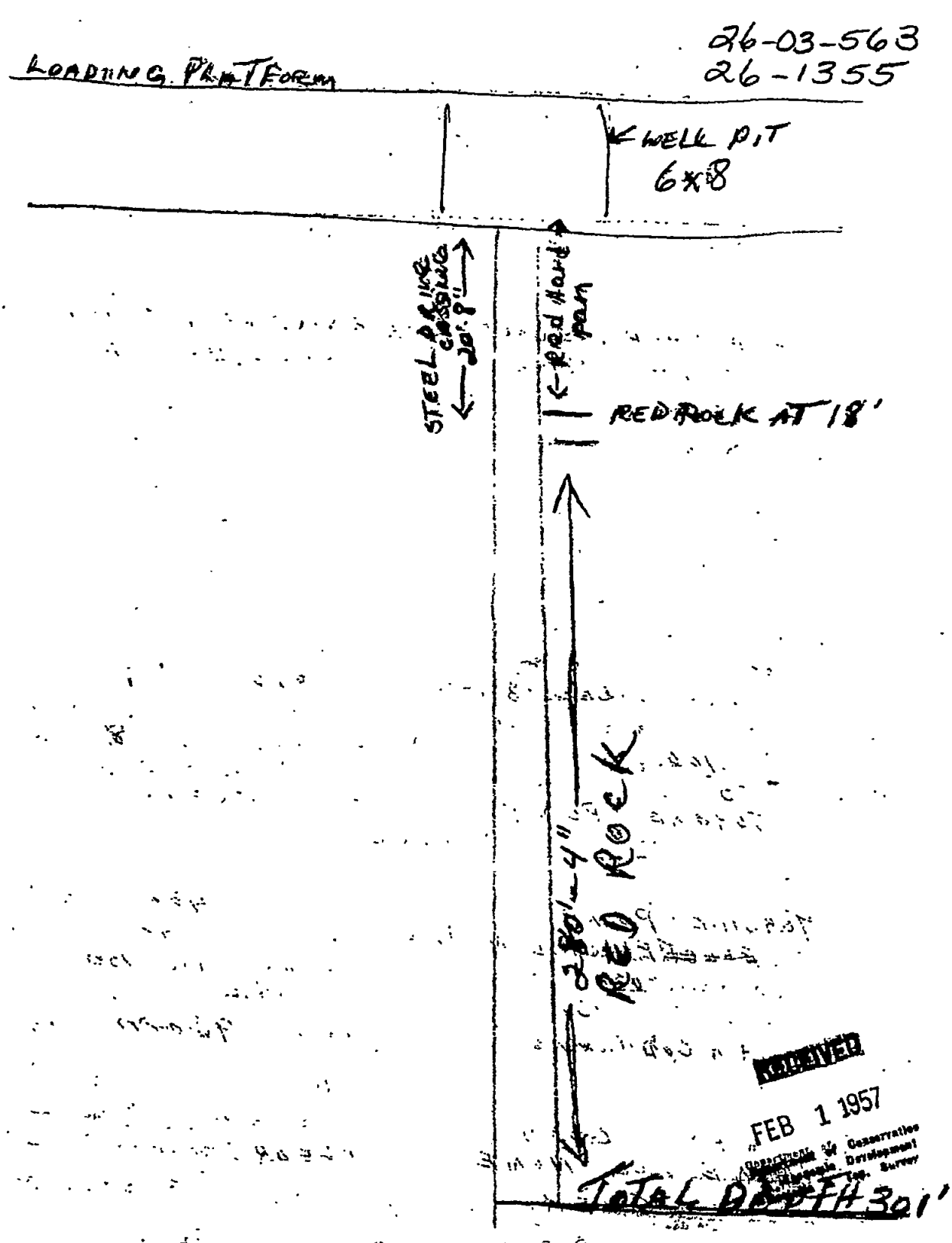
Permit No. 26-1355
Application No. _____
County _____

1. OWNER LODI SHOPPING CENTER INC ADDRESS ESSEX ST & ROUT 17
Owner's Well No. FIRST SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION LODI SHOPPING CENTER INC ESSEX ST & ROUT 17 LODI N.J.
3. DATE COMPLETED DEC 11 1956 DRILLER BURROWS WELL DRILLING CO
4. DIAMETER: Top 8 Inches Bottom 8 Inches TOTAL DEPTH 301 Feet
5. CASING: Type STEEL DRIVE Diameter 8 Inches Length 10'-8" Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet Bottom _____ Feet . Geologic Formation RED HARD PAN TO ROCK
Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date DEC 13 1956 Yield 350 Gallons per minute
Static water level before pumping 10 Feet below surface
Pumping level 100 feet below surface after 8 hours pumping
Drawdown 76 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped TURBINE PUMP How measured ORFICE GAUGE
Observed effect on nearby wells NONE
9. PERMANENT PUMPING EQUIPMENT:
Type TURBINE PUMP Capacity 400 Gallons per minute
How Driven ~~ELECTRIC~~ ELECTRIC MOTOR Horse Power 40 R.P.M. 1760
Depth of pump in well 130 Feet Depth of Foot piece in well 150 Feet
Depth of Air Line in well 13 Feet Type of Meter on Pump _____
10. USED FOR AIR CONDITIONING AMOUNT { Average 96000 Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER GOOD Sample: Yes _____ No. ✓
Taste NONE Odor NONE Color CLEAR Temperature 52° °F
12. LOG OVER (Give details on back of sheet or on separate sheet) Are samples available? No
13. SOURCE OF DATA DRILLERS
14. DATA OBTAINED BY BORROWS WELL DRILLING CO DATE DEC 13 1956

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1806

26-03-563
26-1355



DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22747
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner MARC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/15/90
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-06-06-0606
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

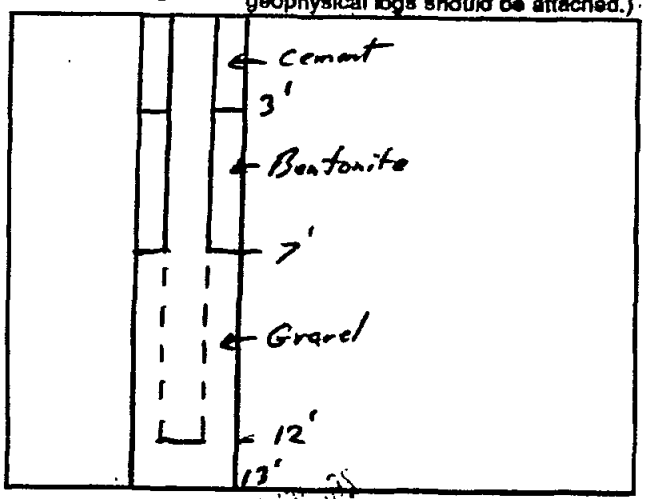
Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	12'	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	
Screen (Note slot size)	7'	12'	4	.010 PVC
Tail Piece	—	—	—	
Gravel Pack	7'	12'	8"	#2 Gravel
Annular Seal/Grout	3'	7'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3' 10" ft.
Water level was measured using Electric line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagan Date 12/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1760

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22748
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 3
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/15/90
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-06-06-0606
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

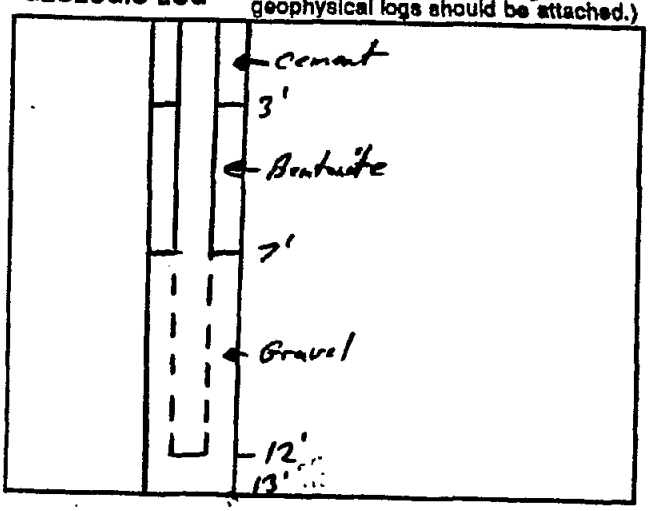
WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	12	4"	S 40 PVC
Outer Casing (Not Protective Casing)	-	-	-	
Screen (Note slot size)	7'	12'	4"	.010 PVC
Tail Piece	-	-	-	
Gravel Pack	7	12	8"	#2 Gravel
Annular Seal/Grout	3"	7'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3'10" ft.
Water level was measured using Electric line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagen Date 9/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

Formerly Permitted as #2622730

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27942
Atlas Sheet Coordinates 26 :03 :562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-4
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/6/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	13	6	020 PVC
Tail Piece				
Gravel Pack	2	13		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4.2 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H. S. A
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Mark McGuinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No: 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-11' Red Silt
11-13 Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

Formerly Permitted as # 26-22733

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27943
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-11
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/6/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	4	PVC 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	14		#2 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 8.7 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method H.S.A.
Drilling Fluid Type of Rig CME 75
Name of Driller Charles Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Tar & Rocks
6"-12 Red silt & Rocks
12-14 Weather Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr. Date 2-11-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27944
Atlas Sheet Coordinates 26 :03 :562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-12
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/8/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	4	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	4	0.020 PVC
Tail Piece	—	—	—	—
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4.7 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H.S.A.
Drilling Fluid ____ Type of Rig CME 75
Name of Driller Charles Kramer
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1060
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Trap Rock - Black Top
6"-11.5 Red Shale
11.5-14 Weather Zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L Kramer Jr Date 2-11-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1798

DWR-138 M
6/89

Formerly Permitted as #26-22729

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27945
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~UNITED TECHNOLOGIES BUILDING~~
City ~~HARTFORD~~ State ~~CT~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-2
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/5/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	6	0.020 PVC
Tail Piece	—	—	—	—
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	0	2		Grout
Method of Grouting	Pour			

Static water level after drilling 5.25 ft.
Water level was measured using Tape
Well was developed for 2 hours at 1 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method H.S.A.
Drilling Fluid None Type of Rig Gus Pech
Name of Driller Mark McGuinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG.- CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-12' Red silt & stone
12'-14' Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L Kramer Jr. Date 2-11-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

NOTE: FORMERLY PERMIT NO. 26-22740

MONITORING WELL RECORD

Well Permit No. 26 28045
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11 / 9 / 90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLAREN/HART F. BRUCKSCHAFF Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 37 ft.
Well finished to 37 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	—	—	—	—
Outer Casing (Not Protective Casing)	+2	17.2	8	SCH-40 STEEL
Screen (Note slot size)	—	—	—	—
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	—	—	—	—
Method of Grouting	PRESSURE GROUTED			

Static water level after drilling 7.5 ft.
Water level was measured using TAPE
Well was developed for 1.5 hours at 6 gpm
Method of development AIR
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM T-450
Name of Driller H. L. REXRODE
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494 H. LEONARD REXRODE, JR.
Name of Drilling Company ~~AQUIFER DRILLING & TESTING, INC.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14B

0-10' MODERATE BROWN, SILTY SAND, SOME CLAY, SOME ROCK FRAGMENTS.

10-13' MODERATE BROWN, SILTY SAND AND CLAY GRADING INTO WEATHERED SHALE @ 12.5'

13'-37' REDDISH BROWN, FINE SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 1/07/91

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1800

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

NOTE: FORMERLY PERMIT NO. 26-22741

MONITORING WELL RECORD

Well Permit No. 26 - 28046
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BLDG.
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11 / 20 / 90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McGREEN HART / F. BRECKER HAFF Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 95 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	85	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	+2	18	8	SCH. 40 STEEL
Screen (Note slot size)	85	95	4	SCH. 40 PVC. 020
Tail Piece	—	—	—	—
Gravel Pack	82	100	8	NO. 2 MORIE SAND
Annular Seal/Grout	0	82	8	CEMENT / BENTONITE
Method of Grouting	TREMIE PIPE PRESSURE GROUTED			

Static water level after drilling 7.5 ft.
Water level was measured using Tape
Well was developed for .5 hours at 7 gpm
Method of development AIR
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig Schramm T450
Name of Driller H.L. REXRODE, JR.
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14A

0 - 14.5 MODERATE BROWN, SILTY SAND, SOME CLAY, TRACE TO SOME ROCK FRAGMENTS.

14.5 - 16.8 - WEATHERED INCOMPETENT SHALE

16.8 - 100. SHALE - REDDISH BROWN, FISSILE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 1/07/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27123
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 1
County Municipality LODI BORO Lot No. 28 Block No. 1114
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/21/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	10'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	4'	10'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'6" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4' - 12" GRAVEL FILL
12" - 5' RED SANDY CLAY FORMATION
5' - 10' RED SANDY W/SOME GRAVEL

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

COPIES White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WELREC 085 1762

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27124
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner NABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/21/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	12'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	4'	12'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'10" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" TOP SOIL
6" - 6' RED SANDY CLAY FORMATION
6'-12' RED SANDY SOIL W/SOME LARGE GRAVEL & WATER

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1762

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD 26-22594

Well Permit No. 22594
Atlas Sheet Coordinates 26 : 03 : 644

OWNER IDENTIFICATION - Owner KAY-S HOMES CENTER
Address ROUTE 17
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W.1
County Bergen Municipality LODI BORO Lot No. 5-6 Block No. 194B
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 29 / 91
Regulatory Program Requiring Well MONITORING UST Case I.D.# 90-10-01-1004
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 13' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	grade	3'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3'	13'	4"	same 20 slot
Tail Piece				
Gravel Pack	2'	13'	6"	#2 Morie
Annular Seal/Grout	grade	2'	6"	cement
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 2 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3'	Sand, F-M, brown silty
3-5'	Sand, F, lt.brown
5-7'	Clay, gray, silt
7-13'	Sand, C, brown olive red

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Date 4/29/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2107

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 22595
Atlas Sheet Coordinates 26 : 03 : 844

OWNER IDENTIFICATION - Owner RAY'S HOMES CENTER
Address ROUTE 17
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W.2
County Bergen Municipality LODI BORO Lot No. Block 194B
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/29/91
Regulatory Program Requiring Well UST Case I.D. 90-10-01-1004
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman COmpanies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	grade	2'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	same 20slot
Tail Piece				
Gravel Pack	1'	12'	6"	#2 Morie
Annular Seal/Grout	grade	1'	6"	Cement
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 2 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3'	Sand, F-M, brown silty
3-5'	Sand, F, lt.brown
5-6'	Sand, F-M, red brown w/silt
6-7'	Clay, gray, organic silt
7-12'	Sand, C, red brown green

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 4/29/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 22596
Atlas Sheet Coordinates 03 : 644 :

OWNER IDENTIFICATION - Owner KAY-S HOMES CENTER
Address ROUTE 17
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W. 3
County Bergen Municipality LODI BORO Lot No. 5-6 Block No. 194B
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 29 / 91
Regulatory Program Requiring Well MONITORING Case I.D. # 90-10-01-1004
UST
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	grade	2'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	same 20slot
Tail Piece				
Gravel Pack	1'	12'	6"	#2 Morie
Annular Seal/Grout	grade	1'	6"	cement
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 2 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-5' Sand, F-M, brown silty
5-6' Sand, F-M, red brown, silt
6-7' Clay, gray, silt
7-12' Sand, C, red brown green

12' 2 DW

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 4/29/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22740
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGY CORP.~~
Address 200 GREG STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14B
County Municipality LODI BORO Lot No. 1-A Block No. 147A-
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/9/90
Regulatory Program Requiring Well RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLAREN HART / F. BEUCKENHOFF Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 37 ft.
Well finished to 37 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	—	—	—	—
Outer Casing (Not Protective Casing)	+2	17.2	8	SCH. 40. STEEL
Screen (Note slot size)	—	—	—	—
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	—	—	—	—
Method of Grouting	Pressure Grouted			

Static water level after drilling 7.5 ft.
Water level was measured using Tape
Well was developed for .5 hours at 6 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM AIR-ROTARY
Name of Driller H. L. REXRODE JR.
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14B
0 - 10' Moderate Brown, silty sand, some clay, some rock fragments,
10' - 13' Moderate Brown, silty sand and clay grading into weathered shale at 12.5'
13' + 37' Reddish Brown, fissile shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 12/11/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WEI REC 085 1757

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 28 - 22741
Atlas Sheet Coordinates 28 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address 200 GREG STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14A
County Municipality Lot No. Block No.
Address LODI BORO 1-A 147A

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/20/90
Regulatory Program Requiring Well MONITORING RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren Hart / F. Brackelieff Tele. #(212) 447-1480

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 95 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	85	4	SCH 40 PVC
Outer Casing (Not Protective Casing)	+2	18	8	SCH 40 STEEL
Screen (Note slot size)	85	95	4	SCH 40 PVC .020
Tail Piece	—	—	—	—
Gravel Pack	82	100	8	#2 Morie Sand
Annular Seal/Grout	0.0	82	8	Cement / bentonite
Method of Grouting	Pressure grouted with tremie pipe			

Static water level after drilling 7.5 ft.
Water level was measured using Tape
Well was developed for .5 hours at 7 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig AIR ROTARY Schramm
Name of Driller H.L. REXRODE, JR.
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14A
0-14.5' Moist brown silty sand, some clay, trace to some rock fragments
14.5'-16' Weathered incompetent shale
16-100' Shale - reddish brown to grey.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 12/11/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1758

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22746
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner NABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 1
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well MONITORING UST Case I.D. # 90-08-08-0806
Date well completed 11/15/90
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

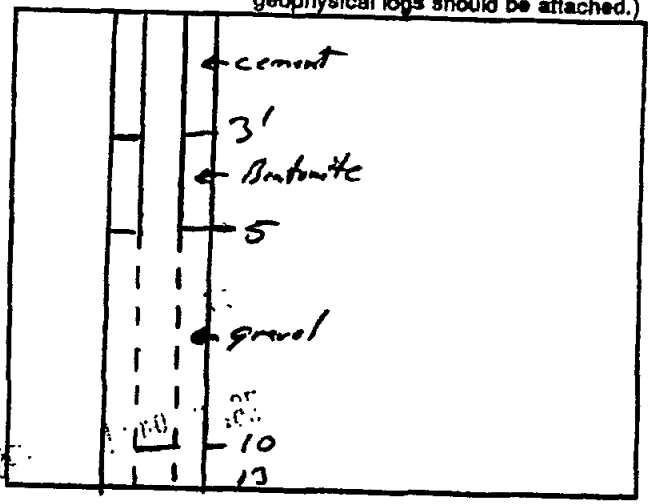
WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	10	4"	Sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	
Screen (Note slot size)	5'	10'	4"	.010 PVC
Tail Piece	—	—	—	
Gravel Pack	5'	10'	8"	#2 Gravel
Annular Seal/Grout	3'	5'	8"	Bentonite
Method of Grouting	Gravity			

Static water level after drilling 3'10" ft.
Water level was measured using Electric line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig Air Rotary
Name of Driller Bob Hagan
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1246
Name of Drilling Company ANCO PUMP & TANK

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert Hagan Date 9/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

formerly Permit # 26-22731

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27941
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB-5
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St Lodi, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/6/90
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	6	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	6	020 PVC
Tail Piece				
Gravel Pack	2	14		#1 Morie
Annular Seal/Grout	6"	2		Bentonite
Method of Grouting	Pour			

Static water level after drilling 4 9 ft.
Water level was measured using Tape
Well was developed for 2 hours at 0.5 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HSA
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company EASTERN DRLG. - CHARLES KRAMER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top + Rocks
6"-12' Red silt and stone
12-14 Weathered Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Charles L. Kramer Jr Date 2-11-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1295

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr
West Columbia, SC 29169
Telephone (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 3 Coordinate No. 26.03.562 Permit No. 26-27744

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 14'

Casing: Type PVC Diameter 2" Length 4'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 2'	GROUT	0' - 14'	Red brn. m/f sand, tr. clay silt, tr. f/gravel some small cobbles
0' - 4'	SOLID		
2' - 3'	PELLETS		
3' - 14'	GRAVEL		
4' - 14'	SCREEN		
	OPEN HOLE		
14'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

WELREC 085 1794

DWR-138-M
6/89

Formerly Permitted as # 26-22947

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 ~~27735~~ 44
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-3
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Piezometer Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	—	Ben Pellets Portland Grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES · White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1702

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 4 Coordinate No. 26.03.562 Permit No. 26-27743

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 12'

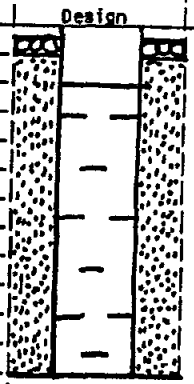
Casing: Type PVC Diameter 2" Length 2'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



no grout	GROUT
0' - 2'	SOLID
.5'- 1'	PELLETS
1' - 12'	GRAVEL
2' - 12'	SCREEN
	OPEN HOLE
12'	SET WELL
	GPM
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE

Identification of Soils / Remarks

0' - 12' Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles

WELREC 085 1792

DWR-138 M
6/89

Formerly Permitted as #26-22942

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27784 43

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP

Address UNITED TECHNOLOGIES BUILDING

City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-4

County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~

Address 208 Gregg Street

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Piezometer Date well completed 11/19/90

Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~M~~ NA Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.

Well finished to 12 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Pellets
Method of Grouting	[illegible]			N/A

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for ½ hours at 2 gpm

Method of development Air Lift

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Method Air Rotary

Drilling Fluid NA Type of Rig Gus Pech

Name of Driller Carmine De Corso

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D (C) B A

N.J. License No. 1210

Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1701

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone (803) 739-9853
Toll Free: (800) 242-6648
FAX. (803) 796-9698

WELL LOG

Well No. PZ - 9 Coordinate No. 26.03.562 Permit No. 26-27742

Date Drilled 11/21/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Auger Sampling Method

Hole Diameter 6" Total Depth 13.5'

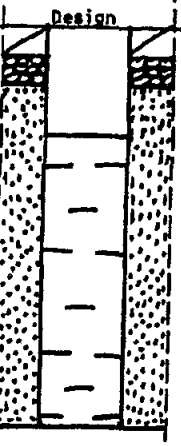
Casing: Type PVC Diameter 2" Length 3.5'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets and grout

Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT
0' - 3.5'	SOLID
1' - 2'	PELLETS
2' - 13.5'	GRAVEL
3.5'-13.5'	SCREEN
	OPEN HOLE
.5	SET WELL
	GPM
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE

Identification of Soils / Remarks

0' - 13.5' Red/brn. sand silt

WELREC 085 1790

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Note: Formerly permitted as 26-22950

Well Permit No. 26 - 27742
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-9
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A 17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/91
Regulatory Program Requiring Well RCRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1 / 0	2 / 1	=	Ben. Pellets / Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using tape
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ *gpm*
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid N A Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1789

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone. (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone. (803) 739-9853
Toll Free. (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 8 Coordinate No. 26.03.562 Permit No. 26-27741

Date Drilled 11/21/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Auger Sampling Method

Hole Diameter 6" Total Depth 13.5'

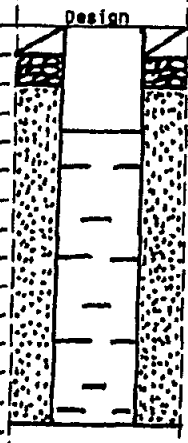
Casing: Type PVC Diameter 2" Length 3.5'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets and grout

Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT
0' - 3.5'	SOLID
1' - 2'	PELLETS
2' - 13.5'	GRAVEL
3.5'-13.5'	SCREEN
	OPEN HOLE
.5	SET WELL
	GPN
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE

Identification of Soils / Remarks

0' - 13.5' Red/brn. sand silt

WELREC 085 1788

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Formerly Permitted #26-22949

Well Permit No. 26 - 27741
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-8
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1 / 0	2 / 1	=	Ben Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using TAPE
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210 SUMMIT WELL DRILLING
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92.

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1787

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

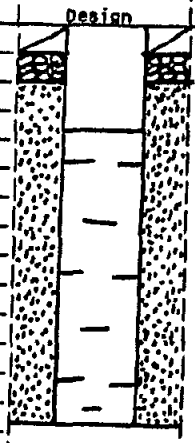
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone. (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 7 Coordinate No. 26.03.562 Permit No. 26-27740
Date Drilled 11/21/90 County Bergen Use Piezometer
Site 200 Gregg Street, Lodi, New Jersey 07666, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Auger Sampling Method
Hole Diameter 6" Total Depth 13.5'
Casing: Type PVC Diameter 2" Length 3.5'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets and grout
Static Water Level 10' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT
0' - 3.5'	SOLID
1' - 2'	PELLETS
2' - 13.5'	GRAVEL
3.5'-13.5'	SCREEN
	OPEN HOLE
.5	SET WELL
	GPM
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	HONE

Identification of Soils / Remarks

0' - 13.5' Red/brn. sand silt

WELREC 085 1786

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Formerly perm. Hedas # 26-22948

Well Permit No. 26 - 27740
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-7
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/21/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	—	Morie #2
Annular Seal/Grout	1 0	2 1	=	Ben Pellets Portland grout
Method of Grouting				

Static water level after drilling 10 ft. —
Water level was measured using TAPE
Well was developed for ½ hours at 1 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller ____
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeRosa Date 2-14-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
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West Columbia, SC 29169
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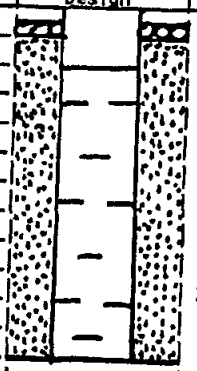
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 6
Coordinate No. 26.03.562
Permit No. 26-27739
Date Drilled 11/19/90
County Bergen
Use Piezometer
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air
Sampling Method
Hole Diameter 6"
Casing: Type PVC Diameter 2" Total Depth 12'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie # 2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



no grout	GROUT
0' - 2'	SOLID
.5' - 1'	PELLETS
1' - 12'	GRAVEL
2' - 12'	SCREEN
	OPEN HOLE
12'	SET WELL
	GPM
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE

Identification of Soils / Remarks

0' - 12' Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles

WELREC 085 170 1

DWR-138 M
6/89

Formerly Permitted as 26-22944

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27739
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-6
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ~~RCRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Ben Pellets
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid N A Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 5 Coordinate No. 26.03.562 Permit No. 26-27738

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 12'

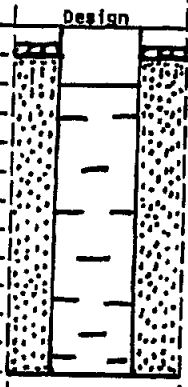
Casing: Type PVC Diameter 2" Length 2'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



GROUT
SOLID
PELLETS
GRAVEL
SCREEN
OPEN HOLE
SET WELL
GPM
STNDP.
MANHOLE
VAULT
GRIPPER
.NONE

Identification of Soils / Remarks

0' - 12' Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles

WELREC 085 1782

DWR-138 M
6/89

Formerly Permitted as 2622943

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 .27738
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-5
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ~~RCRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	12	2	PVC - 0.020
Tail Piece	—	—	—	—
Gravel Pack	1	12	—	Morie #2
Annular Seal/Grout	0.5	1	—	Ben Pellets
Method of Grouting		—		

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Peck
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1781

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free. (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. P2 - 2 Coordinate No. 26.03.562 Permit No. 26-27737

Date Drilled 11/19/90 County Bergen Use Piezometer

Site 200 Gregg Street, Lodi, New Jersey 07644, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07644

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 6" Total Depth 14'

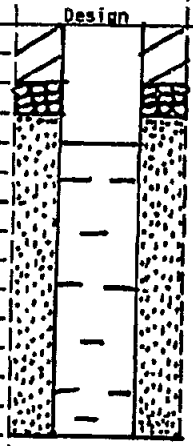
Casing: Type PVC Diameter 2" Length 4'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal Pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 2'	GROUT
0' - 4'	SOLID
2' - 3'	PELLETS
3' - 14'	GRAVEL
4' - 14'	SCREEN
	OPEN HOLE
14'	SET WELL
	GPM
	STNDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE

Identification of Soils / Remarks

0' - 14' Red/brn. m/f sand, tr. clay silt, tr. f/gravel some small cobbles

WELREC 085 1780

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

formerly Permitted as #26-22946

Well Permit No. 26 .27737
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-2
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	—	Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1779

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. PZ - 1 Coordinate No. 26.03.562 Permit No. 26-27736
Date Drilled 11/19/90 County Bergen Use Piezometer
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air Sampling Method
Hole Diameter 6" Total Depth 14'
Casing: Type PVC Diameter 2" Length 4'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 2' GROUT
0' - 4' SOLID
2' - 3' PELLETS
3' - 14' GRAVEL
4' - 14' SCREEN
OPEN HOLE
14' SET WELL
GPM
STNDP.
X MANHOLE
VAULT
GRIPPER
NONE

Identification of Soils / Remarks

0' - 14' Red/brn. m/f sand, tr. clay silt, tr. f/gravel some small cobbles

WELREC 085 1778

DWR-138 M
6/89

N[illegible]: Formerly Permitted as # 26-22945

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27736
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-1
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg Street

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren/Hart Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	P.V.C.
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC-0.020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	= =	Pellets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for ½ hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Gravel Pack Size Morie #2 [illegible] D-487

WELREC085 1777

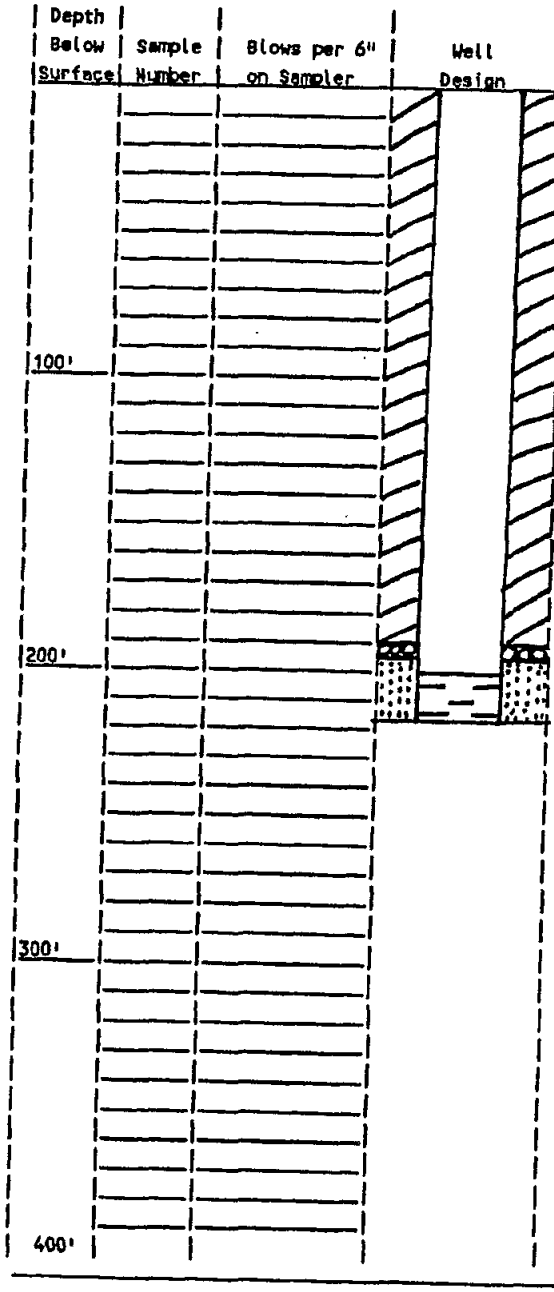
Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 10C
Coordinate No. 26,03,562
Permit No. 26-27735
Date Drilled 11/20/90
County Bergen
Use Recovery
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air
Sampling Method cuttings
Hole Diameter 0'-19'=12", 19'-180'=8", 180'-215'=6"
Total Depth 215'
Casing: Type see below
Diameter 2", 6", 8"
Length see below
Screen: Type PVC
Slot .020
Diameter 2"
Length 200'-215'
Gravel Pack Size Morie # 2
Casing Seal pellets & portland
Static Water Level 20'
Geologic Formation



0' - 195'	GROUT	
0' - 200'	SOLID	
190'-195'	PELLETS	
195'-215'	GRAVEL	
200'-215'	SCREEN	
	OPEN HOLE	
215'	SET WELL	
	GPM	
	STNDP.	
X	MANHOLE	
	VAULT	
	GRIPPER	
	NONE	

The above info is for 2" PVC

Identification of Soils / Remarks

0' - 14' Red/brn. clay silt, tr. m/f sand, tr. f/gravel & cobbles
14' - 19' silt, stone
This hole later to be turned into triple cased well (we pumped last gallon of grout, casing broke at joint 155'. Redrill at later date to 215')
12" hole 0' - 19'
8" steel grouted to 19'
8" hole in rock to 180'
4" PVC set at 180'
PVC broke at joint while grouting
Drilled out PVC to 180'
Attempt to set 6" steel to 180', could only set to 170' - grouted
Drilled 6" hole to 215' & set 2" well 215'

WELREC 085 1776

DWR-138 M
6/89

formerly Permitted as 26 22455-6

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27735
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10C
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address ~~200 Gregg St~~ Trudy Drive

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/20/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 215 ft.
Well finished to 215 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	200	2	PVC
Outer Casing (Not Protective Casing)	0	19	8	Steel
	0	170	6	Steel
Screen (Note slot size)	200	215	2	PVC -0.020
Tail Piece	—	—	—	—
Gravel Pack	195	215	6	Morie #2
Annular Seal/Grout	190	195	6	Ben Pellets
	0	190	6	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 20 ft.
Water level was measured using Tape
Well was developed for 1 hours at 5 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air + Mud Rotary
Drilling Fluid Bentonite Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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Bridgewater, NJ 08807
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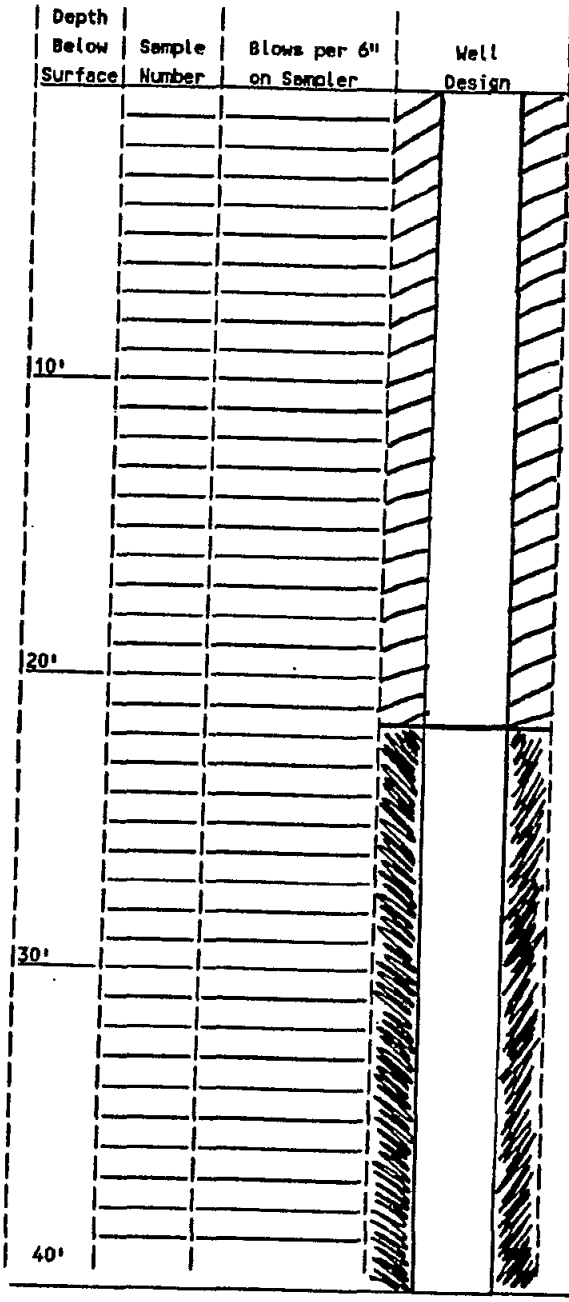
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 13A Coordinate No. 26.03.562 Permit No. 26-27734
Date Drilled 11/12/90 County Bergen Use Monitor
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air Sampling Method from cuttings
Hole Diameter 0'-21.5'=10" Total Depth 40'
Casing: Type Steel Diameter 6" Length 21' set 21.5'
Screen: Type Open Hole Slot .020 Diameter 6" Length 18.5'
Gravel Pack Size Morie #2 Casing Seal Pellets and grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 21.5'	GROUT	0' - 1'	Top soil
6" - 21.5'	SOLID PELLETS	1' - 12'	Red/brn. silty f/sand, some c/f gravel
	GRAVEL		
	SCREEN		
21.5'-40'	OPEN HOLE		
40'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER	12' - 15'	Weathered red sandstone
	NONE		
		15' - 21.5'	Sandstone
		21' - 40'	Sandstone

Well Design / Identification of Soils / Remarks

WELREC 085 1774

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Note!
Formerly permitted as 26-228548

Well Permit No. 26 - 27734
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address Trudy Drive adjacent to 200 Gregg St, Lodi,

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/12/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N A Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	21.5	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	21.5	40		Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0.5	21.5	—	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 27 ft.
Water level was measured using Tape
Well was developed for 1 hours at 1 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine DeCorso.
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
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2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 13B
Coordinate No. 26,03,562
Permit No. 26-27733
Date Drilled 11/16/90
County Bergen
Use Recovery
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method Air
Sampling Method
Hole Diameter 0'-17'=10" 17'-100'=6"
Total Depth 100'
Casing: Type Steel 6" Diameter 6" Length 17'
Screen: Type Rock well open hole Slot Diameter Length
Gravel Pack Size
Casing Seal casing & grout
Static Water Level 18'
Geologic Formation bedrock

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 17'	GROUT	0' - 17'	Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles
0' - 17'	SOLID		
	PELLETS		This hole was hot break threw on respirator
	GRAVEL		
17' - 100'	SCREEN		
	OPEN HOLE		
100'	SET WELL		
	GPM		
	STHDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

Identification of Soils / Remarks

WELREC 085 1772

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD 26-27733

Well Permit No. 26 - 27733
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-13B
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 280 Gregg Street

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/20/90
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLaren/Hart Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 100 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	17	6	Steel
Outer Casing (Not Protective Casing)	N/A	N/A		N/A
Screen (Note slot size)	17	100	6	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	N/A	N/A	—	N/A
Annular Seal/Grout	0	17		Portland grout
Method of Grouting	Tremie			

Static water level after drilling 18 ft.
Water level was measured using tape
Well was developed for 2 hours at 5 gpm
Method of development Air lift

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig CME 75
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 1-9-92

COPIES. White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1771

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. BR - 1 Coordinate No. 26.03.562 Permit No. 26-27732

Date Drilled 11/16/90 County Bergen Use Recovery

Site 200 Gregg Street, Lodi, New Jersey 07664, former Irmont Corp., 200 Gregg Street, Lodi, New Jersey 07664

Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101

Drilling Method Air Sampling Method

Hole Diameter 0'-17'=10", 17'-100'=6" Total Depth 100'

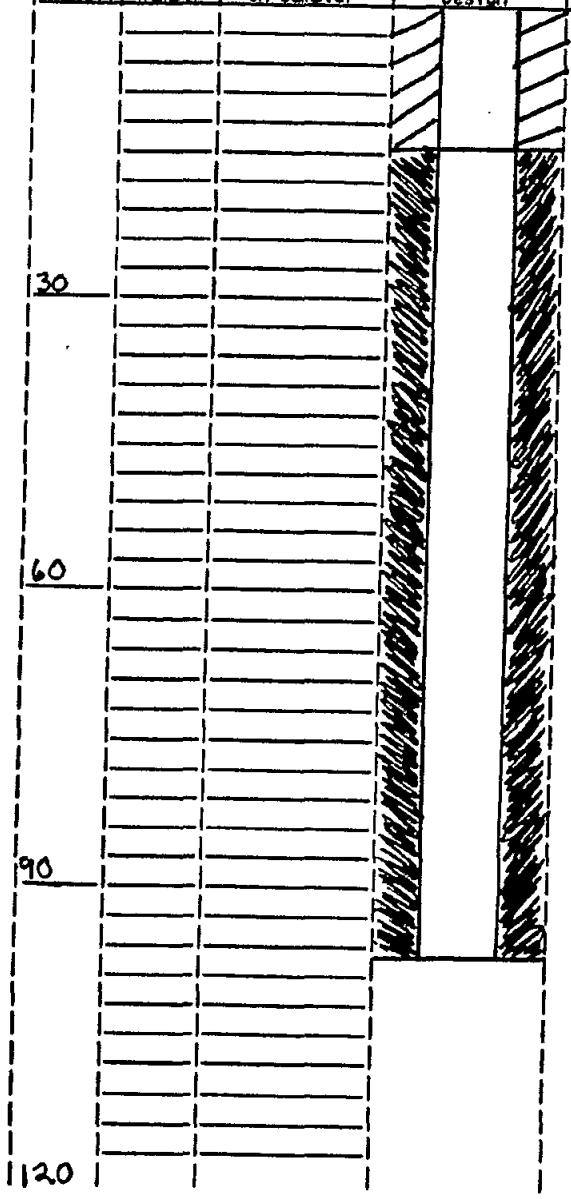
Casing: Type 6" steel Diameter 6" Length 17'

Screen: Type rock well open hole Slot Diameter Length

Gravel Pack Size Casing Seal casing & grout

Static Water Level 18' Geologic Formation Bedrock

Depth Below Surface	Sample Number	Blows per 6" on Sampler
30		
60		
90		
120		



0' - 17'	GROUT	0' - 17'	Red brn. clay silt, tr. m/f sand, tr. f/gravel some small cobbles
0' - 17'	SOLID PELLETS		This hole was hot break threw on respirator
	GRAVEL		
17'- 100'	SCREEN		
	OPEN HOLE		
100'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		

Identification of Soils / Remarks

WELREC 085 1770

DWR 138 M
/89

Originally Permit # 46-23364-9

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27732
Atlas Sheet Coordinates 26 : 09 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR-1
County Bergen Municipality ~~LODI-BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address 200 Gregg St

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/16/90
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 100 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	17	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	—	—	—	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	17	—	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 18 ft.
Water level was measured using Tape
Well was developed for 2 hours at 5 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid N A Type of Rig GUS Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Logs.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCorso Date 2-14-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1760

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone. (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. HMW - 10B
Coordinate No. 26.03.562
Permit No. 26-27731
Date Drilled 06/06/91
County Bergen
Use Monitor
Site 200 Gregg Street, Lodi, New Jersey 07664, former Inmont Corp., 200 Gregg Street, Lodi, New Jersey 07664
Owner United Technologies Corporation, United Technologies Building, Hartford, Connecticut, 06101
Drilling Method
Sampling Method cuttings
Hole Diameter 6" rock well, 2" PVC well
Total Depth 97.5'
Casing: Type PVC
Diameter 2"
Length 86.5' - 1.2"
Screen: Type PVC
Slot .020
Diameter 2"
Length 10'
Gravel Pack Size Morie # 2
Casing Seal pellets & portland
Static Water Level 12'
Geologic Formation Brunswick

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
			1'6"-82'6" GROUT	2" well installed
			1'2"-87'6" SOLID	6" rock monitor well
			82'6"-85'6" PELLETS	steel 15'
			85'6"-100' GRAVEL	depth 100'
			87'6"-97'6" SCREEN	Note: Installed 2" well inside 6" rock well
			OPEN HOLE	
			97'6" SET WELL	
			GPM	
			STNDP.	
100'			MANHOLE	
			VAULT	
			GRIPPER	
			NONE	
200'				
300'				
400'				

WELREC 085 1768

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Note: Formerly Permitted as 5399 #26-2~~5399~~

Well Permit No. 26 - 27731
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10B
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address ~~200 Gregg Street~~ Pearl Court Area Adjacent to 200 Gregg St, Lod., NJ 07644
TYPE OF WELL (as per Well Permit Categories) ~~REPLACE MONITOR~~ Date well completed ~~11/16/90~~ 6/6/91
Regulatory Program Requiring Well ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~McLaren Hart~~ NA Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to ~~100~~ 97'6" ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ~~X~~ above grade
X flush mounted

If finished above grade, casing height (stick up) above land surface ~~NA~~ ft.

Was steel protective casing installed? X Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	~~+2~~ 1'2"	87'6"	X 2	~~Steel~~ PVC
Outer Casing (Not Protective Casing)	0.5	15	6	Steel
Screen (Note slot size)	87'6"	~~100~~ 97'6"	to 2	PVC - 0.020 ~~Open hole~~
Tail Piece	—	—	—	—
Gravel Pack	85'6"	100	6	Morie #2
Annular Seal/Grout	~~82'6"~~ 1'2"	~~85'6"~~ 87'6"	6	Portland Cement Bentonite Pellets
Method of Grouting	Tremie			

Static water level after drilling ~~12~~ ft.
Water level was measured using Tape
Well was developed for ~~NA~~ 2 hours at ~~—~~ gpm
Method of development ~~Air Lift~~

Was permanent pumping equipment installed? ☐ Yes X No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Tech
Name of Driller Carmine DeCosa
Health and Safety Plan submitted? X Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Carmine DeCosa Date 1/9/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27127
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner NABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 5
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/13/91
Regulatory Program Requiring Well UST Case I.D. # 90-06-06-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	7'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	7'	14'	4"	.020 P.V.C.
Tail Piece	X	X	X	
Gravel Pack	6'	14'	8"	#2 GRAVEL
Annular Seal/Grout	5'	6'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3'2" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4" BLACK TOP
4"-8" GRAVEL FILL
8"-7' RED SANDY CLAY FORMATION
7'-14' RED SANDY CLAY W/SOME GRAVEL & WATER.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELL REC 085 1766

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27126
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner HABC SPORTS
Address RT. 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 4
County Municipality LODI BORO Lot No. 28 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/22/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-08-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	5'	15'	4"	.020 P.V.C.
Tail Piece	X	X	X	
Gravel Pack	4'	15'	8"	#2 GRAVEL
Annular Seal/Grout	3'	4'	8"	BENTOINTE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3' 10" ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
NJ License No 735
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4" - 8" GRAVEL FILL
8" - 6' RED SANDY CLAY FORMATION
6' - 15' RED SANDY W/ SOME CLAY & GRAVEL WATER 10' - 15'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27125
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner WABC SPORTS
Address RT 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 3
County Municipality LODI BORO Lot No. 2B Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/22/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-06-0806
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface X ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6'	4"	SC 40 P.V.C.
Outer Casing (Not Protective Casing)	X	X	X	
Screen (Note slot size)	6'	13'	4"	.020 P.V.C.
Tail Piece	X	X		
Gravel Pack	5'	13'	8"	#2 GRAVEL
Annular Seal/Grout	4'	5'	8"	BENTONITE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 4 ft.
Water level was measured using ELECT LINE
Well was developed for 1/2 hours at 1 gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity X gpm
Pump type: X
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM
Name of Driller MARK HIPP
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 733
Name of Drilling Company COOPER & HIPP WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" BLACK TOP
4" - 12" GRAVEL FILL
12" - 7' RED SANDY CLAY FORMATION
7' - 13' RED SANDY FORMATION W/ SOME GRAVE & WATER

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Hipp Date 12/18/91

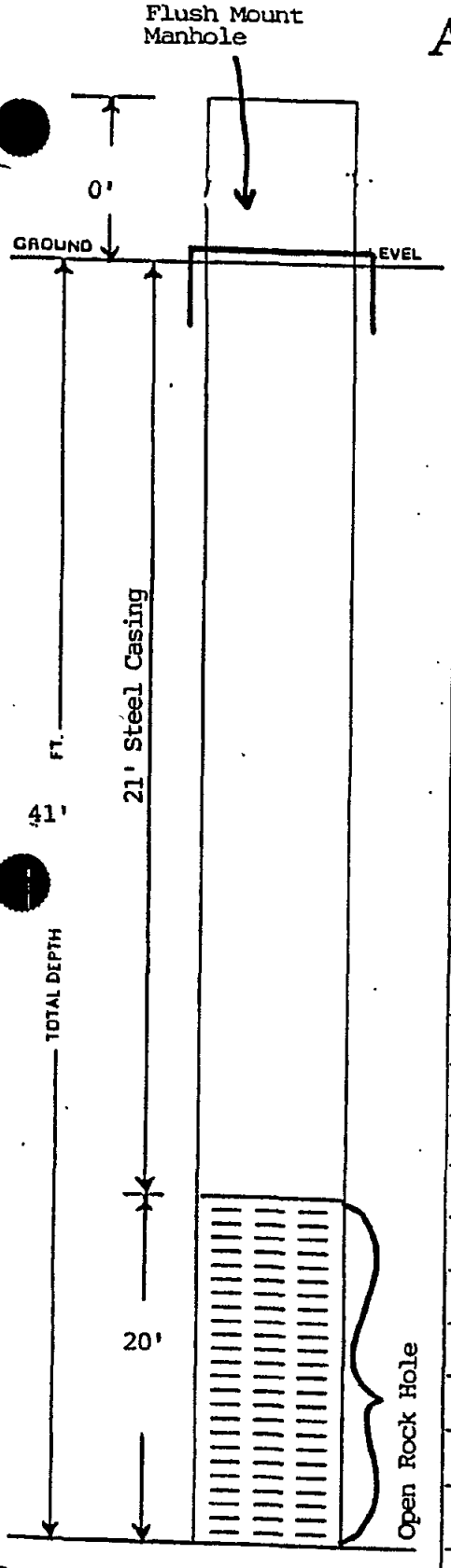
COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1764

A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562



WELL LOG	FEET FROM GROUND SURFACE 0 to 41'	NAME OF OWNER United Technologies Corp.
Sand & Brownish red	0-11.5'	Location BASF Plant Lodi, NJ
stones		Well No. MW-22A
Weathered Rock	11.5'-16'	State Permit 2632649
Competent rock	16'-41'	Job No. 23642
		Test Pumped (Hrs.) 1/2
		Capacity (GPM) 3
		Static Level 3'
		Pumping Level NA
		Datum Ground
		Specific Capacity NA
		Diameter of Casing 6"
		Depth of Well (Ground) 41'
		Depth to Gravel NA
		Gravel Size NA
		Length of Casing 21'
		Screen Material Open Rock Hole
		Screen Mfg. NA
		Screen Dia. 6"
		Length of Screen 20'
		Top of Screen Fitting NA
		Bottom of Screen Fitting NA
		Slot Size NA
		Seal Material Cement
		Quantity 530 lbs.
		Depth of Seal Material 0-21'
		Drilling Machine Air Rotary
		Date Well Completed 4/5/93
		Driller Steven Steffen J-1305 & Logan Bollinger

WHPEC 151 0591

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32649
Atlas Sheet Coordinates 26 : 05 : 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP~~
Address ~~UNITED TECHNOLOGIES BLDG~~
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-22A
County Bergen Municipality ~~LODI BORO~~ Lot No. 1A Block No. 147A
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 5 / 93
Regulatory Program Requiring Well ~~ECRA~~ MONITORING Case I.D. # ~~B0064~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 41 ft.
Well finished to 41 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	21	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21	41	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	21	10	Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development Pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steven Steffen /SP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0590

DWR-138 M
1/95

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46393
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW30
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address ~~200 GREGG ST.~~ Date well started 12/20/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/20/96
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirogen, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface +2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	+2	2	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2	12	4	Sch 40 PVC .010
Tail Piece				
Gravel Pack	1	12		Morie #1
Annular Seal/Grout	0	1		Portland
Method of Grouting	Gravity			

Static water level after drilling 4 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-57
Name of Driller Jim Burton
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J137522
Name of Drilling Company SUBMIT WELL DRILLING CO INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Jim Burton Date 12/26/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC151.0595

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: EMW30 DATE DRILLED: 12/20/1996 COORD #1: 26.03.562 PERMIT #1: 26-46393
COORD #2: PERMIT #2:
SITE: United Tech Inc., 200 Gregg St., , Lodi, NJ 07664 COUNTY: Bergen
OWNER: United Technologies Corpo, 1 Financial Plaza, , Hartford, CT 06101 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 4'

SET WELL: 12'
GRAVEL PK SZ: Morie #1
DRILLER: Jim Burton
SURFACE COMPLETION: S

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 2
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

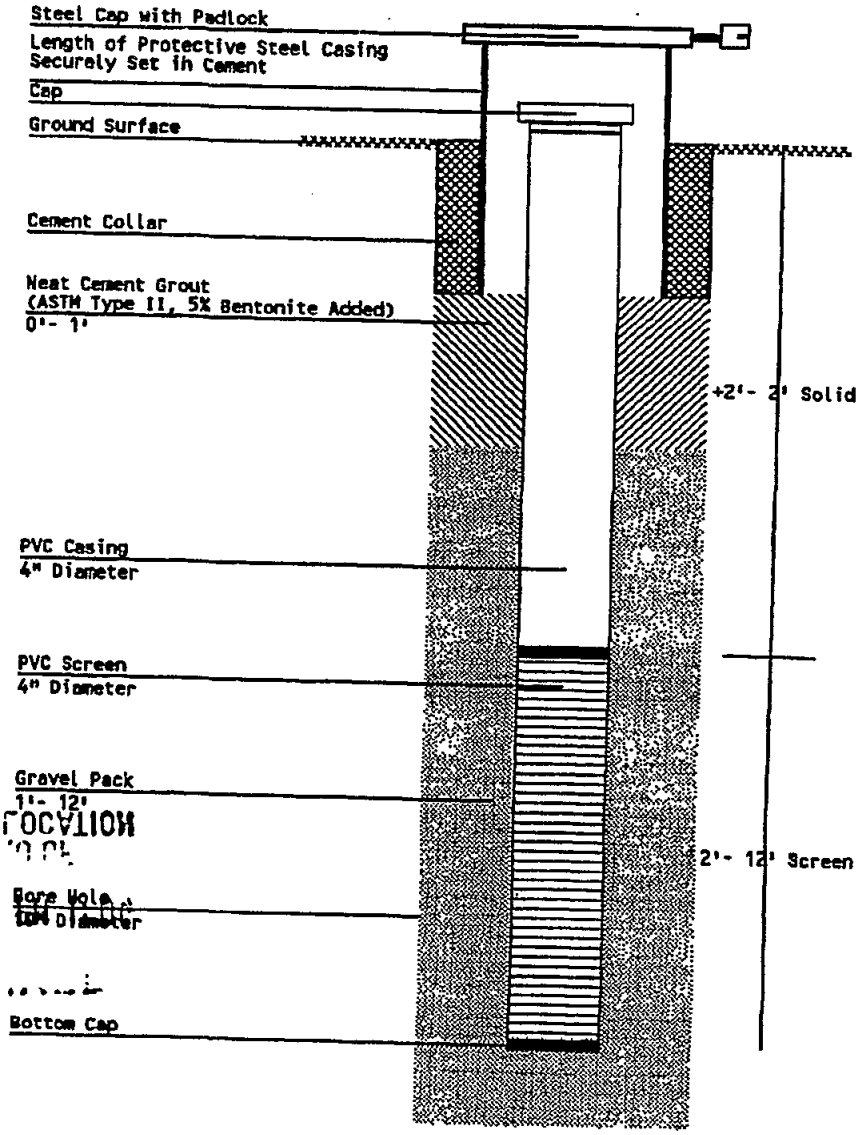
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIA: 10"
TOTAL DEPTH: 12'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
2.5 - 4.5	5-5-12-16
4.5 - 6.5	3-13-23-36
8' - 10'	55-17-35-28

REMARKS / SOILS IDENTIFICATION

0' - 1' Fill material.
1' - 5' Black-grey clayey silt.
5' - 12' Red-brown silty sand.
Rock at 12'.



WATER ALLOCATION
98 DEC 30

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43109
Atlas Sheet Coordinates 26 Ø5 563

OWNER IDENTIFICATION - Owner PERGAMENT, MURRAY & ROBER
Address 150Ø OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address 40 INDUSTRIAL RD.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	4	Sch40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6	12	4	Sch40 PVC .020
Tail Piece				
Gravel Pack	5	12		Morie #2
Annular Seal/Grout	0	5		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000 13 59
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW1 DATE DRILLED: 1/03/1996 COORD #1: 26.03.563 PERMIT #1: 26-43109
COORD #2: PERMIT #2:
SITE: Hoboken Paints, Inc., 40 Industrial Road, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: Murray and Robert Pergame, 1500 Old Northern Blvd., , Roslyn, NJ 11576 XSTREET: Gregg Street
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 6'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 6'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 12'

SET WELL: 12'
GRAVEL PK SZ: Morie #2
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

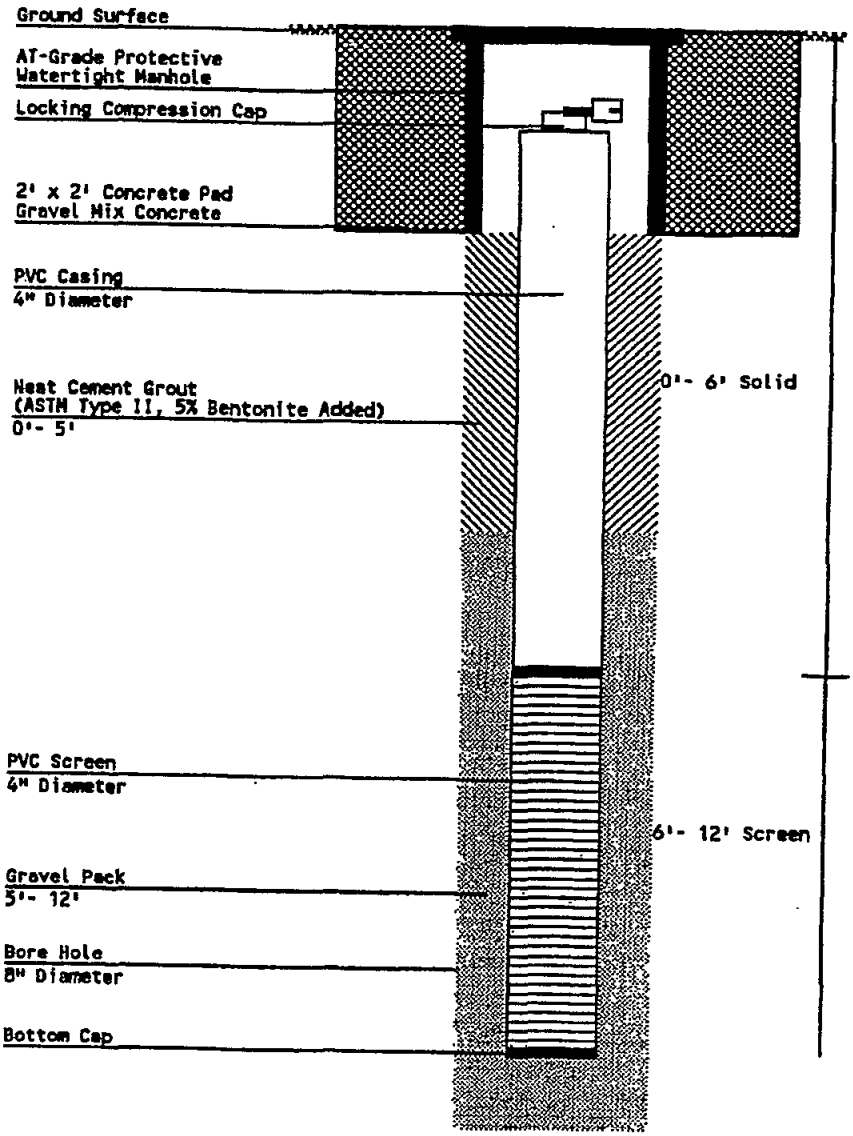
GAL PER MIN:
STAT H2O LVL: Not taken
DEVELOPMENT METHOD: Not dev.
DEVELOPMENT TIME:

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0' - 2' Asphalt & stone.
2' - 3' Fill.
3' - 5' Red-brown m/f sand & gravel.
5' - 12' Bedrock, shale & sandstone.



WELREC 151.060

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43110
Atlas Sheet Coordinates 26 03 563

OWNER IDENTIFICATION - Owner ~~PERGAMENT, MURRAY & ROBER~~
Address 1500 OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address ~~40 INDUSTRIAL RD.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	9	20		Morie #2
Annular Seal/Grout	0	9		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev. hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 0001359
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0605

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX. (908) 356-1009

WELL LOG

WELL: MW2 DATE DRILLED: 1/03/1996 COORD #1: 26.03.563 PERMIT #1: 26-43110
COORD #2: PERMIT #2:
SITE: Hoboken Paints, Inc., 40 Industrial Road, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: Murray and Robert Pergame, 1500 Old Northern Blvd., , Roslyn, NJ 11576 XSTREET: Gregg Street
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 10'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #2
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

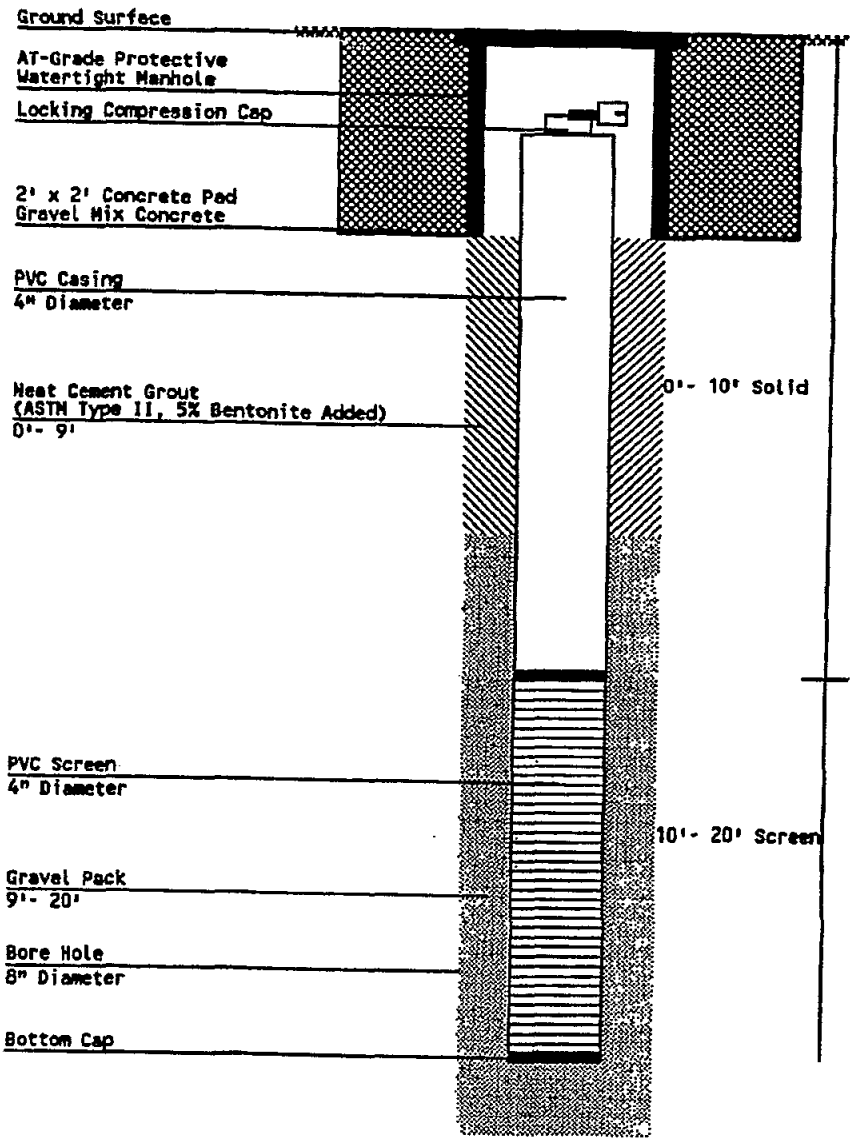
GAL PER MIN:
STAT H20 LVL: Not taken
DEVELOPMENT METHOD: Not dev.
DEVELOPMENT TIME:

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0' - 2' Asphalt & stone.
2' - 3' Fill.
3' - 5' Red-brown m/f sand & gravel.
5' - 20' Bedrock, shale & sandstone.



WELREC 151.0606

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
DMR

MONITORING WELL RECORD

Well Permit No. 26 43111
Atlas Sheet Coordinates 26 03 563

OWNER IDENTIFICATION - Owner ~~PERGAMENT, MURRAY & ROBER~~
Address 1500 OLD NORTHERN BLVD.
City ROSLYN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 205.02
Address ~~40 INDUSTRIAL RD.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/96
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GZA GeoEnvironmental, Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	Sch 40 PVC, 020
Tail Piece				
Gravel Pack	9	20		Morie #2
Annular Seal/Grout	0	9		Portland
Method of Grouting	Tremie			

Static water level after drilling not taken ft.
Water level was measured using
Well was developed for not dev. hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000 1359
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 1/17/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0607

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW3 DATE DRILLED: 1/03/1996 COORD #1: 26.03.563 PERMIT #1: 26-43111
COORD #2: PERMIT #2:

SITE: Hoboken Paints, Inc., 40 Industrial Road, , Lodi, NJ 07644
OWNER: Murray and Robert Pergame, 1500 Old Northern Blvd., , Roslyn, NJ 11576

COUNTY: Bergen
XSTREET: Gregg Street
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 10'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #2
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

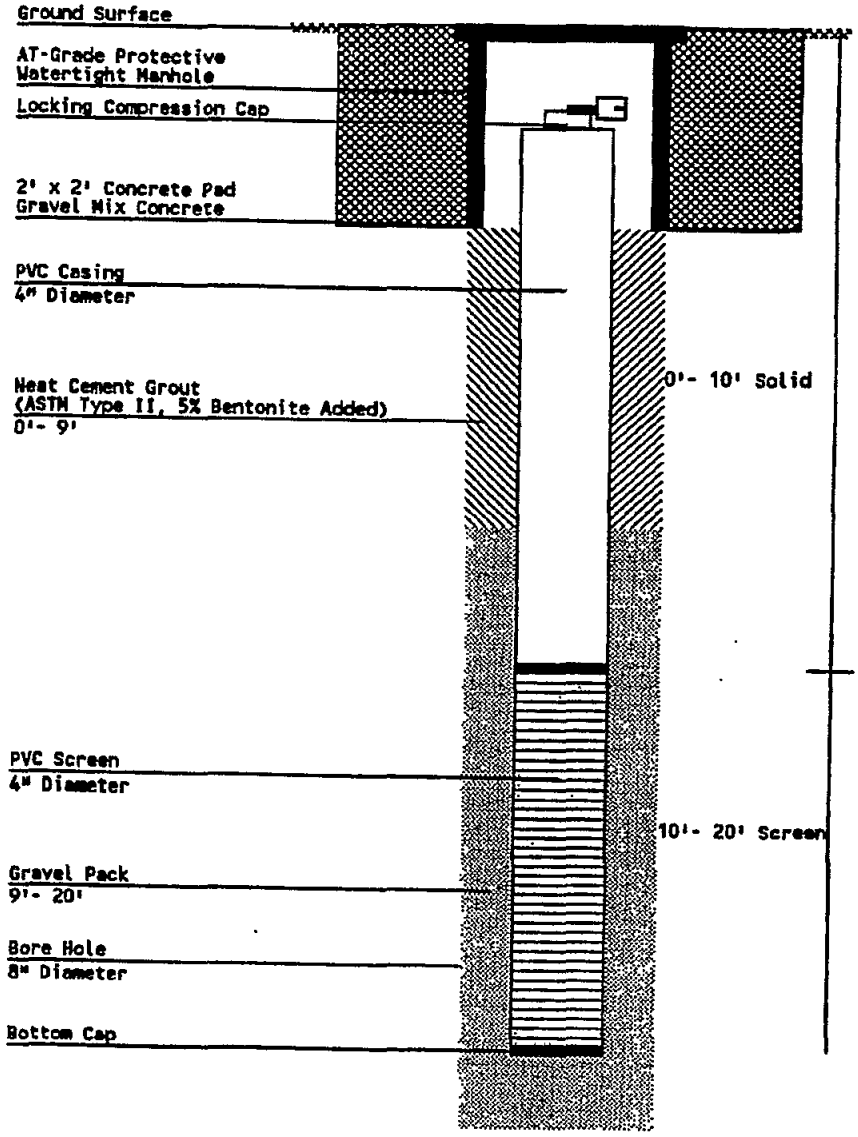
GAL PER MIN:
STAT H2O LVL: Not taken
DEVELOPMENT METHOD: Not dev.
DEVELOPMENT TIME:

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO | BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0' - 2'. Asphalt & stone.
2' - 4' Fill.
4' - 9' Red-brown f/m sand & gravel.
9' - 20' Rock.



WELREC 151.0608

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41632
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-31 (Blanket)
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/27/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734 7000

WELL CONSTRUCTION

Total depth drilled 35.8 ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☒ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 5.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud. Rotary
Drilling Fluid Bentonite Type of Rig Atlas Hillbilly
Name of Driller Jerold Klaus
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B0195
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 15' Brn Red Brn Silt, Sd & Gravel
15' to 20' Brn Silt To gravel To Sand Stone & 4" Asphalt (FILL)
20' to 25' Black Organic Silt Little gravel Trace F Sand
25' to 30' Lite Brn Silt
30' to 35.8' Red Brn f/sd Lt m/f gravel with Rock Fragments Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jerold Klaus Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0592

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: EMW29 DATE DRILLED: 09/16/1996 COORD #1: 26.03.562 PERMIT #1: 26-45583
COORD #2: PERMIT #2:
SITE: United Tech Inc., 200 Gregg St., , Lodi, NJ 07664 COUNTY: Bergen
OWNER: United Technologies Corpo, 1 Financial Plaza, , Hartford, CT 06101 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 5'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD: S/S
HOLE DIAMETER: 10"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: Carmine Decorso
SURFACE COMPLETION: M

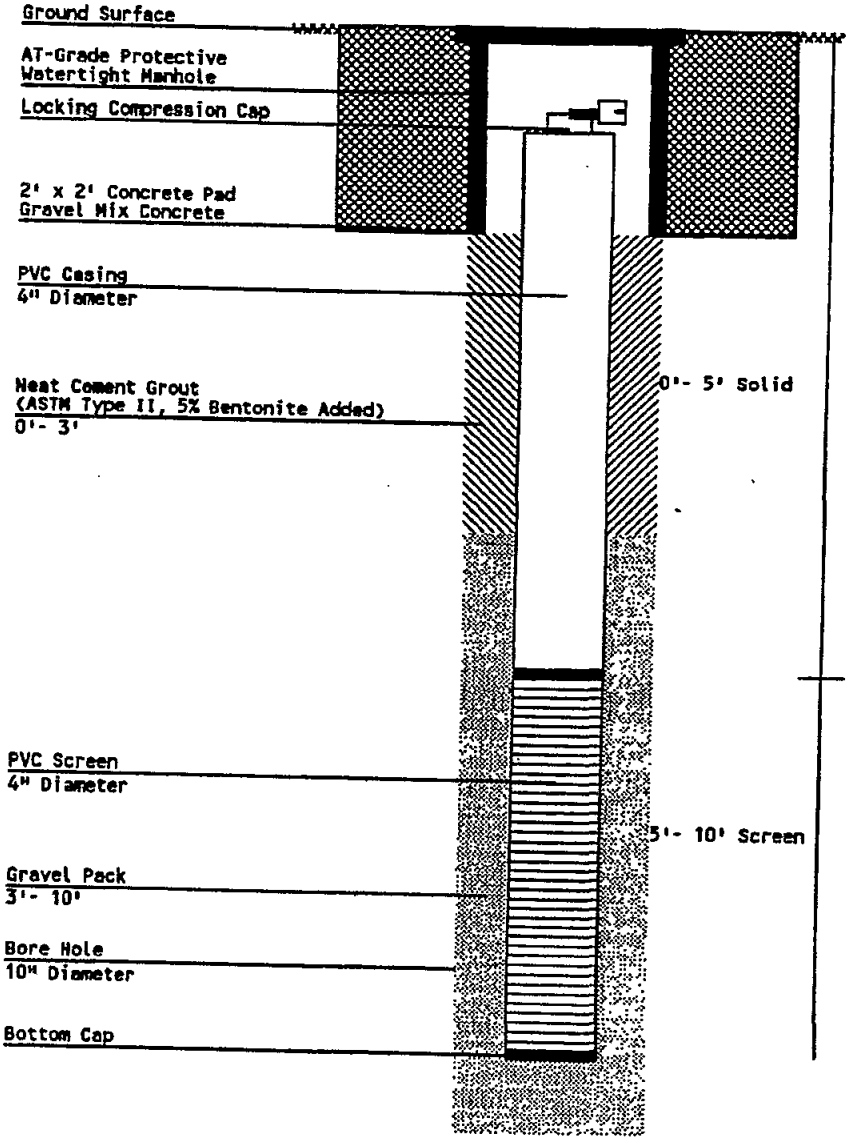
GAL PER MIN: 1/2
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	None
3' - 5'	None
5' - 7'	None
7' - 9'	None

REMARKS / SOILS IDENTIFICATION

0' - 1' Asphalt & road stone.
1' - 10' Red-brown f/m sand trace c/f gravel trace silt.



DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -32568
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~UNITED TECH BLDG -MAIL STOP 50~~
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BMW-16A
County Bergen Municipality LODI BORO Lot No. 4, 1A Block No. 176J
Address Trudy Dr. & Pearl Court

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 15 / 93
Regulatory Program Requiring Well ~~ECRA~~ recovery Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 44.5 ft.
Well finished to 44.5 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	24	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Open Rock ~~XXXXX~~ Hole (Note slot size)	24	44.5	6	Open Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	24	10	Portland Type I
Method of Grouting	Pressure			

Static water level after drilling 4.83 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development Previously Developed
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

*NOTE: Well Was constructed previously under permit #26-28239 by William ~~X~~ Stothoff Co.

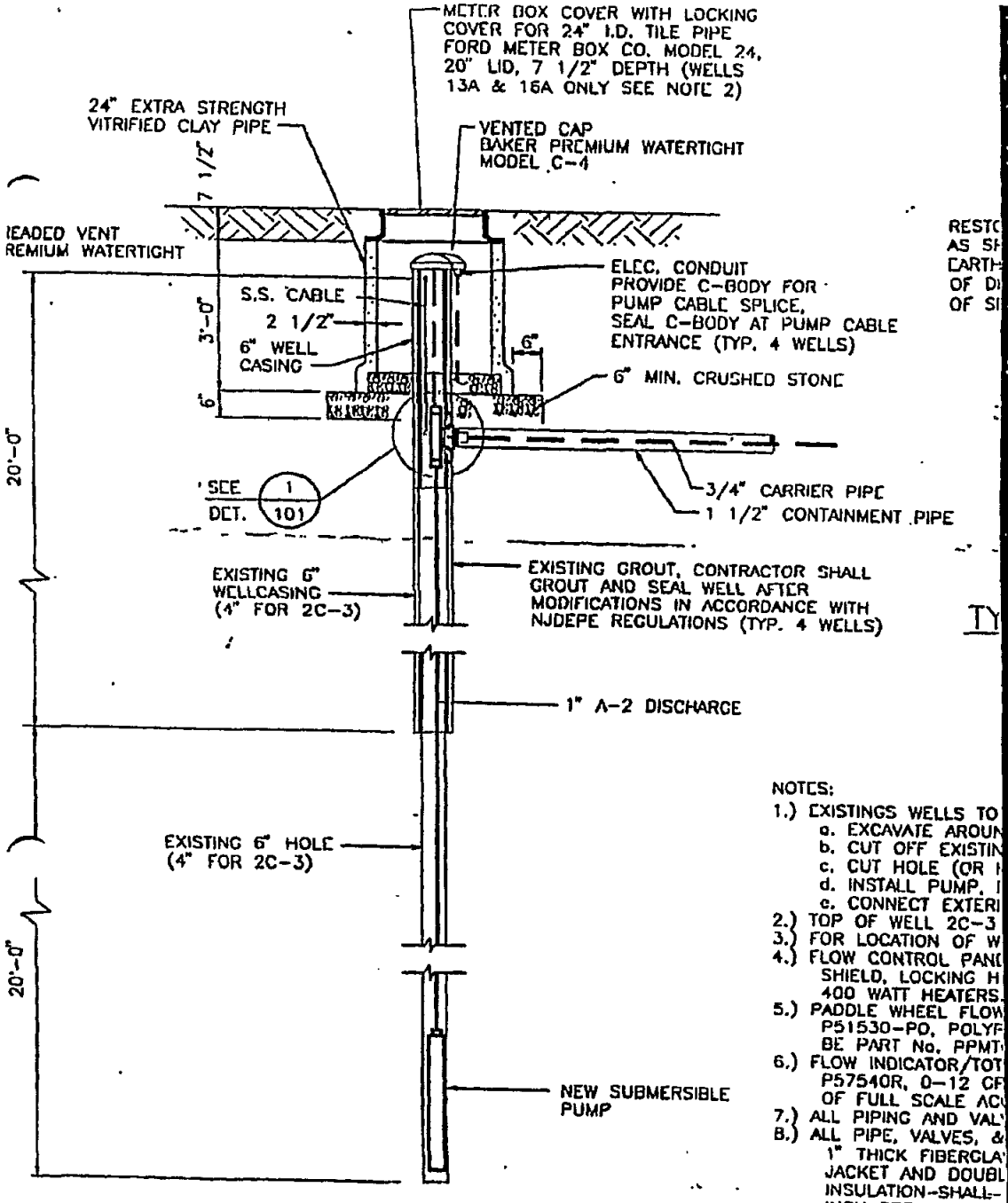
*See the attached drawing for modifications made by A. C. ~~X~~ Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss / TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0578



NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANE
   SHIELD, LOCKING H
   400 WATT HEATERS.
5.) PADDLE WHEEL FLOW
   P51530-PO, POLYP
   BE PART No. PPMT
6.) FLOW INDICATOR/TOT
   P57540R, 0-12 GP
   OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, &
   1" THICK FIBERGLA
   JACKET AND DOUBL
   INSULATION-SHALL-
   INCH DEEP CORRUG
9.) DIAPHRAGM VALVES
   PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL
   BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH
   SHOWN ON DWG. 1

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TY

WELLS HMW-13A, BMW-16A & 2C-3
4/14 4/15 4/26

1/2" 0 1 2 4 6

Compaction T

BCM Engineers Inc.

WELREC 151 0579

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32569
Atlas Sheet Coordinates 26 :03 :562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~UNITED TECH BLDG -MAIL STOP 50~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ~~EM~~ HMW-13A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~4, 1A~~ Block No. ~~176J~~
Address Trudy Dr. & Pearl Court

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 14 / 93
Regulatory Program Requiring Well ~~ECRA~~ recovery Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	21.5	6	Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21.5	40	6	Open Rock Hole
Tail Piece				
Gravel Pack				
Annular Seal/Grout	0.5	21.5		Portland Type I
Method of Grouting	X Tremie			

Static water level after drilling 4.83 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development X Developed Previously
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

*NOTE: Well was constructed previously under permit #26-27734 by Summit Well Drilling

*See the attached drawing for modification made by A. C. Schultes, Inc.

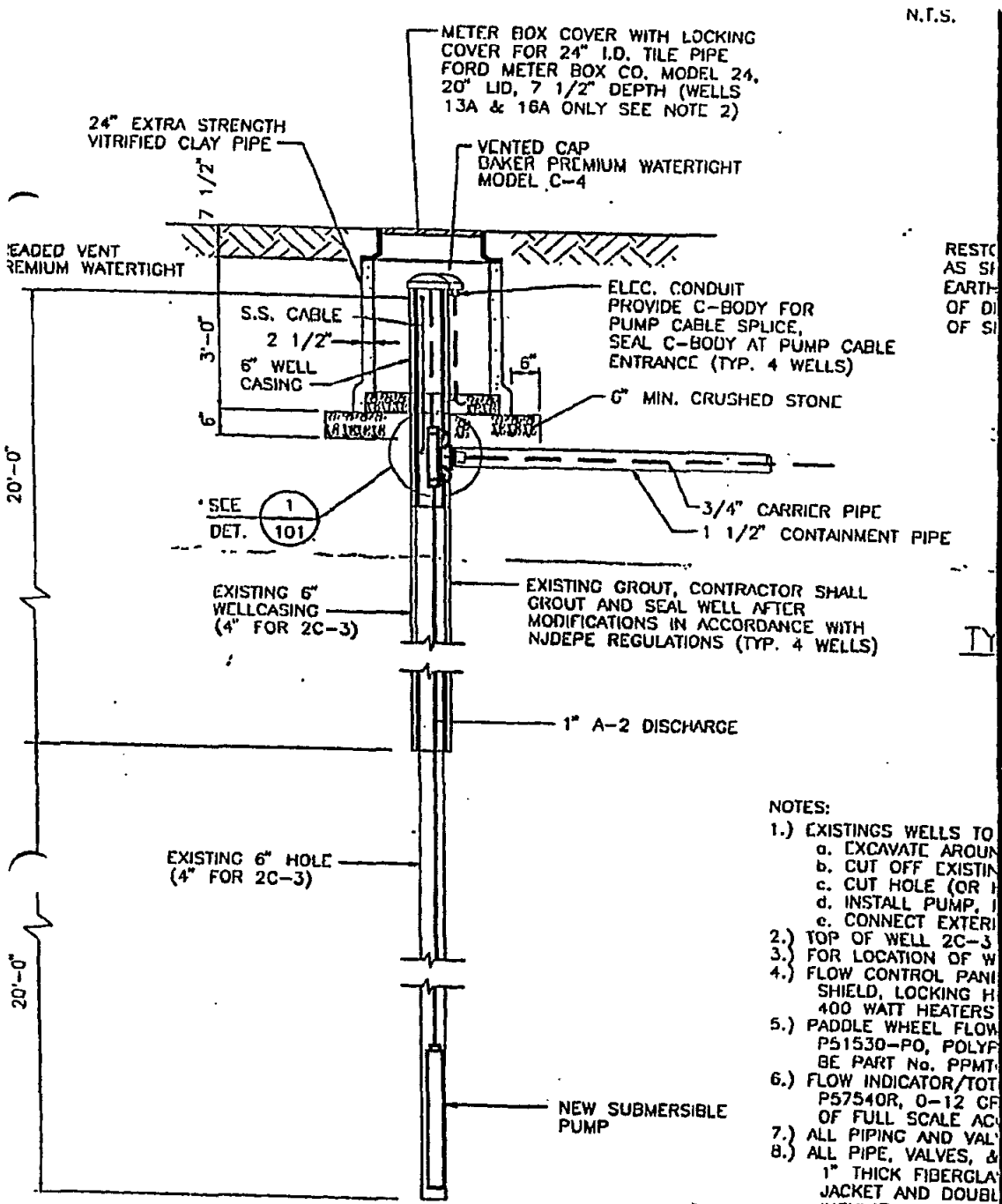
I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss/TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0580

N.T.S.



NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANI SHIELD, LOCKING H 400 WATT HEATERS
5.) PADDLE WHEEL FLOW P51530-PO, POLYF BE PART No. PPMT
6.) FLOW INDICATOR/TOT P57540R, 0-12 GF OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, & 1" THICK FIBERGLA JACKET AND DOUBL INSULATION--SHALL INCH DEEP CORRU
9.) DIAPHRAGM VALVES PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH SHOWN ON DWG. 1

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Compaction T

WELLS HMW-13A, BMW-16A & 2C-3

1/2" 0 1 2 4 6

BCM BCM Engineers Inc.

WTLREC 151.0581

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 32570
Atlas Sheet Coordinates 26 :03 :562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address ~~UNITED TECH BLDG. MAIL STOP 50~~
City ~~HARTFORD~~ State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2C-3
County Bergen Municipality ~~LODI BORO~~ Lot No. 1A Block No. ~~147A-77~~
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 26 / 93
Regulatory Program Requiring Well ~~recovery~~ ECRA Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 46.83 ft.
Well finished to 46.83 ft.
Borehole diameter:
Top * in.
Bottom * in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				NO DATA
Outer Casing (Not Protective Casing)				AVAILABLE
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 4 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development Developed Previously
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 5 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig * *
Name of Driller ~~MR~~ Chuck Griffith/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1527/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

*NOTE: Well previously constructed under permit #26-5226 by Warren George Inc.

*See the attached drawing for modifications performed by A. C. Schultes, Inc.

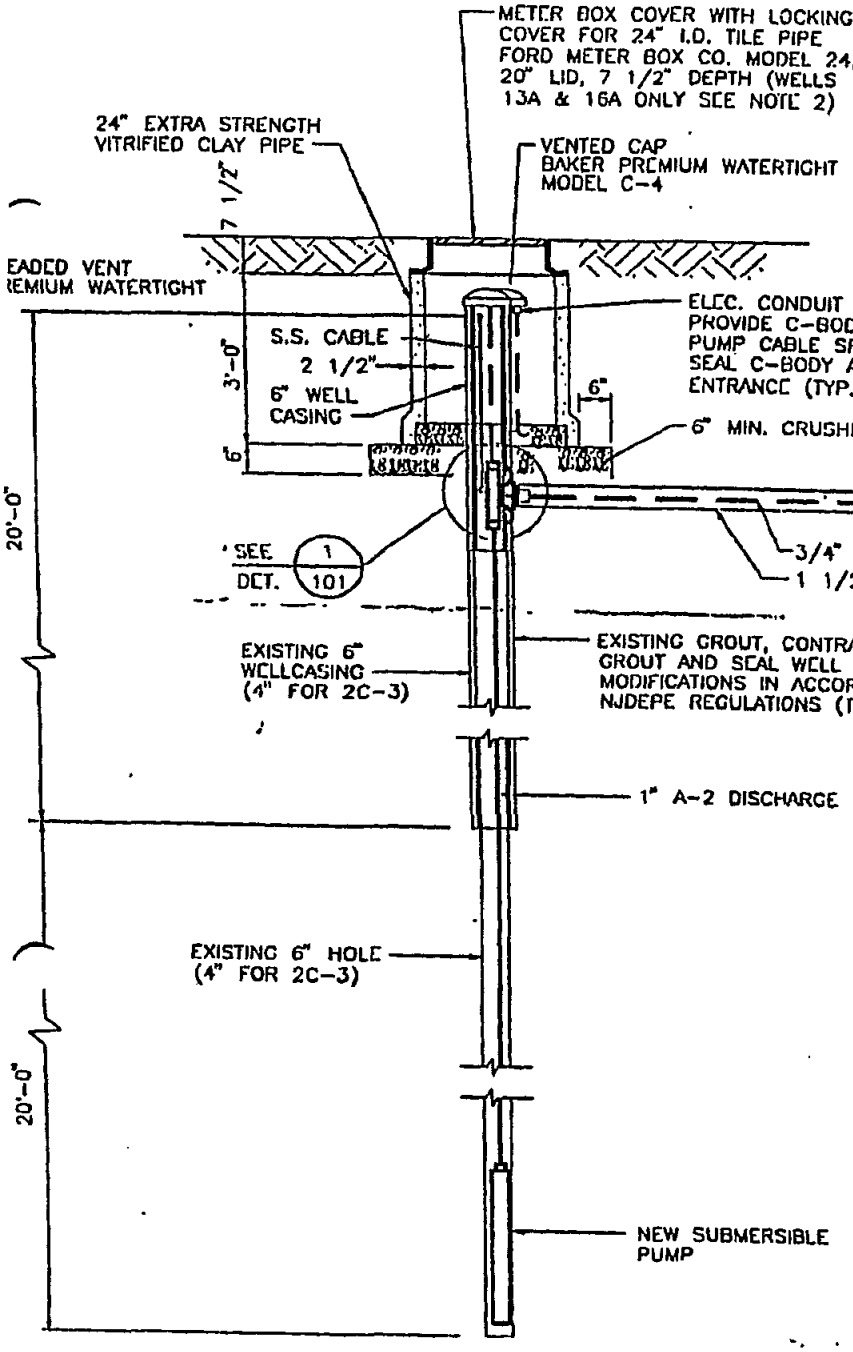
I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss /TOP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0582

N.T.S.



NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANE
   SHIELD, LOCKING H
   400 WATT HEATERS
5.) PADDLE WHEEL FLOW
   P51530-PO, POLYF
   BE PART No. PPMT-
6.) FLOW INDICATOR/TOT
   P57540R, 0-12 GP
   OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, &
   1" THICK FIBERGLA
   JACKET AND DOUBL
   INSULATION--SHALL-
   INCH DEEP CORRUG
9.) DIAPHRAGM VALVES
   PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL
   BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH
   SHOWN ON DWG. 1

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Compaction T

WELLS HMW-13A, BMW-16A & 2C-3

1/2" 0 1 2 4 6

BCM BCM Engineers Inc.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 46 - 32571
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECH. BLDG-MAIL STOP 50
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address Pearl Court

TYPE OF WELL (as per Well Permit Categories) recovery Date well completed 4 / 13 / 93
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				NO DATA
Outer Casing (Not Protective Casing)				AVAILABLE
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 5.17 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development M-Scope
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

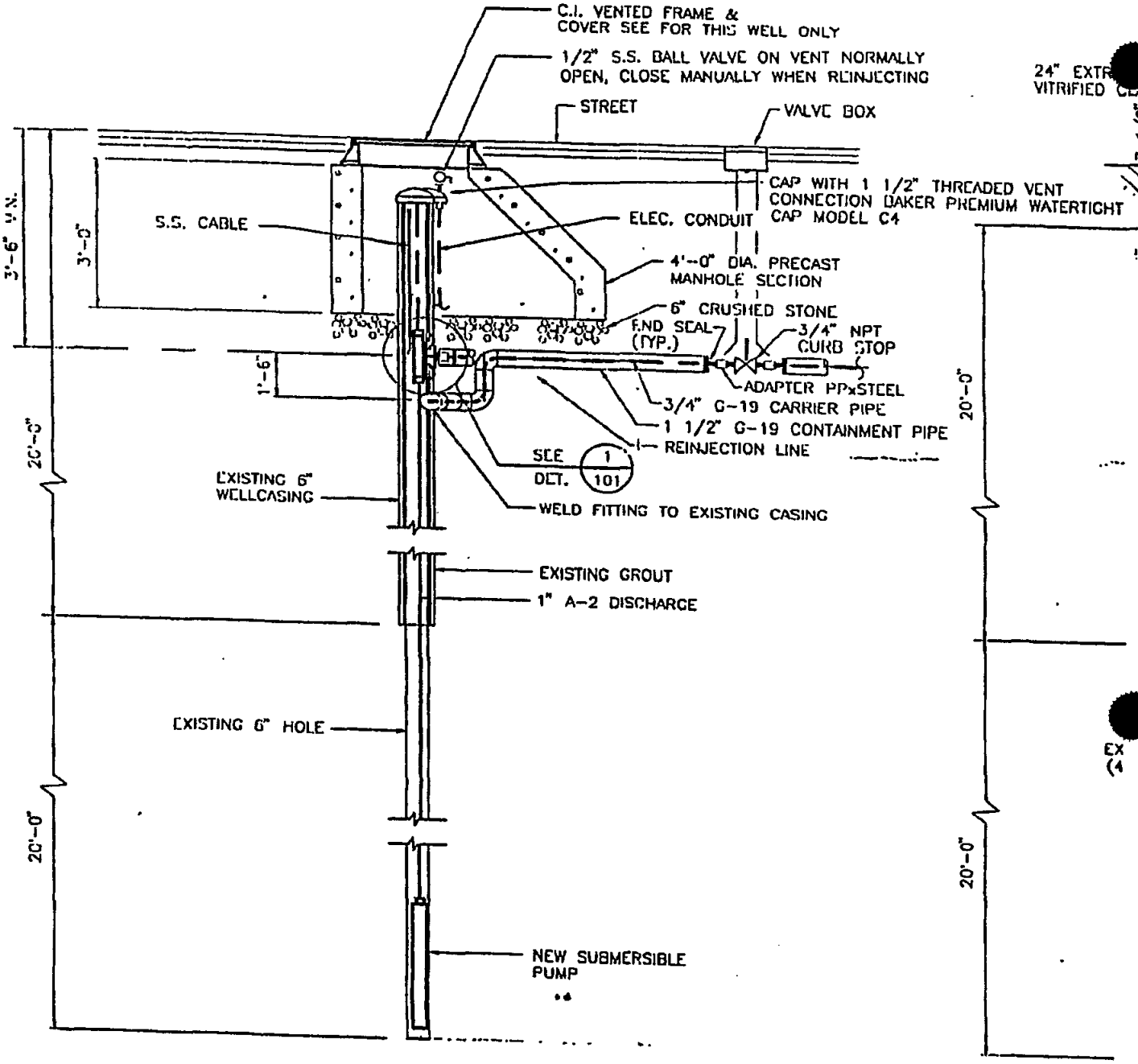
*NOTE: Well was constructed previously under another permit # unknown to A. C. Schultes.

*See attached drawing for modifications made by A. C. Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss / TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



WELL HMW-10A

4/13

SECTION A 101

1/2" 0 1 2 4 6

WELLS H

1/2" 0

D-520

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32647
Atlas Sheet Coordinates 26 103 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP~~
Address UNITED TECHNOLOGIES BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - *If not the same as owner please give address.* Owner's Well No. MW-17A
County Bergen Municipality ~~EDISON~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 5 / 93
Regulatory Program Requiring Well MONITORING ~~FDRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 41 ft.
Well finished to 41 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	21	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21	41	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	21	10	Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development ~~Pumped~~
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

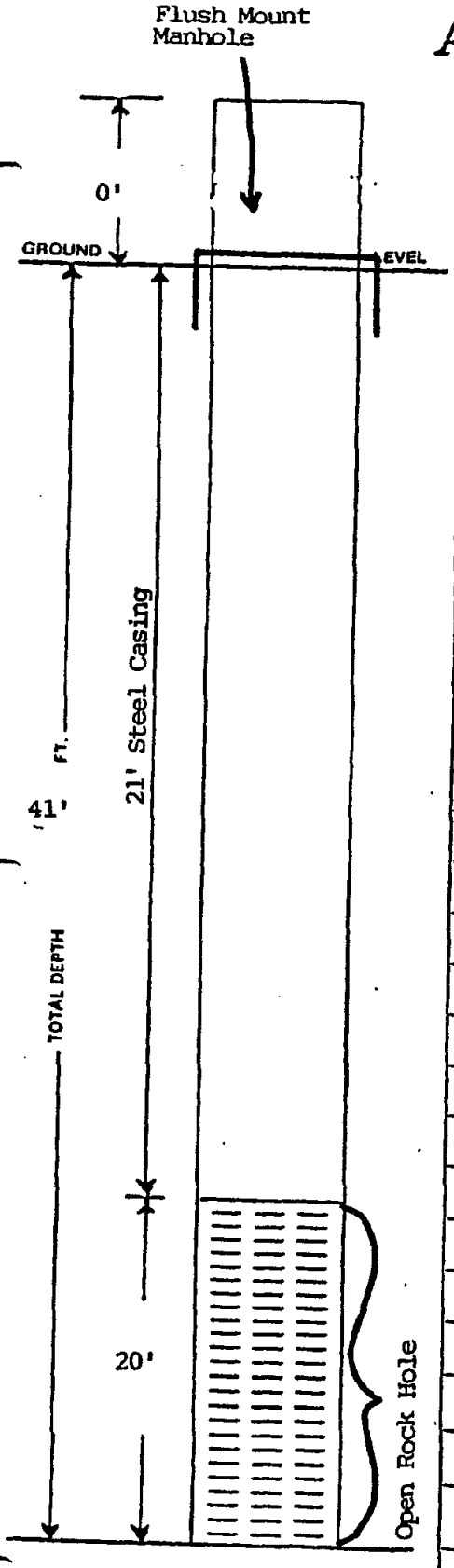
GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Steven Steffen /TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562

WELL LOG	FEET FROM GROUND SURFACE 0 to 41'	NAME OF OWNER United Technologies Corp.
Sand & Stone	0-12'	Location BASF Plant Lodi, NJ
Weathered Rock	12'-16'	Well No. MW-17A
Competent Bedrock	16'-41'	State Permit 2632647
		Job No. 23642
		Test Pumped (Hrs.) 1/2
		Capacity (GPM) 3
		Static Level 3'
		Pumping Level NA
		Datum Ground
		Specific Capacity NA
		Diameter of Casing 6"
		Depth of Well (Ground) 41'
		Depth to Gravel NA
		Gravel Size NA
		Length of Casing 21'
		Screen Material Open Rock Hole
		Screen Mfg. NA
		Screen Dia. 6"
		Length of Screen 20'
		Top of Screen Fitting NA
		Bottom of Screen Fitting NA
		Slot Size NA
		Seal Material Cement
		Quantity 530 lbs.
		Depth of Seal Material 0-21'
		Drilling Machine Air Rotary
		Date Well Completed 4/5/93
		Driller Steven Steffen J-1305 & Logan Bollinger

WELREC 151.0587

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32648
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES COR
Address UNITED TECHNOLOGIES BLDG
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address 200 Gregg St.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 4/ 5 / 93
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	25	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	25	50	6	Open Rock Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	25	10	~~XXXXX~~ Portland Cement
Method of Grouting	Tremie Pipe			

Static water level after drilling 3 ft.
Water level was measured using M-Scope
Well was developed for 1/2 hours at 3 gpm
Method of development Pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig Schramm
Name of Driller Steven Steffen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1305
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Steven Steffen /TJP Date 6/2/93

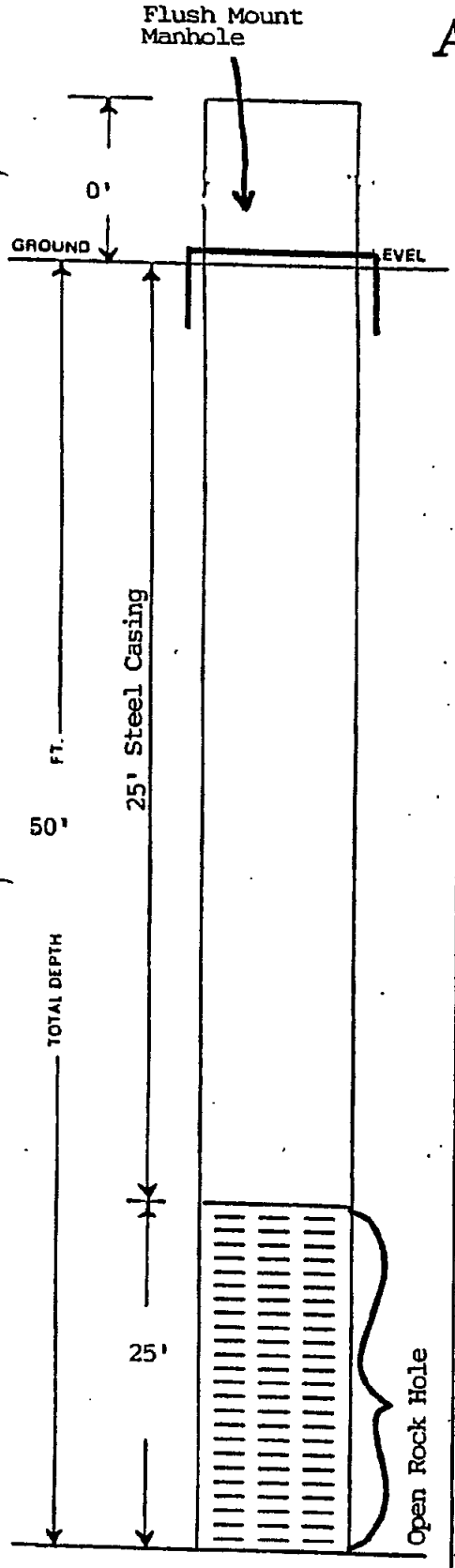
COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0588

A.C. SCHULTES, INC.

SINGLE CASED WELL

Coord. #26:03:562



WELL LOG	FEET FROM GROUND SURFACE 0 to 50'	NAME OF OWNER United Technologies Corp.
Sand & stones	0-17'	Location BASF Plant Lodi, NJ
Weathered rock	17'-20'	Well No. MW-21A
Competent bedrock	20'-50'	State Permit 2632648
		Job No. 23642
		Test Pumped (Hrs.) 1/2
		Capacity (GPM) 3
		Static Level 3'
		Pumping Level NA
		Datum Ground
		Specific Capacity NA
		Diameter of Casing 6"
		Depth of Well (Ground) 50'
		Depth to Gravel NA
		Gravel Size NA
		Length of Casing 25'
		Screen Material Open Rock Hole
		Screen Mfg. NA
		Screen Dia. 6"
		Length of Screen 25'
		Top of Screen Fitting NA
		Bottom of Screen Fitting NA
		Slot Size NA
		Seal Material Cement
		Quantity 630 lbs.
		Depth of Seal Material 0-25'
		Drilling Machine Air Rotary
		Date Well Completed 4/5/93
		Driller Steven Steffen J-1305 & Logan Bollinger

J#1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48628

Atlas Sheet Coordinates 26 : 03 : 539

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 100 WEST HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-2
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 WEST HUNTER AVE.

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8 in.
Bottom 2 in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☑ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 45 gpm

Method of development Sub Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5	15	2	PVC	Sch. 40 .10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	15	8	#2 & #1	Morie
Grout	0	3	8	Neat Cement	50 lbs.
				Bentonite	lbs.

Grouting Method Poured in place
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.

Well Driller (Print) Charles Hitzelberger

Driller's Signature Charles Hitzelberger

Registration No. 10166 Date 9/15/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-8' Black Fill
8'-11' Dark Brown Clay
11-15' Soft Shale

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0482

J-1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48629

Atlas Sheet Coordinates 26 : 03 : 539

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 100 WEST HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-5
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 WEST HUNTER AVE.

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 1 gpm

Method of development Sub Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5	15	2	PVC	Sch. 40 .10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	15	8	#0 & #1	Morie
Grout	0	3	8	Neat Cement Bentonite	50 lbs. ___ lbs.

Grouting Method Poured in place
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-7' Soft Black Fill
7'-13' Dark Brown clay
13'-15' Hard Shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.
Well Driller (Print) Charles Kitzelberger
Driller's Signature Charles Kitzelberger
Registration No. MD 1066 Date 9/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0483

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 51006

Atlas Sheet Coordinates 26 : 03 566

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW10
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

DATE WELL STARTED 7 / 6 /98
DATE WELL COMPETED 7 / 6 /98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well WATER/HAZ ENF Case I.D.# 95-01-31-093011

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt. Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 18' ft.
Well finished to 18' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Is steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	8'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8'	18'	4"	PVC	.020 Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5'	18'		Morie #2	
Grout	0'	5'		Neat Cement Bentonite	188 lbs. 10 lbs.

Grouting Method Tremie
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Matthew Raab

Driller's Signature Matthew Raab

Registration No. J1577 Date 7 / 10 /98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 185 2324

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009

WELL LOG

WELL: MW9 DATE DRILLED: 07/06/1998 COORD #1: 26.03.566 PERMIT #1: 26-51005
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 10'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 10"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #2
DRILLER: Matthew Raab
SURFACE COMPLETION: M

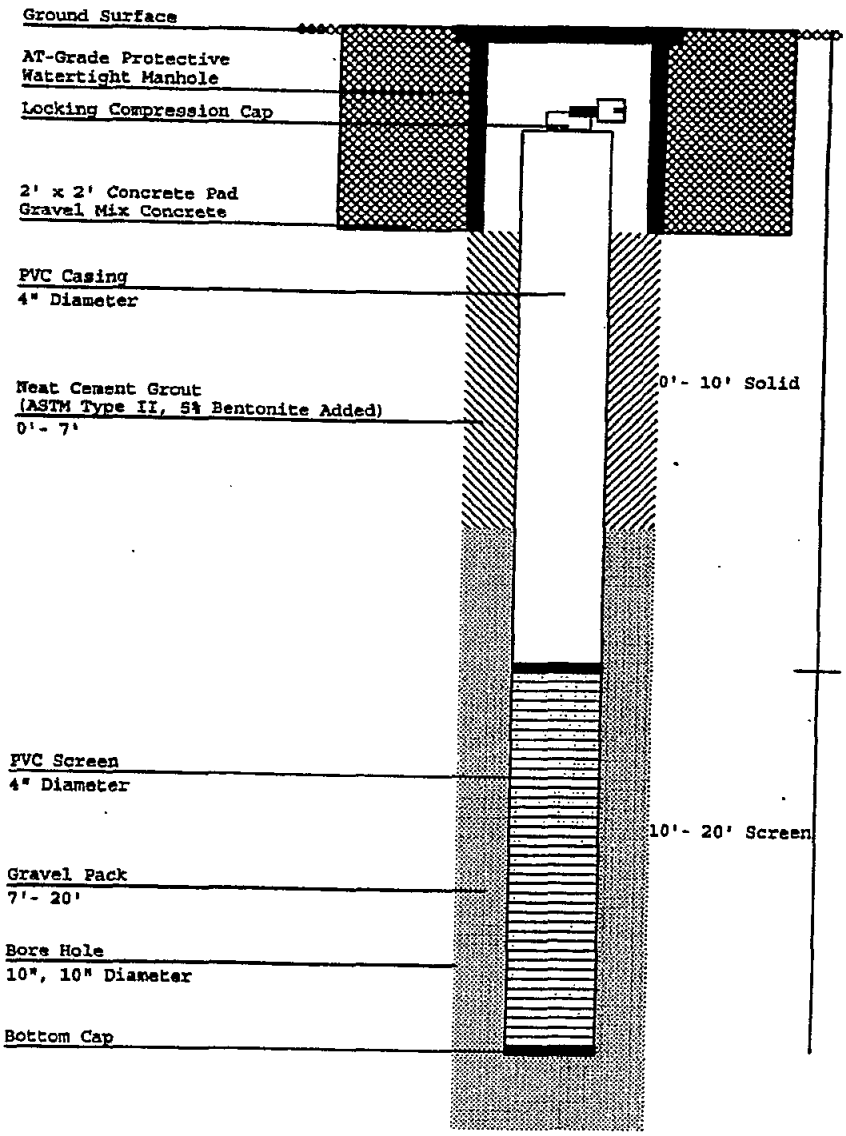
GAL PER MIN: 1
STAT H2O LVL: 11'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
10' - 12'	9-9-60-91
12' - 14'	45-27-17-9
14' - 16'	6-12-12-20

REMARKS / SOILS IDENTIFICATION

0'- 1' Asphalt & stone.
1'- 5' Dark brown silt & sand fine gravel.
5'- 20' Red-brown clayey silt some f/m sand trace f/m gravel with shale fragments.



WELREC 185 2222

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 51005

Atlas Sheet Coordinates 26 : 03 566

OWNER IDENTIFICATION - Owner N.J.D.O.T.
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW9
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147
Address GREGG STREET

DATE WELL STARTED 7 / 6 /98
DATE WELL COMPETED 7 / 6 /98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well WATER/HAZ ENF Case I.D.# 95-01-31-093011

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Environmental Mgmt. Inc Tele. #

WELL CONSTRUCTION

Total depth drilled 20' ft.
Well finished to 20' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 11' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	10'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	10'	20'	4"	PVC	.020 Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	7'	20'		Morie #2	
Grout	0'	7'		Neat Cement Bentonite	188 lbs. 10 lbs.

Grouting Method Tremie
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Matthew Raab

Driller's Signature Matthew Raab

Registration No. J1577 Date 7 / 10 /98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009

WELL LOG

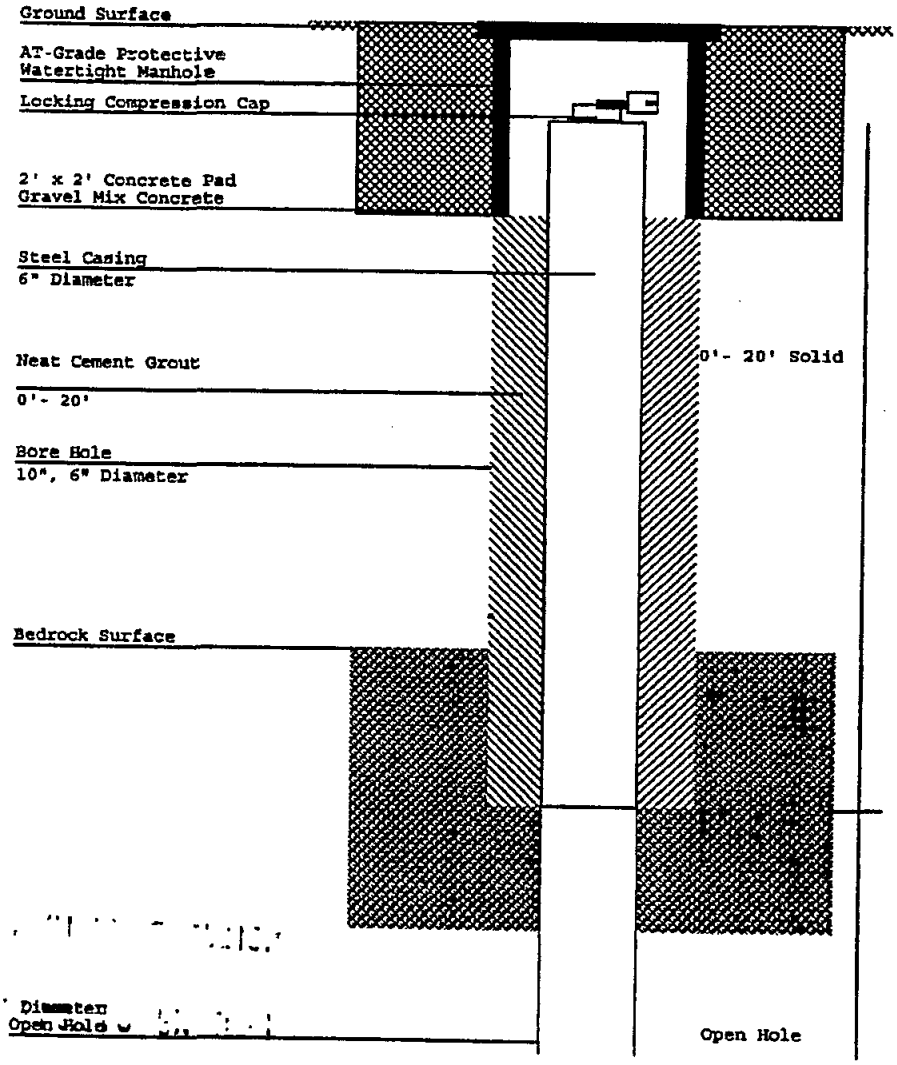
WELL: MW31A DATE DRILLED: 10/08/1997 COORD #1: 26.03.562 PERMIT #1: 26-48885
COORD #2: PERMIT #2:
SITE: UTC/BASF (former Inmont Facili, Trudy Drive (200 Gregg Street), , Lodi, NJ 07664 COUNTY: Bergan
OWNER: United Technologies Corpo, 1 Financial Plaza, , Hartford, CT 06101 XSTREET:
USE: Monitoring

INNER CASING:	Steel	OUTER CASING:	SCREEN TYPE 1:	Open Hole	DRILLING METHOD: Air Rotary
DIAMETER:	6"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	20'	LENGTH:	DIAMETER:		HOLE DIA: 10", 6"
			LENGTH 1:		TOTAL DEPTH: 40'
SET WELL:	40'	GAL PER MIN: 1	LENGTH 2:		
GRAVEL PK SZ:		STAT H2O LVL: 19'	SLOT SIZE:		
DRILLER:	Steve Yotcoski	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1/2 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0' - 2' Asphalt & stone.
2' - 6' Red-brown medium sand & gravel some silt.
6' - 15' Red-brown medium sand some silt trace gravel.
15' - 20' Bedrock, sandstone, shale.
20' - 40' Rock, sandstone, shale.
Water at 30' & 33'.



WELREC 151 0600

)WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61657

Atlas Sheet Coordinates 26 : 03 564

[redacted]ER IDENTIFICATION - Owner NYS&W RAILROAD CORP.

Address PO BOX 439

City BUTLER State NJ Zip Code 07405

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Site GB-20

County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A

Address RT. 17 & MAIN ST.

DATE WELL STARTED 7/9/01

DATE WELL COMPLETED 7/9/01

TYPE OF WELL (as per Well Permit Categories) BORING

Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) YU & ASSO. Tele. # 1-201-791-00[redacted]

WELL CONSTRUCTION

Total depth drilled 41.5 ft.

Well finished to ___ ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ___ ft.

W[redacted]eel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8 ft.

Water level was measured using Tape

Well was developed for ___ hours at ___ gpm

Method of development ___

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ___ gpm

Pump type: ___

Drilling Fluid Bentonite Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement / Bentonite	___ lbs. / ___ lbs.

Grouting Method Trem. with pump

Drilling Method Mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0" to 6" Top Soil
6" to 9' misc fill
9' to 15' Brn clfsd gcl fg sd
15' to 35' Brn cl fsd tr gl
35' to 41½" Red Brn clfsd tr slt with clfg sd

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING

Well Driller (Print) Michael Blaszczyk

Driller's Signature [signature]

Registration No. B0185 Date 7/24/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.___" LONGITUDE: ___° ___' ___.___"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

...-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58539

Atlas Sheet Coordinates 26 : 03 563

OWNER IDENTIFICATION - Owner KOLITCH, STEVEN
Address 411 STATE ROUTE 17 SUITE 110
City HASBROUCK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5R
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N @ ESSEX ST

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

DATE WELL STARTED 9/ 6/ 00
DATE WELL COMPLETED 9/ 6/ 00

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 3' ft.

Water level was measured using Tape

Well was developed for 1/2 hour hours
@ 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5'	12'		Morie #1	
Grout	0'	1.5'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) Rich Gurczynski
Driller's Signature Rich Gurczynski
Registration No. J1570 Date 9 / 14 / 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

DMR

MONITORING WELL RECORD

Well Permit No. 26- 415000
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address ~~RT 17 N. & ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 08/8/95
Regulatory Program Requiring Well UST Case I.D. # ~~90-10-01-1004~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN CO. Tele. #

WELL CONSTRUCTION
Total depth drilled 11'6" ft.
Well finished to 11'6" ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	11'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0'6"	11'6"	Annul.	#2 MORIE
Annular Seal/Grout	0'	0'6"	Annul.	Cement
Method of Grouting	Gravity			

Static water level after drilling 3'6" ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 3 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller B.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1290
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Backfill
2-10 Gray silty clay + sand
10-11'6" Decomposed bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature B.M. Strzelczyk Date 08/28/95

COPIES: White - DEP | Canary - Driller | Pink - Owner | Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26. 41501
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address ~~RT 17 N. & ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 08,28,95
Regulatory Program Requiring Well UST Case I.D. # ~~90-10-01-1004~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitmen Co. Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 11'6" ft.
Well finished to 11'6" ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	1'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)			—	
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0'6"	11'6"	Aund.	#2 morie
Annular Seal/Grout	0	0'6"	Aund.	Cement
Method of Grouting			Gravity	

Static water level after drilling 3' ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 5 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller D.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1280
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-3' Backfill
3'-9' Gray silty sand fine to medium.
9'-11'6" Decomposed rock (red shell).

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature B. M. Strzelczyk Date 08/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58377

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E1
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. #(609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
/ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

/ell was finished: ☐ above grade
☒ flush mounted

fi[illegible]d above grade, casing height (stick p) [illegible]ve land surface ____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

/ater level was measured using Tape

/ell was developed for 1/2 hours
1-2 gpm

/ethod of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

/ump capacity NA gpm

/ump type: NA

)rilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

.evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company DIAMOND DRILLING CO., INC.

Ve[illegible]ler (Print) Norman Crane

)riller's Signature

Registration No. 0022211 Date 6/26/01

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58378

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E2
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.01
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.
Well Driller (Print) Norman Crane
Driller's Signature N. Crane
Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

WR-138 M
/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58379

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E3
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12.28.00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. (609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
/ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

/ell was finished: ☐ above grade
☒ flush mounted

fi[illegible]d above grade, casing height (stick
ip) [illegible]e land surface ____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.
/ater level was measured using Tape
/ell was developed for 1/2 hours
: 1-2 gpm
/ethod of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/F
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

/as permanent pumping equipment installed? ☐ Yes ☒ No
'ump capacity N/A gpm
'ump type: N/A
)rilling Fluid HSA Type of Rig CME 75
Health and Safety Plan submitted? ☐ Yes ☒ No
.evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company DIAMOND DRILLING CO., INC.
Ne[illegible]ler (Print) Norman Crank
)riller's Signature
Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner

FUSRAP
Maywood Superfund Site

Groundwater Remedial Investigation Report

Volume 5
Appendix D (continued)

Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:

Shaw Environmental, Inc.
100 West Hunter Avenue
Maywood, New Jersey 07607

Prepared for:

US Army Corps
of Engineers®

Contract No. DACW41-99-D-9001

July 2005, Revision 4

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APPENDIX D
WELL SEARCH INFORMATION (CONTINUED)

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58380

Atlas Sheet Coordinates 26 : 03 562

VNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
dress 1 FINANCIAL PLAZA MAIL STOP
y HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. E4
unty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ldress 200 GREGG ST.

DATE WELL STARTED 12/28/00
'PE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609)584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

in[redacted]d above grade, casing height (stick
o) [redacted]e land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using tape

ell was developed for 1/2 hours
1-2 gpm

lethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

)rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 #/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company DIAMOND DRILLING CO., INC.

Ve[redacted]iller (Print) Norman Crane

)riller's Signature

Registration No. 0022211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58381

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E5
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12 28 00
egulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 1 18 01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
/ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

/ell was finished: ☐ above grade
☑ flush mounted

finished above grade, casing height (stick p) above land surface ____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

/ater level was measured using Tape

/ell was developed for 1/2 hours
1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.01
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

lethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity NA gpm

'ump type: NA

)rilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company DIAMOND DRILLING CO., INC.

/ell Driller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0022211 Date 6/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58382

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E6
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 548-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p e land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.
ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 16
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

ethod of development Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME75

ealth and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

Vel ller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0022217 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58383

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E7
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8907

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 16/S
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.01
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Riddish brown silty sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58384

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E8
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/28/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele.(#609)584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☑ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☑ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1-2 gpm

Method of development

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement	50 lbs.
				Bentonite	3 lbs.

Grouting Method Pavement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

D-543

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58385

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E9
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/28/00
YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T Group Tele. #(609) 584-8907

WELL CONSTRUCTION

otal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick p) above land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

ethod of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME 75

ealth and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

ell Driller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58386

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-11
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12 / 28 / 00
DATE WELL COMPLETED 4 / 18 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1-2 gpm

Method of development PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	30455	1.61 16/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	30 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6'	LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT
6-11'	REDDISH BROWN SILTY SAND

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Name of Driller (Print) NORMAN CRATE

Driller's Signature

Registration No. 002221 Date 6 / 25 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58387

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MPE-12
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12 / 29 / 00
DATE WELL COMPLETED 4 / 18 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 5848900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/FT
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	MORIE	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature

Registration No. 0022211 Date 6 / 26 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' LOOSE FILL CONSTRUCTION DEBRIS CONCRETE AND CEMENT

6-11' REDDISH BROWN SILTY SAND

COPIES: White - DEP

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58388

Atlas Sheet Coordinates 26 : 03 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-13
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
Regulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 4/18/01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) I.T. Group Tele (609) 584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Name of Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 00 22211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction Debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58389

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-14
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
egulatory Program Requiring Well DATE WELL COMPLETED 4/18/01
Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

lethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME75

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

/e:l Driller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health D...

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MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58390

Atlas Sheet Coordinates 26 . 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ity HARTFORD State CT Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-15
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

YPE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609) 584-8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
'ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

'ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) e land surface ft.

'as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

'ater level was measured using Tape

'ell was developed for ½ hours
1-2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity NA gpm

'ump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

.evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction Debris Concrete and Cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Cwner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58391

Atlas Sheet Coordinates 26 : 03 562

VNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
dress 1 FINANCIAL PLAZA MAIL STOP
y HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-16
unty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
dress 200 GREGG ST.

DATE WELL STARTED 12/29/00
'PE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 4/18/01
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

al depth drilled 11 ft.
ell finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☑ flush mounted

nished above grade, casing height (stick) above land surface ____ ft.

s steel protective casing installed?
Yes ☒ No

atic water level after drilling 6 ft.

ter level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

as permanent pumping equipment installed? ☐ Yes ☑ No

mp capacity N A gpm

mp type: N A

rilling Fluid HSA Type of Rig CME75

ealth and Safety Plan submitted? ☐ Yes ☒ No

vel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris, concrete and cement

6-11' Reddish brown silty sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

ell Driller (Print) Norman Crane

riller's Signature

egistration No. 0622211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58392

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ddress 1 FINANCIAL PLAZA MAIL STOP
ty HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-17
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST.

DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01

YPE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
ve land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME75

lealth and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 16/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	1.01 0
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

ell Driller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish Brown Silty Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58393

Atlas Sheet Coordinates 26 : 03 562

)WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address 1 FINANCIAL PLAZA MAIL STOP
City HARTFORD State CT Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-18
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
Address 200 GREGG ST.

DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. #(609)584-8900

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1-2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) Norman Crane

Driller's Signature N. Crane

Registration No. 0022211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown Silty Sand

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58394

Atlas Sheet Coordinates 26 : 03 562

VNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
dress 1 FINANCIAL PLAZA MAIL STOP
y HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (MP) E-19
unty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
dress 200 GREGG ST.

PE OF WELL (as per Well Permit Categories) RECOVERY
DATE WELL STARTED 12/29/00
DATE WELL COMPLETED 4/18/01
gulatory Program Requiring Well Case I.D.#

)NSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. (609) 584-8900

WELL CONSTRUCTION

al depth drilled 11 ft.
ll finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ll was finished: ☐ above grade
☒ flush mounted

nished above grade, casing height (stick
) e land surface ____ ft.

s steel protective casing installed?
Yes ☒ No

tic water level after drilling 6 ft.

ter level was measured using Tape

ll was developed for 1/2 hours
1-2 gpm

ethod of development Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

mp capacity NA gpm

mp type: NA

illing Fluid HSA Type of Rig CME 75

ealth and Safety Plan submitted? ☐ Yes ☒ No

vel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304 SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown Silty Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

illing Company DIAMOND DRILLING CO., INC.

ell ller (Print) Norman Crane

iller's Signature

gistration No. 0022211 Date 6/26/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58395

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
ldress 1 FINANCIAL PLAZA MAIL STOP
:y HARTFORD State CT Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. (NP) E-20
ounty BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ldress 200 GREGG ST.

'PE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL STARTED 12/29/00
:gulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 4/18/01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) IT Group Tele. # (609) 584-8900

WELL CONSTRUCTION

tal depth drilled 11 ft.
ell finished to 11 ft.

rehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
)) above land surface ____ ft.

as steel protective casing installed?
]Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1-2 gpm

ethod of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2	304SS	1.61 lb/ft
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6	11	2	304 SS	.016
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	5	11	6	Morie	#1
Grout	0	5	6	Neat Cement Bentonite	50 lbs. 3 lbs.

Grouting Method Placement
Drilling Method HSA

'as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity NA gpm

ump type: NA

rilling Fluid HSA Type of Rig CME75

leaith and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company DIAMOND DRILLING CO., INC.

/ell Driller (Print) Norman Crane

riller's Signature N. Crane

egistration No. 0622211 Date 6/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6' Loose fill construction debris concrete and cement

6-11' Reddish brown silty sand

COPIES: White - DEP Canary - Driller Pink - Owner

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22945
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner McLAREN / HART
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-4
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A
Address Trudy Dr. Lodi, N.J. 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	P.V.C.
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	— —	Bent Pelets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using TAPE
Well was developed for 1/2 hours at 2 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air rotary
Drilling Fluid NA Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/8/91

D-555

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 4 Coordinate No. 26.03.5.37 Permit No. 26-22945
Date Drilled 11/19/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 6" Total Depth 14'
Casing: Type PVC Diameter 2" Length 4'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		

Well Design

0' - 2'	GROUT
0' - 4'	SOLID
2' - 3'	PELLETS
3' - 14'	GRAVEL
4' - 14'	SCREEN
14'	SET WELL
	GPM
	STNDP. OR
X	MANHOLE

Identification of Soils / Remarks

0' - 14' red/ brn. m/f sand, tr. clay silt, tr. f/ gravel some small cobbles

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22946
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ~~McLAREN / HART~~
Address ~~470 PARK AVE. SOUTH, 11TH FLOOR~~
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Pz-5
County Bergen Municipality Lot No. 1A Block No. ~~147A~~
Address Trudy Dr. Lodi N.J. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/19/90
Regulatory Program Requiring Well PIEZOMETER Case I.D. # ~~85664~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	— —	Ben Pelets Portland grout
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid N.A. Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 12.10
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/8/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 5 Coordinate No. 26.03.5.37 Permit No. 26-22946
Date Drilled 11/19/90 County Bergen Use Piezometer
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY
Drilling Method air rotary Sampling Method none
Hole Diameter 6" Total Depth 14'
Casing: Type PVC Diameter 2" Length 4'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie #2 Casing Seal pellets
Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		

Well Design

0' - 2'	GROUT	
0' - 4'	SOLID	
2' - 3'	PELLETS	
3' - 14'	GRAVEL	
4' - 14'	SCREEN	
14'	SET WELL	
	GPM	
	STNDP. OR	
X	MANHOLE	

Identification of Soils / Remarks

0' - 14'	red/ brn. m/f sand, tr. clay silt, tr. f/ gravel some small cobbles

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22947
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner McLAREN / HART
Address 470 PARK AVE. SOUTH, 11TH FLOOR
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-6
County Bergen Municipality Lot No. 1A Block No. 147A
Address Trudy Dr. - Lodi N.J. LODI BORO 07644

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/19/90
Regulatory Program Requiring Well ECRA Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	4	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	3	14	—	Morie #2
Annular Seal/Grout	2 0	3 2	— —	Ben Pellets Portland grout
Method of Grouting	GRAVITY			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 2 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid NA Type of Rig Gus Rech
Name of Driller Carmine De Cerso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Cerso Date 1/3/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. PZ - 6 Coordinate No. 26.03.5.37 Permit No. 26-22947

Date Drilled 11/19/90 County Bergen Use Piezometer

Location UTC/BASF, Trudy Drive, Lodi, NJ 07664

Owner McLaren/Hart, 470 Park Avenue, Souht 11th Floor, New York, NY

Drilling Method air rotary Sampling Method none

Hole Diameter 6" Total Depth 14'

Casing: Type PVC Diameter 2" Length 4'

Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie #2 Casing Seal pellets

Static Water Level 7' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 2'	GROUT	
0' - 4'	SOLID	
2' - 3'	PELLETS	
3' - 14'	GRAVEL	
4' - 14'	SCREEN	
14'	SET WELL	
	GPM	
	STNDP. OR	
X	MANHOLE	

Identification of Soils / Remarks

0' - 14' red/ brn. m/f sand, tr. clay silt, tr. f/ gravel some small cobbles

DWR-138
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

WELL RECORD

E
CL

Well Permit No. 46 – 39261
Atlas Sheet Coordinates 26: 03 : 566

OWNER IDENTIFICATION - Owner BASF CORPORATAION
Address 200 GREG STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same owner please give address. Owner's Well No. 1
Address SAME "Interchemical Corp. Site"
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01

WELL USE Fire Protection Status Standby

WATER USE " " Average gals. daily Maximum gals. daily

WELL CONSTRUCTIONS
BOREHOLE DIMENSIONS
Date well completed 8/00/1935
Depths: Total 355 ft. Finished 355 ft.
Diameter: Top 8 in. Bottom 8 in.
record obtained for registration # 10330W
Land Surface Elevation at well ft. Elevation was determined using
Casing Height (stick-up) above land surface ft.

	DEPTH TO TOP (FT.)	LENGTH (FT.)	DIAMETER (IN.)	TYPE AND MATERIAL *Screens: Note Slot Size(s)*
Casing 1				
Casing 2				
Casing 3				
Screen 1				
Screen 2				
Tail Piece				
Gravel Pack				
Grout				
Grouting Method				

WELL FLOWS NATURALLY gals. per min. at ft. above the land surface.
Water rises to ft. above the land surface.

RECORD OF TEST Test Date / /
Static water-level before pumping ft. below land surface.
Water level was measured using
Discharge rate measured using
Well was pumped using
Observed effects on nearby wells
Water Quality (taste, odor, color, etc.)
Water level ft. below land surface after hrs. of pumping
Drawdown ft.
Discharge Rate gals. per min.
Specific Capacity gals. per min. per ft. of drawdown

PERMANENT PUMPING EQUIPMENT Installed by UNK. Pump Type
Mfrs. Name UNK. Model
CAPACITY: Pump delivers 200 GPM at PSI pressure
POWER: HP at RPM Power Source
DEPTHS: Pump ft. Footpiece ft. Airline ft.
FLOW METER: Model installed on in. diameter pipe

CONTRACTOR - Name of Drilling Contractor DRILLER UNKNOWN
Address
City State Zip Code
Name of Driller License No.

Signature of Contractor Date / /

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WEI REC 151 2743

DWR-13B
9/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

WELL RECORD

Well Permit No. 46 39261
26 03 566

Driller: Please use the space below for the log description. Note water bearing zones or geological formation.

Are samples available? ☐ Yes ☒ No

Drilling Method UNKNOWN

Type of Rig

Aquifer/Geo. Fm. Passaic formation
Well drilled 1935

LOG

DEP USE ONLY

Storet Hydrogeo Code
USGS Hydrogeo Code
Depth to Bedrock ft.
Bedrock Lith. Code
Bedrock Fm. Code

Completed by
Date / /

Thick.	Lith.	Fm.

GWPI No. -

NJPDES No. -

Latitude ° ' "

Longitude ° ' "

Lat-Long Accuracy ☐ 1" ☐ 5" ☐ 10" ☐ 20"

USGS Quadrangle

Drainage Basin Code

County/Municipality Code

OTHER FILES: ☐ Lithologic Log ☐ Samples Available ☐ Aquifer Test ☐ Water Level Data
☐ Geophysical Logs ☐ Water Chemistry ☐ Pollution Case

Checked by

Date / /

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18944
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner ~~BERGEN CABLE TECHNOLOGIES~~
Address 170 GREGG ST.
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality ~~LODI BORO~~ Lot No. 113 Block No. 205
Address 170 GREGG STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 02/23/90
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~89-11-01-116~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) AGUILAR - DOUG HARM Tele. # 290-7800

WELL CONSTRUCTION

Total depth drilled 11.5 ft.
Well finished to 11.5 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1.5	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1.5	11.5	4	PVC .020
Tail Piece	NONE	—	—	—
Gravel Pack	1	11.5	—	#2 MORIE
Annular Seal/Grout	0	1	—	BPELLETS + PORT.
Method of Grouting	TREMIE			

Static water level after drilling 1.5 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller CARMINE DECORSO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 03/06/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1821

DWR 138A
1/84

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2617675
APPLICATION NO ____
COUNTY BERGEN
COORD. 2603 647

WELL RECORD

1. OWNER Chemad Development ADDRESS 589 Central Ave., E. Orange, N.J.
Owner's Well No B-3 SURFACE ELEVATION ____ Feet (Above mean sea level)
2. LOCATION Hackensack, N.J.
3. DATE COMPLETED 11-1-89 DRILLER Mc K Soil Investigations
4. DIAMETER. Top 4 Inches Bottom 4 Inches TOTAL DEPTH 11 Feet
5. CASING. Type Sch 40 PVC Diameter 4 Inches Length 1 Feet
6. SCREEN. Type Sch 40 PVC Size of Opening .010 Diameter 4 Inches Length 10 Feet
Range in Depth { Top 3 Feet / Bottom 11 Feet Geologic Formation Cohansey
Tail Piece: Diameter N/A Inches Length ____ Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at ____ Feet above surface
Water rises to ____ Feet above surface
8. RECORD OF TEST Date N/A Yield ____ Gallons per minute
Static water level before pumping ____ Feet below surface
Pumping level ____ feet below surface after ____ hours pumping
Drawdown ____ Feet Specific Capacity ____ Gals. per min. per ft. of drawdown
How pumped ____ How measured ____
Observed effect on nearby wells ____
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name ____
Capacity ____ G.P.M. How Driven ____ H.P. ____ R.P.M. ____
Depth of Pump in well ____ Feet Depth of Footpiece in well ____ Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump ____ Size ____ Inches
10. USED FOR Test Borings AMOUNT { Average ____ Gallons Daily / Maximum ____ Gallons Daily
11. QUALITY OF WATER ____ Sample: Yes ____ No ____
Taste ____ Odor ____ Color ____ Temp. ____ °F.
12. LOG See Attached Are samples available? ____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY Doug Wheeler Date 11-28-89

Boy C3 Bor

NOTE Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 2116

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 19976
Atlas Sheet Coordinates 26 : 03 : 529

OWNER IDENTIFICATION - Owner US ARMY CORPS OF ENGINEER
Address 26 FEDERAL PLAZA
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-45
County Municipality LODI BORO Lot No. 01 Block No. 179
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 04/20/90
Regulatory Program Requiring Well BORING Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 30.5 ft.
Well finished to ft.
Borehole diameter:
Top in.
Bottom in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling ft.
Water level was measured using
Well was developed for hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method
Drilling Fluid Type of Rig
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company U.S. ACOE,NY DIST.,CENAN-PR-G

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature x Carl J Moon Date x 8-27-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

26-03-529 26-19976 Hole No. SR-45

DRILLING LOG

DIVISION: SOUTH ATLANTIC
INSTALLATION: SAVANNAH DISTRICT
SHEET 1 OF 2 SHEETS

1. PROJECT: LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT
2. LOCATION (Coordinates or Station)
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SR-45
5. NAME OF DRILLER: CARL MOON
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 12.0'
8. DEPTH DRILLED INTO ROCK: 5.5'
9. TOTAL DEPTH OF HOLE: 17.5'
10. SIZE AND TYPE OF BIT: 6" AUGER - 6" FISHTAIL - N.D. SIZE CORE
11. DATUM FOR ELEVATION SHOWN (TBM or MSL): NAVD
12. MANUFACTURER'S DESIGNATION OF DRILL: FAILING 314-C
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 12; UNDISTURBED —
14. TOTAL NUMBER CORE BOXES: 1
15. ELEVATION GROUND WATER: 0-12.5'
16. DATE HOLE: STARTED 04/20/90; COMPLETED 04/20/90
17. ELEVATION TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING: %
19. SIGNATURE OF INSPECTOR: T. CHILDERS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1'		GM - RED - BLACK - GRAY SILTY SAND - CRUSHED STONE 3/4" ASPHALT FILL MATERIAL	0.9'	1	
	2'		SM - [illegible]		2	REFUSAL W/ CAT. APP. 0.6' OF ASPHALT AUGERED THRU - JAR SAMPLE TAKEN FROM AUGER
	3'					
	4'				3	
	5'		SM - BROWN SILTY FINE GRAIN SAND W/TRACE OF ROCK FRAG. - 3/4" & LITTLE LIMES - CLAY -	0.4'	4	
	6'					
	7'		PT - [illegible]		5	
	8'		SM BLACK REDDISH [illegible]	0.9'	6	
	9'					
	10'		SM - RED - BLACK - GRAY - BROWN SILTY FINE GRAIN SAND W/TRACE OF ROCK FRAG. - 3/4" & A LITTLE DECAYED WOOD. LIMES - GRAVEL - STONES - ETC.	0.6'	7	
	11'		PT - GRAY - HIGHLY [illegible] ORGANIC SOILS (WOOD MOIST)	0.6	8	
	12'					
	13'		SM - BLACK REDDISH BROWN SILTY FINE GRAIN SAND W/TRACE OF GRAVEL 1/2" & DECAYED ROOTS - WOOD (WET)	1.2'	9	
	14'		CONTINUED			

▼ DURING DRILLING 12.5'

PRELIMINARY
SUBJECT TO CORRECTION

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23364 - 9
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner MCLAREN/HART
Address 470 PARK AVE. SOUTH 11TH AVE.
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-13B
County Bergen Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address Tondy Dr. Lodi, NJ. 07644

TYPE OF WELL (as per Well Permit Categories) Date well completed 12/20/90
Regulatory Program Requiring Well MONITORING Case I.D. # 85664
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 215 ft.
Well finished to 215 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	200	2"	P.V.C.
Outer Casing (Not Protective Casing)	0.5 0.5	170 19	6" 8"	Steel Steel
Screen (Note slot size)	200	215	2"	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	187	215	—	Morie #1
Annular Seal/Grout	150 0.5	187 150	— —	Pen Pelets Portland grout
Method of Grouting	Tremie			

Static water level after drilling 27 ft.
Water level was measured using tape
Well was developed for 2 hours at 1/2 gpm
Method of development Air lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Mud + Air Rotary
Drilling Fluid Bentonite Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 12.10
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 1/4/91

COPIES: White & Canary - DEP Canary - Driller Pink - Owner

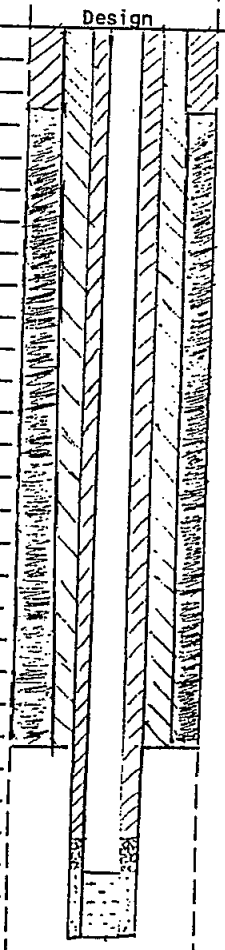
Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. HMW - 13B Coordinate No. 26.03.537 Permit No. 26-23364-9
Date Drilled 12/20/90 County Bergen Use Monitor
Location UTC/BASF, Trudy Drive, Lodi, NJ 07664
Owner Amerada Hess, 1 Hess Plaza, Woodbridge, 07095
Drilling Method Mud Rotary Sampling Method none
Hole Diameter top 12", bottom 6" Total Depth 215'
Casing: Type 2" PVC, 6" steel, 8" steel Diameter 2", 6", 8" Length see note
Screen: Type 2" PVC Slot .020 Diameter 2" Length 15'
Gravel Pack Size Morie # 1 Casing Seal pellets
Static Water Level 27' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
75'			
150'			
225'			



Identification of Soils / Remarks

set 2" well @ 215' w/ 15' 2" PVC screen
grout to surface
note: 8" steel = 0' - 19'
6" steel = 0' - 170'
2" PVC casing = 0' - 200'
2" PVC screen = 200' - 215'

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 22787
Atlas Sheet Coordinates 26 03 529

OWNER IDENTIFICATION - Owner ~~EXXON COMPANY USA~~
Address P.O BOX 4415
City HOUSTON State TX Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. W-2.
County Bergen Municipality
Address 460 N. Main St, Lodi, NJ. LODI BORO Lot No. 6B, 7, 8 Block No. 219

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well ~~UST~~ MONITORING Date well completed 11 / 21 / 90
Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex of NJ (KoKoL) Tele. # 536-8500.

WELL CONSTRUCTION

Total depth drilled 23 ft.
Well finished to 23 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.75	4.75	4"	PVC Sch. 40
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4.75	22.75	4"	PVC Sch. 40 Slot 20.
Tail Piece	22.75	23.0	4"	PVC Sch 40
Gravel Pack	2.5	23.0		#1 Morie
Annular Seal/Grout	0.5	2.5		Bentonite
Method of Grouting				

Static water level after drilling 13.8 ft.
Water level was measured using electronic probe
Well was developed for .5 hours at 41 gpm
Method of development surge + bail
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary.
Drilling Fluid N/A Type of Rig Mobile B80
Name of Driller Sam Berry
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1417
Name of Drilling Company HANDEX CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sam Berry Date 12-19-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

26-03-529 26-19976

DRILLING LOG (Cont Sheet) ELEVATION TOP OF HOLE

Hole No. SR-45

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT

INSTALLATION SAVANNAH DISTRICT

SHEET 2 OF 2 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	14'		SM - BROWNISH RED SILTY FINE GRAIN SAND W/TRACE OF WEA. ROCK FRAG 1" & HAIRLINE ROOTS.	1.1'	10	EST. TOP OF DECOMPOSED TO HI-WEA. ROCK
	15'					4 5
	16'		SM - WHITISH RED SILTY FINE-MED. GRAIN SAND W/TRACE OF WEA-ROCK FRAG 1"	1.1'	11	MIXED DRILL FLUID CLEANED HOLE W/6" FISHTAIL. 12 11 16
	17'		SM - RED SILTY FINE GRAIN SAND W/TRACE OF WEA-ROCK FRAG 1"	1.0'	12	SET 20.5' OF 4" CASING CLEANED HOLE W/ROCKBIT BEGAN CORING N.P. WIRELINE. 15 12 15 27
	18'					
	19'					PULL - 1 D-18.0' - 23.5' RAN 5.5 REC. 5.5 C.L. 0.0 WATER RETURN 100% COLOR RED
	20'					
	21'					
	22'					
	23'					
	23.5		E.O.B.			BACKFILLED HOLE

PRELIMINARY
SUBJECT TO CORRECTION

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 41499
Atlas Sheet Coordinates 26 03 566

OWNER IDENTIFICATION - Owner ILY PROPERTIES INC
Address RT 17 N. & ESSEX ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 194B
Address RT 17 N. & ESSEX ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 08 8 015
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN CO. Tele. #

WELL CONSTRUCTION

Total depth drilled 11'6" ft.
Well finished to 11'6" ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	1'6"	4"	PVC SCH40
Outer Casing (Not Protective Casing)			—	
Screen (Note slot size)	1'6"	11'6"	4"	SLOT 0.20
Tail Piece			—	
Gravel Pack	0.6"	11'6"	Annd.	#2 MORIE
Annular Seal/Grout	0'	0.6"	Annd.	Cement
Method of Grouting	gravity			

Static water level after drilling 3'6" ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 3 gpm
Method of development bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller B.M. STRZELCZYK
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1290
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Backfill
2-10 gray silty clay + sand
10'-12' coarse sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature B.M. Strzelczyk Date 08.28.95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

DMR

Well Permit No. 26 - 40433
Atlas Sheet Coordinates 26 : 03 : 648

OWNER IDENTIFICATION - Owner SHELL OIL COMPANY
Address 11921 FREEDOM DRIVE
City RESTON State VA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12
County BERGEN Municipality HACKENSACK CITY Lot No. TOWN Block No. ROW
Address Essex & Polifly

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/11/95
Regulatory Program Requiring Well UST Case I.D. # 89-06-14-0721
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Tele. # 908-536-8500

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 30 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	10	30	4	20 SLOT / SCH 40 PVC
Tail Piece	—	—	—	—
Gravel Pack	8	30	8	#1 MORIE
Annular Seal/Grout	0	8	8	BENT. / PORTLAND
Method of Grouting	PRESSURE			

Static water level after drilling 22 ft.
Water level was measured using PROBE
Well was developed for 1/2 hours at 2 gpm
Method of development PUMP & SURGE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method 8" AUGERS
Drilling Fluid — Type of Rig B-59
Name of Driller CHRIS O'SHAUGHNESSY
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1419
Name of Drilling Company HANDEX CORP./STEVE QUATRO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 10' BROWN SILTY SAND
10 - 20' BROWN SILTY SAND TO WEATHERED SHALE
20 - 30' WEATHERED SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Chris O'Shaughnessy Date 8-14-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0943

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

E DMR

MONITORING WELL RECORD

Well Permit No. 26 – 45583
Atlas Sheet Coordinates 26 Ø3 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW29
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 1478&177
Address 200 GREGG ST Date well started 9/16/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/16/96
Regulatory Program Requiring Well ISRA SITE Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirogen, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter: Top 10 in. Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	10	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	3	10		Morie #2
Annular Seal/Grout	0	3		Portland
Method of Grouting	Gravity			

Static water level after drilling 4 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 1/2 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J1210
Name of Drilling Company SUMMIT WELL DRILLING CO INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 9/18/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

E DMR

MONITORING WELL RECORD

Well Permit No. 26 44428
Atlas Sheet Coordinates 26 : Ø3 651

OWNER IDENTIFICATION - Owner ALFRED SANZARI ENTERPRISE
Address 25 MAIN ST.
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 2-R.
County ~~BERGEN~~ Municipality ~~HACKENSACK CITY~~ Lot No. ~~1D~~ Block No. ~~114C~~
Address ~~267 SOUTH SUMMIT ST.~~ Date well started 5 /17 /96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5 /17 /96
Regulatory Program Requiring Well UST Case I.D. # ~~90-01-19-1340~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dresdner Robin Tele. # (201)432-9800

WELL CONSTRUCTION

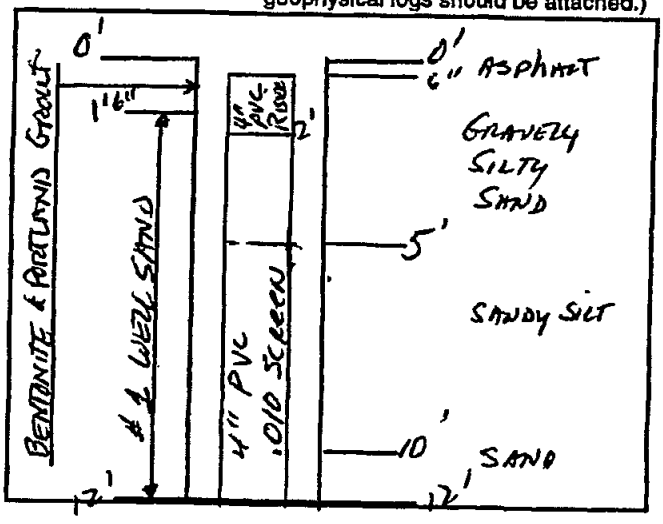
Total depth drilled 12'6 ft.
Well finished to 12' ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	3½"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	.010 slot PVC
Tail Piece				
Gravel Pack	1'6"	12'		#1 well sand
Annular Seal/Grout	0	1'6"		Bentonite & Portland Grout
Method of Grouting	tremie pipe			

Static water level after drilling 6 ft.
Water level was measured using water tape
Well was developed for 1 hours at 10 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity 0 gpm
Pump type none
Drilling Method Hollow Stem Auger
Drilling Fluid none Type of Rig TH60
Name of Driller Terry Griffin
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. JD1604
Name of Drilling Company ~~SBI ENVIRONMENTAL~~ INC.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature _____ Date 6 / 7 / 96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0950

DW .38 M
11/96

E DMR

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 48885

Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address 1 FINANCIAL PLAZA
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW31A
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 147A-17
Address 200 GREGG ST

DATE WELL STARTED 10 / 7 / 97
DATE WELL COMPETED 10 / 8 / 97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 85564

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirogen, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 40' ft.
Well finished to 40' ft.

Borehole diameter:
Top 10" in.
Bottom 6" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Is steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 19' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-80

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	20'	6"	Steel	19 lbs
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	20'	40'		Open Hole	
Blank Casings (No. Used)					19 lbs
Tail Piece					
Gravel Pack					
Grout	0'	20'		Neat Cement Bentonite	940 lbs. 50 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Steve Yetcoski

Driller's Signature Steve Yetcoski

Registration No. J1622 Date 11 / 7 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~48761~~

Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 562

OWNER IDENTIFICATION - Owner ~~VORNADO REALTY TRUST~~
Address ~~PARK 80 WEST, PLAZA II~~
City ~~SADDLE BROOK~~ State ~~NJ~~ Zip Code 07663

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-1 (Site)
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~2,6,7~~ Block No. ~~192B~~
Address ~~ROUTE 17~~

DATE WELL STARTED 10 / 9 / 97
DATE WELL COMPETED 10 / 9 / 97

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Langan Eng Tele. # 201-794-6900

WELL CONSTRUCTION

Total depth drilled 35 ft.
Well finished to N/A ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig ACKERMAN II

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	____ lbs. ____ lbs.

Grouting Method Tremi with pump
Drilling Method Mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0" to 3" Concrete
3" to 6" Stone
6" to 1' Gray f/m Sd Tr Slt Tr gravel
1' to 5' Same with peat
5' to 6' Gray c/m Sd Tr Slt Tr gravel
6' to 7' Red Till
7' to 15' Red m/f Sd Tr Slt Tr gravel
15 to 20' Same Tr decomposed Rock
20 to 25' Decomposed Sand Stone
25' to 35' Sand Stone

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) George Thornhill
Driller's Signature George Thornhill
Registration No. J1306 Date 10 / 18 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0598

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59098

Atlas Sheet Coordinates 26 : 03 556

ER IDENTIFICATION - Owner SCHWARTZ, BARBRA
Address 476 BLOOMFIELD AVE
City TRENTON State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-16D
County BERGEN Municipality LODI BORO Lot No. 5 Block No. 164
Address MONEY ST. & SIDNEY ST.

DATE WELL STARTED 11 / 9 / 00
DATE WELL COMPLETED 11 / 13 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 73 ft.
Well finished to 73 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 2.5 hours at 2 gpm

Method of development Submersible Pump.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	48	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
(Open Hole) or Screen (No. Used)	48	73	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	48	8	Neat Cement Bentonite	1250 lbs. 70 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller Signature Steve Wolf

Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	
5	Dark Brown Fine Brown Sand — Water 5'
10	Medium fine Red Silty Sand w/ Clay + Cobbles
20	
30	
38	
40	Red Shale / Sandstone Bedrock
50	
60	
70	
73	EOH 73'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

FORM 87

26-03-557

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3574
Application No. [redacted]
County _____

WELL RECORD

1. OWNER Washine Chemical Co. ADDRESS 165 Main St., Lodi, New Jersey
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)

2. LOCATION Lodi Bergen County

3. DATE COMPLETED February 28, 1966 DRILLER Wm. Stothoff Co., Inc.

4. DIAMETER: top 8 Inches Bottom 6 Inches TOTAL DEPTH 400 Feet

5. CASING: Type Std Steel, P.E. Welded Diameter 12 / 6 Inches Length 29'4" / 46'10½" Feet

6. SCREEN: Type None Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
Tail piece: Diameter _____ Inches Length _____ Feet

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date Feb. 26, 1966 Yield 100 Gallons per minute
Static water level before pumping 14 Feet below surface
Pumping level 399 feet below surface after 1 hours pumping
Drawdown 385 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Rotary rig air lift pump. Turbine test to be made later. How measured 5 gallon pail
Observed effect on nearby wells None observed

9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR Industrial AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes ___ No. No
Taste _____ Odor _____ Color _____ Temp. _____ °F

12. LOG See Over Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

13. SOURCE OF DATA Wm. Stothoff Co., Inc.

14. DATA OBTAINED BY Wm. Stothoff Co., Inc. Date May 17, 1966

D-578

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~59097~~

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~556~~

)WNER IDENTIFICATION - Owner ~~SCHWARTZ, BARBRA~~
Address ~~476 BLOOMFIELD AVE~~
City ~~TRENTON~~ State ~~NJ~~ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-16S
'ounty ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~5~~ Block No. ~~164~~
:ddress ~~MONEY ST. & SIDNEY ST.~~

YPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 11 / 14 / 00
DATE WELL COMPLETED 11 / 14 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 14 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 5 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	14	6	Morie 0	500 lbs
Grout	0	2	6	Neat Cement Bentonite	~~94~~ lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Drive and Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 23 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Red Med Fine Silty
5 Sand + Gravel
10
15
16 EOH 16'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-969

WELL LOG

Well # MW - 7D Date Drilled 1/12/93 Coordinate # 26.03.557 Permit # 26-32202 County Bergen
Type Vapor Extraction Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Site Mark - Tex Corporation, 85 Arnot Street, Lodi, NJ 07644
Drilling Method N/A Sampling Method N/A Hole Diameter see below Total Depth 70'
Gravel Pack Size Morie #1 & 2 Static Water Level n/a Casing Seal Portland & Pellets Open Hole
Inner Casing PVC Diameter 2" Length 65' Outer Casing Steel Diameter 6" Length 60'
Screen Type PVC Slot .020 Diameter 2" Length 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
			0'- 62' GROUT 0'- 65' IN. CASING 0'- 60' OUT CASING 62'-63' PELLETS 63'-70' GRAVEL 65'-70' SCREEN OPEN HOLE 70' SET WELL GPM none DEVELOPMENT TIME STANDPIPE X FLUSHMOUNT VAULT	2" PVC well set in previously drilled 70' steel cased open hole Hole diameter : 0'- 60' .. 10" 60'-70' .. 6"
20'				
40'				
60'				
80'				

Drilled by: John Vogt

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22740
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY CORP.
Address 200 GREG STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14B
County Municipality LODI BORO Lot No. 1-A Block No. 147A-
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/9/90
Regulatory Program Requiring Well ECRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) McLAREN HART / F. BROCKERHOFF Tele. # (212) 447-1480

WELL CONSTRUCTION

Total depth drilled 37 ft.
Well finished to 37 ft.
Borehole diameter:
Top 12 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	—	—	—	—
Outer Casing (Not Protective Casing)	+2	17.2	8	SCH. 40. STEEL
Screen (Note slot size)	—	—	—	—
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	—	—	—	—
Method of Grouting	Pressure Grouted			

Static water level after drilling 7.5 ft.
Water level was measured using TAPE
Well was developed for .5 hours at 6 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY
Drilling Fluid NONE Type of Rig SCHRAMM AIR-ROTARY
Name of Driller H. L. REXRODE, JR.
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14B

0 - 10' Moderate Brown, silty sand, some clay, some rock fragments.
10' - 13' Moderate Brown, silty sand and clay grading into weathered shale at 12.5'
13 + 37' Reddish Brown, fissile shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 12/11/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site
Saddle Brook, New Jersey
DATE STARTED: 7/2/90 DATE COMPLETED: 7/2/90

HOLE NO. MW-5U
~~SURF. EL.~~ 26-2096' 26.03.562
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 2.5'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DRILLER'S FIELD LOG

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
WL ▼						Drilled to 9.0' without sampling	
5.0							
10.0							
						Bottom of Boring	9.0'
						Note: Installed 2" stainless steel 10 slot screen 9.0' to 4.0', 2" stainless steel riser to surface with locking standpipe cover.	

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60060

Atlas Sheet Coordinates 26 : 03 562

WNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
ddress 1 FINANCIAL PLAZA MAIL STOP516
ity HARTFORD State CT Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. EMW-29R
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 177.01
ddress 200 GREGG ST

DATE WELL STARTED 1 / 11 / 01
DATE WELL COMPLETED 5 / 3 / 01

YPE OF WELL (as per Well Permit Categories) MONITORING
legulatory Program Requiring Well ISRA SITE Case I.D.# 86564

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) THE IT GROUP Tele. # (609) 584 8900

WELL CONSTRUCTION

otal depth drilled 11 ft.
Vell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

Vell was finished: ☐ above grade
☒ flush mounted

f finished above grade, casing height (stick up ve land surface ____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

tatic water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours
at 1-2 gpm

Method of development PUMP

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	30455	1.61 #
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	1	11	2	30455	.010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.5	11	6	MORIE	#1
Grout	0	.5	6	Neat Cement Bentonite	25 lbs. ____ lbs.

Grouting Method PLACEMENT
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid HSA Type of Rig CME 75

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company DIAMOND DRILLING CO., INC.

Well Driller (Print) NORMAN CRANE

Driller's Signature [signature]

Registration No. J22211 Date 7 / 11 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 11 BROWN FINE SILTY SAND WITH GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT — Consolidated Edison Company
LOCATION — Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED — 6/30/90 DATE COMPLETED — 6/30/90

HOLE NO. TW-1
~~SURF. EL.~~ 26·20955 / 26:03:562
JOB NO. 9053
GROUND WATER DEPTH WHILE DRILLING 4.6'
BEFORE CASING REMOVED
AFTER CASING REMOVED — Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/OR — % CORE RECOVERY

SHEET 1 OF 1

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		6/19		Black-brown moist hard to very stiff SILT, little fine to coarse sand, trace wood, trace glass, trace metal, trace rubber	2.5'
	2.0'			34/27	53		
	2.0'-	2*		14/8			
	4.0'			10/19	18		
5.0 ▼	4.0'-	3		9/12		Brown moist medium dense fine to coarse SAND, little silt, trace fine gravel	7.0'
WL	6.0'			13/13	25		
	6.0'-	4		8/8		Brown wet medium dense fine SAND, some silt	8.0'
	8.0'			10/10	18		
	8.0'-	5		9/10		Brown-red wet very stiff SILT, little fine sand	9.5'
10.0	10.0'			14/16	24	Red wet medium dense weathered SHALE	
						Bottom of Boring	10.3'

Note: Installed 2" stainless steel 10 slot screen 10.3' to 5.3', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 377Ø9
Atlas Sheet Coordinates 26 Ø3 529

OWNER IDENTIFICATION - Owner EXXON COMPANY USA
Address 339 JEFFERSON ROAD
City PARSIPPANY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County BERGEN Municipality LODI BORO Lot No. Block No.
Address 460 N. Main Street CITY STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/18/94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Tele. # 536-8500

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	4"	Sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	5	20	4"	Sch 40 PVC 20 slot
Tail Piece	—	—	—	
Gravel Pack	4	20	8"	#1 Morie
Annular Seal/Grout	0	4	8"	Bentonite/Portland
Method of Grouting	Pressure			

Static water level after drilling 17.2 ft.
Water level was measured using Electronic Probe
Well was developed for 1/2 hours at 15 gpm
Method of development Bail
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity / gpm
Pump type: /
Drilling Method Air Rotary
Drilling Fluid Air Type of Rig CT 450
Name of Driller Vincent Javdot
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 11533
Name of Drilling Company HANDEX CORP./STEVE QUATTRO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1 asphalt
1-7 Brn Sand + gravel some (+) silt and clay
7-13 Rd Brn Sand, silt Shale fragments
13-20 Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 8/29/94

LP

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50184

Atlas Sheet Coordinates 26: 03 529

OWNER IDENTIFICATION - Owner EXXON COMPANY U.S.A.
Address 1900 E. LINDEN AVE.
City LINDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #6
County BERGEN Municipality LODI BORO Lot No. NA Block No. NA
Address AVENUE "E"

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 03 / 31 / 98
DATE WELL COMPETED 03 / 31 / 98
Regulatory Program Requiring Well UST Case I.D.# 90-06-04-0920

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) land tech remedial Tele. # 732-935-1300

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface 0 ft.

Was steel protective casing installed?
☒ Yes ☐ No WSTEEL MANHOLE

Static water level after drilling 12 ft.

Water level was measured using steel tape

Well was developed for ____ hours
at ____ gpm

Method of development ____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	GRADE	5'	1¼"	PVC	SCH 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25	1¼"	PVC SLOT .010	SCH 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4'	25'	ANNULUS	MORIE GRAVEL	#1
Grout	GRADE	4'	ANNULUS	Neat Cement Bentonite	94 lbs. ____ lbs.

Grouting Method TREMMY
Drilling Method ____

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig GEOPROBE

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company LUTZ ENVIRONMENTAL INC.

Well Driller (Print) RICHARD M. TABOR

Driller's Signature Richard M. Tabor

Registration No. J 1598 Date 5/4/98

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0" - 6" ASPHALT
6" - 7' RED/BROWN COARSE TO MEDIUM SAND SOME(-) SILT, TRACE MED. TO FINE ROUNDED GRAVEL
7' - 13' red medium to fine sand, trace silt some medium to fine rounded gravel
13' - 25' BEDROCK - RED SANDSTONE

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

FORM 87

26-05-565 X

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-357
Application No. _____
County Bergen

WELL RECORD

Red #

1. OWNER Jos L Muscarelle Inc ADDRESS 113 Essex St
Owner's Well No. One SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Maywood Bergen Co N.J.
3. DATE COMPLETED Aug 5 1966 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 10 Inches Bottom 10 Inches TOTAL DEPTH 400 Feet
5. CASING: Type Steel Diameter 10 Inches Length 32 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
Range in Depth { Top ___ Feet / Bottom ___ Feet Geologic Formation ___
Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
Water rises to ___ Feet above surface
8. RECORD OF TEST: Date Aug 5 1966 Yield 159 Gallons per minute
Static water level before pumping 10 Feet below surface
Pumping level 185 feet below surface after 8 hours pumping
Drawdown 175 Feet Specific Capacity ___ Gals. per min. per ft. of drawdown
How Pumped Turbine How measured orific
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Turbine Mfrs. Name Deming
Capacity 150 G.P.M. How Driven electric H.P. 25 R.P.M. 1750
Depth of Pump in well 210 Feet Depth of Footpiece in well 10 Feet
Depth of Air Line in well 210 Feet Type of Meter on Pump no Size ___ Inches
10. USED FOR Cooling AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily
11. QUALITY OF WATER ___ Sample: Yes X No. ___
Taste No Odor no Color clear Temp. 56 °F
12. LOG 10 Red Hard Pan bal red shales and rock Are samples available? no
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date Aug 19 1966

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

Form 87-5M

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 26-1356
Application No. _____
County _____

1. OWNER Lodi Shopping Center ADDRESS _____
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet
   (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED _____ DRILLER _____
4. DIAMETER: Top _____ Inches Bottom _____ Inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet Geologic Formation _____
   Bottom _____ Feet
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ Feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Capacity _____ Gallons per minute
   How Driven _____ Horse Power _____ R.P.M. _____
   Depth of pump in well _____ Feet Depth of Foot piece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily
    Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ DATE _____

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138
5/95

New Jersey Department of Environmental Protection
Bureau of Water Allocation

WELL RECORD

Well Permit Number 26 - 58373

Atlas Sheet Coordinates 26 : 03 : 569

OWNER LIEBHOFF, JEREMY & TARASO

Address 250 ROUTE 17 SOUTH

City LODI State NJ Zip Code 07644

WELL LOCATION ADDRESS 250 ROUTE 17 SOUTH Owner's Well No. #1

County BERGEN Municipality LODI BORO Lot No. 3 Block No. 224

WELL USE INDUSTRIAL

DATE WELL STARTED 10 / 16 / 00

DATE WELL COMPLETED 10 / 20 / 00

WELL CONSTRUCTION

Total Depth Drilled 175ft ft.

Finished Well Depth 175ft ft.

Borehole Diameter:
Top 12"x8" in.
Bottom 8" in.

Well Casing Begins:
1½ ft. above grade or
_____ ft. below grade

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	52	8"	Steel	25LBS
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	21ft	12"	Steel	50LBS
Open Hole or Screen (No. Used)	52	175ft	8"	open hole	—
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	52ft	12"x8"	Neat Cement Bentonite	1880 lbs 100 lbs

RECORD OF TEST

Test Date 10 / 20 / 2000

Static Water Level 1½ft ft. below land surface

Water Level Measured Using m-scope

Pumping Water Level 56ft ft. below land surface

Well Was Pumped Using air rotary

Well Yield 200GPM gpm

If Pump Tested: Discharge Rate _____ gpm

Duration of Test _____ hours

Grouting Method Pres Grout w/trimmie pipe

Drilling Method Mud Rotary

PERMANENT PUMPING EQUIPMENT

Installed by Adam F Rinbrand Jr Reg. No MD-0332

Pump Type Gould Subm. 70J07

Depth of Pump below land surface 105ft ft.

Capacity 65 gpm Horsepower 7½HP

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company RINBRAND WELL DRILLING

Well Driller (Print) Adam F Rinbrand Jr

Driller's Signature Adam F Rinbrand Jr

Registration No. MD-0332 Date 10 / 23 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-3.5ft Red Rock/fill
3½-16ft Clay, Boulder Sand
16-149 Red sandstone
149-153 red shale Rock
153-175 Red shale/sand stone
1st water 75ft = 15GPM
2nd water 90ft = 30GPM
3rd water 149ft = 30GPM
4th water 150ft = 75GPM
5th Water 154ft = 150GPM
6th Water 175ft = 200GPM

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Handex

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751

BORING LOG

Well No. W-4 Permit No. 2616427-2 Coordinate No. 26.03.5.69

Date Drilled 3/28/89 County Bergen Use monitoring

Location Block 114A, Lot 3 (behind 445 Route 17 South), Hackensack, New Jersey

Owner Amoco Oil Company Address P.O. Box 87707, Chicago, Illinois 60680

Drilling Method augers Sampling Method split-spoon

Hole Diameter 8" Total Depth 17'

CASING: Type PVC Schedule 40 Diameter 4" Length 2'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 15'

Gravel Pack Size #1 Casing Seal cement/bentonite Static Water Level 9.06'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-3' Red/brown CLAY and SILT, some (+) fine to medium sand
5'	S-1 3'-5'	5.5.4.11	WELL SCREEN	3'-5' Red/brown fine SAND, little (+) silt, little (-) fine gravel and clay
				5'-10' Red/brown SILT, little (-) clay, trace (+) fine sand and gravel
10'	S-2 8'-10'	20.16.5.7		10'-17' Red/brown fine SAND and SILT with (+) coarse gravel, little (+) clay
15'				NOTE: 14' - large cobbles

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60319

Atlas Sheet Coordinates 26 : 03 : 644

WNER IDENTIFICATION - Owner RAPOPORT, FREDRICA C/O SC

ddress

ity 15 MAPLE AVE. MORRISTOWN State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1

ounty BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 60

ddress 175 ROCHELLE AVE.

DATE WELL STARTED 2/6/01

YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 2/6/01

egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Raviv Associates Tele. #

WELL CONSTRUCTION

otal depth drilled 17' ft.
ell finished to 17' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

ell was finished: ☒ above grade ☐ flush mounted

inished above grade, casing height (stick p) e land surface 3' ft.

as steel protective casing installed? ☒ Yes ☐ No

atic water level after drilling 8' ft.

ater level was measured using Tape

ell was developed for 1/2 hours 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	7'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	7'	17'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	17'		Morie #2	
Grout	0'	6'		Neat Cement Bentonite	188 lbs. 10 lbs.

lethod of development pump

Grouting Method tremie

Drilling Method Auger

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity gpm

ump type:

rilling Fluid Type of Rig Hurricane

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company SUMMIT WELL DRILLING CO INC

/ell Driller (Print) John Vogt

riller's Signature John Vogt

egistration No. J1544 Date 2/16/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1[illegible]
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

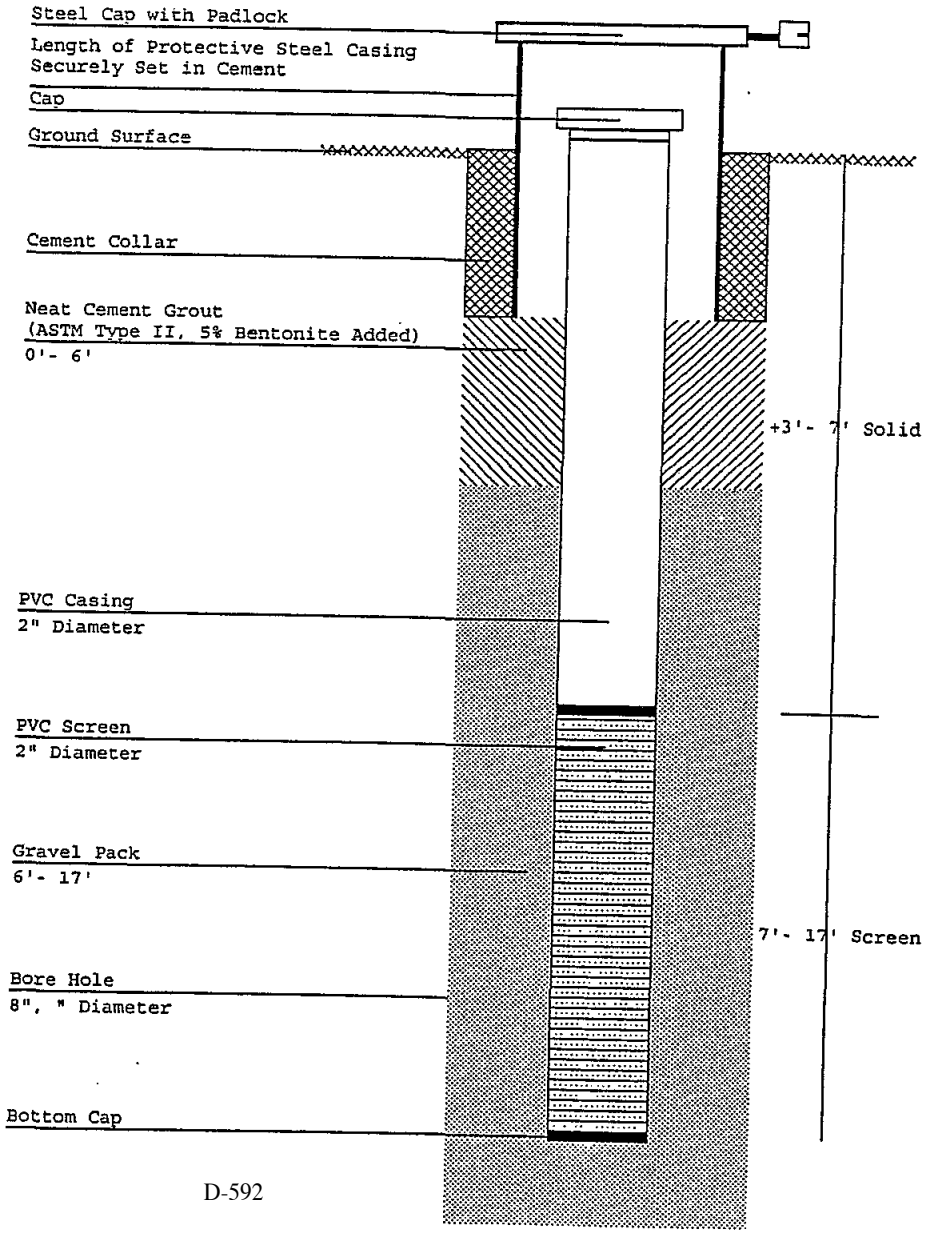
LL: MW1 DATE DRILLED: 02/06/2001 COORD #1: 26.03.644 PERMIT #1: 26-60319
COORD #2: PERMIT #2:
TE: Pine Cottage Estate, 175 Rochelle Avenue, , Rochelle Park, NJ COUNTY: Bergen
NER: Rapoport, Fredrica, 15 Maple Avenue, , Morristown, NJ XSTREET:
USE: Monitor

NER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
AMETER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
NGTH: 10' LENGTH: DIAMETER: 2" HOLE DIA: 8",8"
LENGTH 1: 10' TOTAL DEPTH: 17'
T WELL: 17' GAL PER MIN: 1/2 LENGTH 2:
AVEL PK SZ: Morie #2 STAT H2O LVL: 8' SLOT SIZE: .020
ILLER: John Vogt DEVELOPMENT METHOD: pump CASING SEAL: Portland
RFACE COMPLETION: S DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

MARKS / SOILS IDENTIFICATION

- 6' Brown sand fill.
- 8' Silty clay.
- 17' Brown sand.



WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60320

Atlas Sheet Coordinates 26 : 03 : 644

WNER IDENTIFICATION - Owner RAPOPORT, FREDRICA C/O SC

ddress 15 MAPLE AVE.

ity MORRISTOWN State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2

ounty BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 60

ddress 175 ROCHELLE AVE.

DATE WELL STARTED 2/ 6 / 01

YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 2/ 6 / 01

egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Raviv Associates Tele. #

WELL CONSTRUCTION

otal depth drilled 14' ft.

/ell finished to 14' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

/ell was finished: ☒ above grade
☐ flush mounted

finished above grade, casing height (stick p[illegible]e land surface 3' ft.

/as steel protective casing installed?
☒ Yes ☐ No

tatic water level after drilling 8' ft.

/ater level was measured using Tape

/ell was developed for 1/2 hours
1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	4'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	4'	14'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	14'		Morie #2	
Grout	0'	3'		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method gravity

Drilling Method Auger

lethod of development pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity gpm

'ump type:

)rilling Fluid Type of Rig Hurricane

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

)riller's Signature John Vogt

legistration No. J1544 Date 2 / 16 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
VIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-100
http://www.summitdrilling.co
email: info@summitdrilling.com

WELL LOG

.: MW2 DATE DRILLED: 02/06/2001 COORD #1: 26.03.644 PERMIT #1: 26-60320
COORD #2: PERMIT #2:

:: Pine Cottage Estate, 175 Rochelle Avenue, , Rochelle Park, NJ COUNTY: Bergen
:R: Rapoport, Fredrica, 15 Maple Avenue, , Morristown, NJ XSTREET:
USE: Monitor

:R CASING: PVC
IETER: 2"
GTH: 7'

WELL: 14'
/EL PK SZ: Morie #2
LLER: John Vogt
FACE COMPLETION: S

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

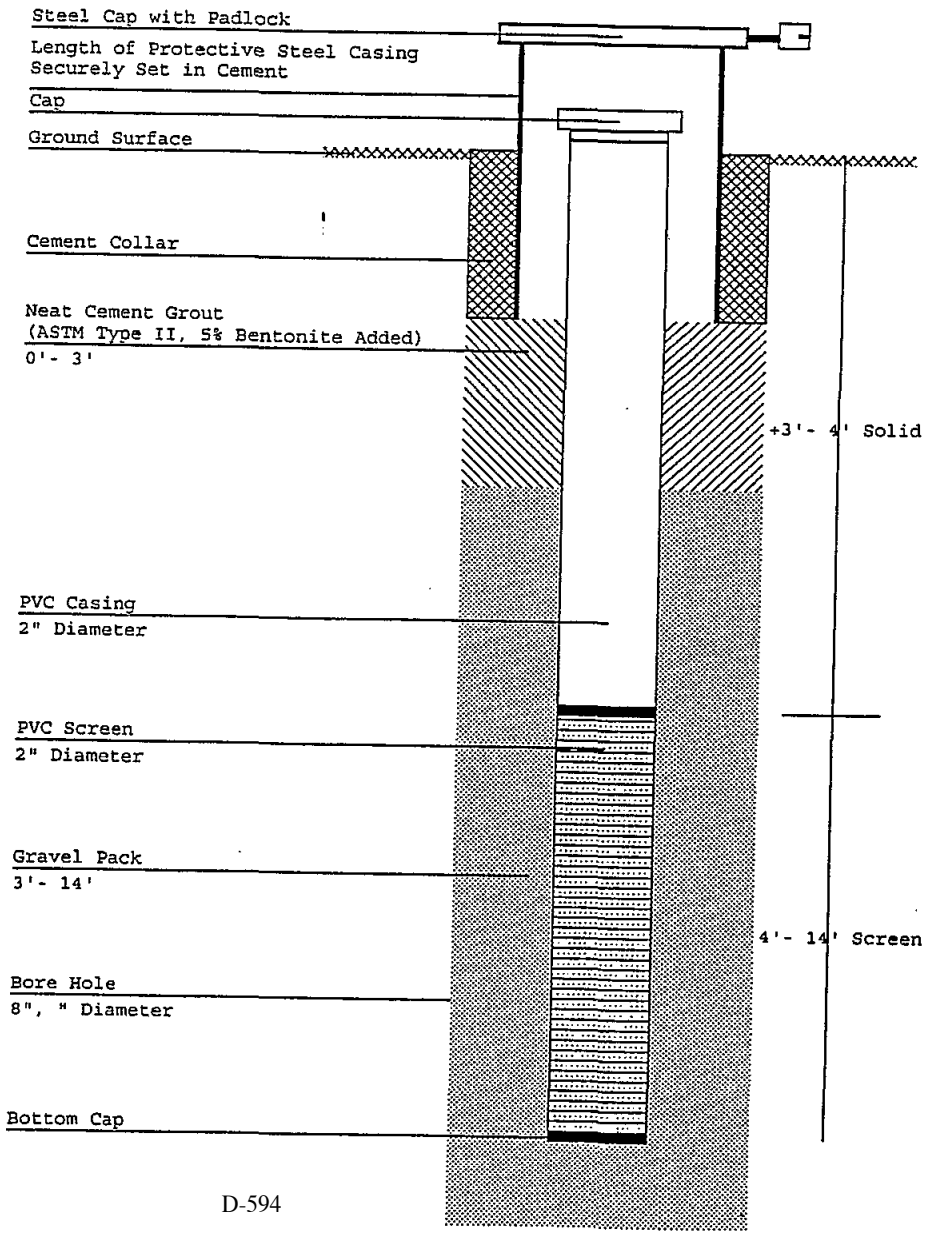
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 14'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

ARKS / SOILS IDENTIFICATION

6' Brown sand fill.
8' Silty clay.
14' Brown sand.



/R-138 M
98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60321

Atlas Sheet Coordinates 26 : 03 : 644

VNER IDENTIFICATION - Owner RAPOPORT, FREDRICA C/O SC

dress 15 MAPLE AVE.

y MORRISTOWN State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3

unty BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 60

dress 175 ROCHELLE AVE.

DATE WELL STARTED 2/ 6/ 01

'PE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 2/ 6/ 01

gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Raviv Associates Tele. #

WELL CONSTRUCTION

al depth drilled 17' ft.

ll finished to 17' ft.

rehole diameter:
Top 8" in.
Bottom 8" in.

ll was finished: ☒ above grade
☐ flush mounted

inished above grade, casing height (stick
e land surface 3' ft.

as steel protective casing installed?
Yes ☐ No

atic water level after drilling 8' ft.

ater level was measured using Tape

ll was developed for 1/2 hours
1/2 gpm

ethod of development pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	7'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	7'	17'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	8'	17'		Morie #2	
Grout	0'	8'		Neat Cement Bentonite	~~188~~ lbs. ~~10~~ lbs.

Grouting Method tremie

Drilling Method Auger

'as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity gpm

ump type:

rilling Fluid Type of Rig Hurricane

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company SUMMIT WELL DRILLING CO INC

ell iller (Print) John Vogt

riller's Signature John Vogt

egistration No. J1544 Date 2 / 16 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
VIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-100
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

L: MW3 DATE DRILLED: 02/06/2001 COORD #1: 26.03.644 PERMIT #1: 26-60321
COORD #2: PERMIT #2:

E: Pine Cottage Estate, 175 Rochelle Avenue, , Rochelle Park, NJ
ER: Rapoport, Fredrica, 15 Maple Avenue, , Morristown, NJ

COUNTY: Bergen
XSTREET:
USE: Monitor

ER CASING: PVC
METER: 2"
GTH: 10'

WELL: 17'
VEL PK SZ: Morie #2
LLER: John Vogt
FACE COMPLETION: S

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

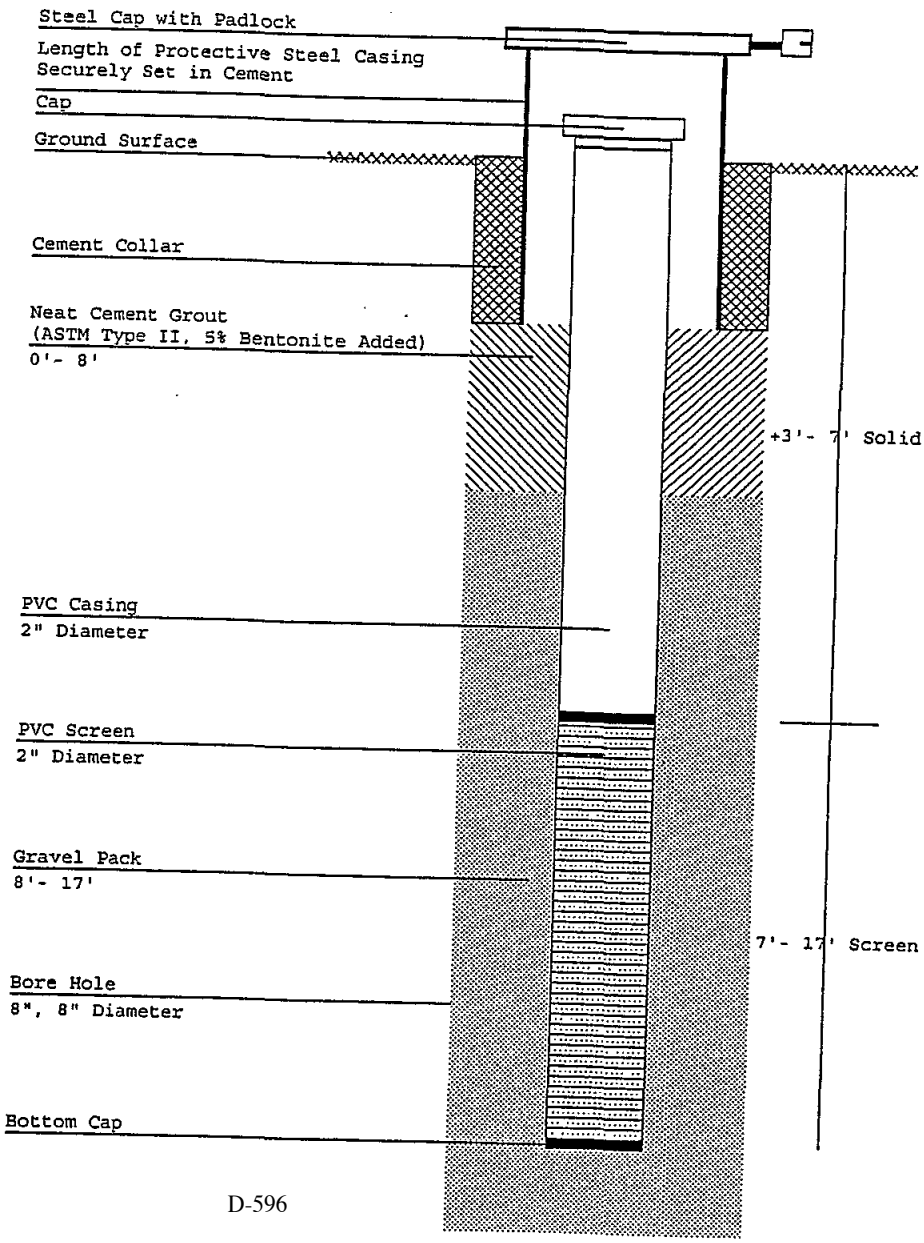
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 17'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

ARKS / SOILS IDENTIFICATION

6' Brown sand fill.
8' Silty clay.
17' Brown sand.



VR-138 M
'98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60322

Atlas Sheet Coordinates 26 : 03 : 644

WNER IDENTIFICATION - Owner RAPOPORT, FREDRICA C/O SC
ldress 15 MAPLE AVE.
ty MORRISTOWN State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4
unty BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 60
ldress 175 ROCHELLE AVE.

DATE WELL STARTED 2/6/01
DATE WELL COMPLETED 2/6/01

'PE OF WELL (as per Well Permit Categories) MONITORING
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Raviv Associates Tele. #

WELL CONSTRUCTION

al depth drilled 18 ft.
ll finished to 18 ft.

rehole diameter:
Top 8" in.
Bottom 8" in.

ll was finished: ☒ above grade
☐ flush mounted

nished above grade, casing height (stick
) a land surface 3' ft.

s protective casing installed?
☒ Yes ☐ No

tic water level after drilling 8' ft.

ter level was measured using Tape

ll was developed for 1/2 hours
1/2 gpm

ethod of development pump

as permanent pumping equipment installed? ☐ Yes ☒ No

mp capacity gpm

mp type:

illing Fluid Type of Rig Hurricane

ealth and Safety Plan submitted? ☒ Yes ☐ No

vel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	8'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8'	18'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	7'	18'		Morie #2	
Grout	0'	7'		Neat Cement Bentonite	188 lbs. 10 lbs.

Grouting Method tremie
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

illing Company SUMMIT WELL DRILLING CO INC

ell Driller (Print) John Vogt

iller's Signature John Vogt

gistration No. J1544 Date 2/16/01

D-597

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1[illegible]
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

LL: MW4 DATE DRILLED: 02/06/2001 COORD #1: 26.03.644 PERMIT #1: 26-60322
COORD #2: PERMIT #2:

TE: Pine Cottage Estate, 175 Rochelle Avenue, , Rochelle Park, NJ COUNTY: Bergen
NER: Rapoport, Fredrica, 15 Maple Avenue, , Morristown, NJ XSTREET:
USE: Monitor

NER CASING: PVC
AMETER: 2"
NGTH: 11'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 18'

T WELL: 18'
AVEL PK SZ: Morie #2
ILLER: John Vogt
RFACE COMPLETION: S

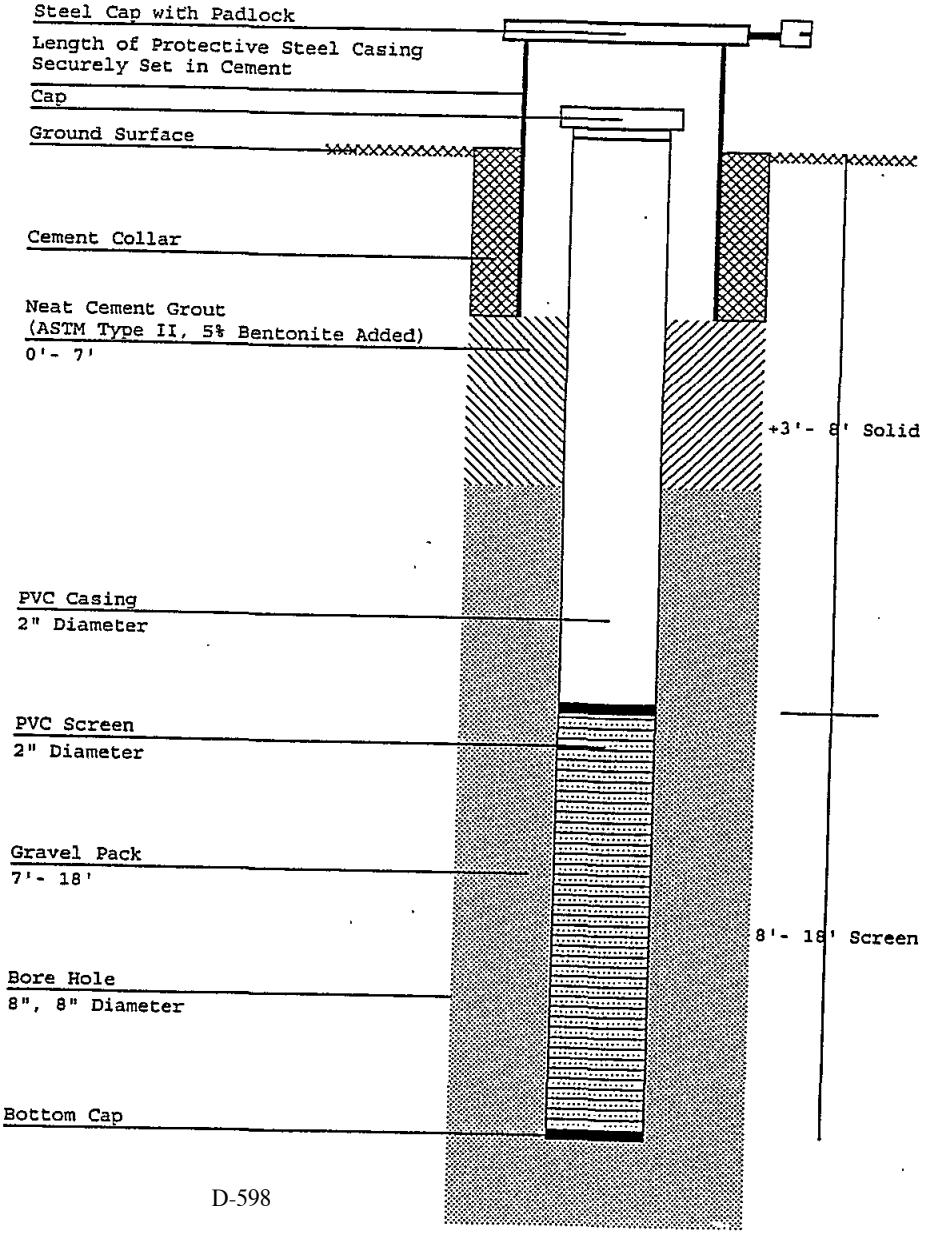
GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

MARKS / SOILS IDENTIFICATION

- 6' Brown sand fill.
- 8' Silty clay.
- 18' Brown sand.



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59174

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner EXXON MOBIL CORP.
Address 1900 E LINDEN AVE
City LINDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address OUTWATER LA & MAIN ST

DATE WELL STARTED 12 / 22 / 00
DATE WELL COMPETED 12 / 22 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Tele. # 732 536 8500

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 12 ft.

Water level was measured using Probe

Well was developed for 1/2 hours at — gpm

Method of development Pump & Surge

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geo Probe

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	3/4	PVC	Sch 40
Middle Casing (for triple cased wells only)	—		—	—	—
Outer Casing (largest diameter)	—		—	—	—
Open Hole or Screen (No. Used 1)	5	17	3/4	PVC	10 slot
Blank Casings (No. Used —)	—		—	—	—
Tail Piece	—		—	—	—
Gravel Pack	3	17	3	Sand	#1
Grout	0	3	3	Neat Cement	10 lbs.
				Bentonite	1 lbs.

Grouting Method PRESSURE
Drilling Method Direct Push

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HANDEX CORP./CHRIS O'SHAUGHNESS
Well Driller (Print) Chris O'Shaughnessy
Driller's Signature
Registration No. 11419 Date 12/22/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-17' Brown silty sand to bedrock.

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53935

Atlas Sheet Coordinates 26 : 03 537

OWNER IDENTIFICATION - Owner NJ DEPT OF TRANSPORATION
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Site NW-15
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address I-80

DATE WELL STARTED 6/11/99
DATE WELL COMPLETED 6/11/99

TYPE OF WELL (as per Well Permit Categories) BORING
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 1-609-734-7000

WELL CONSTRUCTION

Total depth drilled 31.5 ft.
Well finished to N/A ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4 ft.

Water level was measured using Tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	___ lbs. ___ lbs.

Grouting Method Tremi with pump
Drilling Method mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 6" Asphalt
6" to 5' Blk m/f Gravel
5' to 31.5' Brn m/f SD gravel & Silt

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) George Thornhill
Driller's Signature
Registration No. 1306 Date 7/3/99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 19977
Atlas Sheet Coordinates 26 : 03 : 528

OWNER IDENTIFICATION - Owner US ARMY CORPS OF ENGINEER
Address 26 FEDERAL PLAZA
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-46
County Municipality LODI BORO Lot No. 01 Block No. 13
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 06/01/90
Regulatory Program Requiring Well BORING Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 31.8' ft.
Well finished to ft.
Borehole diameter:
Top in.
Bottom in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling ft.
Water level was measured using
Well was developed for hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method
Drilling Fluid Type of Rig
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company U.S. ACOE,NY DIST.,CENAN-PR-G

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature James E Kinsey Date 8-27-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

26-03-528 26-19977 Hole No. SR-46

DRILLING LOG

DIVISION: SOUTH ATLANTIC
INSTALLATION: SAVANNAH DISTRICT
SHEET 1 OF 3 SHEETS

1. PROJECT: LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT
2. LOCATION (Coordinates or Station):
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SR-46
5. NAME OF DRILLER: JAMES KNOX
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 17.0'
8. DEPTH DRILLED INTO ROCK: 14.8'
9. TOTAL DEPTH OF HOLE: 31.8'
10. SIZE AND TYPE OF BIT:
11. DATUM FOR ELEVATION SHOWN (TBM or MSL): MSL
12. MANUFACTURER'S DESIGNATION OF DRILL: FAILING 314
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 7; UNDISTURBED
14. TOTAL NUMBER CORE BOXES:
15. ELEVATION GROUND WATER: NOT RECORDED
16. DATE HOLE: STARTED 06/01/90; COMPLETED 06/01/90
17. ELEVATION TOP OF HOLE:
18. TOTAL CORE RECOVERY FOR BORING: %
19. SIGNATURE OF INSPECTOR: GUSTAVE ANDERSON

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1'		SM- REDISH BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL. (FILL)	.6'	1	
	2'		SM- REDISH BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (FILL)	.7'		
	3'					
	4'		SM- REDISH BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (FILL)	.5'	2	
	5'		SM- DK. BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (FILL)	.6'		
	6'					
	7'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (FILL)	.7'	3	
	8'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (FILL)	.7'		
	9'					
	10'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL (MOIST)	.6'	4	
	11'		SM- REDISH BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL	.6'		
	12'					
	13'		SM- RED DECOMPOSED SAND STONE	.6'	5	
			- CONTINUED -			

PRELIMINARY SUBJECT TO CORRECTION

26-03-528 26-19977

DRILLING LOG (Cont Sheet) ELEVATION TOP OF HOLE

Hole No. SR-46

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT

INSTALLATION SAVANNAH DISTRICT

SHEET 3 OF 3 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV-ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	28'		RED SANDSTONE			RUN 3 – 27.8' TO 31.8' REC. 3.8'
	29'					
	30'					
	31'					
	32'		BOTTOM OF HOLE AT 31.8'			

PRELIMINARY
SUBJECT TO CORRECTION

26-05-028 26-17911

DRILLING LOG (Cont Sheet) ELEVATION TOP OF HOLE

Hole No. SR-46

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT

INSTALLATION SAVANNAH DISTRICT

SHEET 2 OF 3 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	14'		NO SAMPLE	0		
	15'		SM- RED DECOMPOSED SANDSTONE	4'	6	6 8 19
	16'					
	17'		RED GLACIAL TILL	.2	7	50+.2'
			RED SANDSTONE			BEGAN CORING RUN 1 - 17.0' TO 22.8' REC. 5.15'
	18'					
	19'					
	20'					
	21'					
	22'					
	23'					RUN 2 - 22.8' TO 27.8' REC. 4.95'
	24'					
	25'					
	26'					
	27'					
	28'		-CONTINUED-			

PRELIMINARY
SUBJECT TO CORRECTION

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32809
Atlas Sheet Coordinates 26 : 03 : 529

OWNER IDENTIFICATION - Owner EXXON COMPANY U S A
Address 339 JEFFERSON RD.
City PARSIPPANY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Bergen Municipality LODI BORO Lot No. 21.D Block No. 169B
Address 449 Main Street - The Corner Nursery

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/10/93
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HANDEX of NJ Tele. # 908-536-8500

WELL CONSTRUCTION

Total depth drilled 17.5 ft.
Well finished to 17.5 ft.
Borehole diameter:
Top 4 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2.5	4	PVC Sch. 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2.5	17.5	4	PVC Sch. 40 (.020)
Tail Piece				
Gravel Pack	2	17.5	8	#1 morie
Annular Seal/Grout	1	2	8	Portland / Bentonite
Method of Grouting	PRESSURE			

Static water level after drilling 8' ft.
Water level was measured using probe
Well was developed for 1/2 hours at 2 gpm
Method of development Bailing
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method Hollow Stem Auger
Drilling Fluid ___ Type of Rig B-80
Name of Driller Robert Brown
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1575
Name of Drilling Company HANDEX CORP./STEVE QUATRO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1 Brown c-f SAND, some rounded C-m Gravel
1-2 Brown c-f rounded Gravel
2-3 Dark Brown c-f SAND
3-4 Brown silty CLAY
4-7 Grey-brown CLAY
7-11 Red silty clay
11-14 Red c-f sand & Silt some rounded c-f Gravel
14-18 red silty clay

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Robert J Brown Date 3-11-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

HANDEX OF NEW JERSEY, INC., 500 Campus Drive, P.O. Box 451, Morganville, New Jersey 07751-0451 (908) 536-8500

BORING LOG

Well No. W-3 Permit No. 26-22788 Coord. No. 26.035.29

Date Drilled 11/21/90 County Bergen Use Monitoring

Location Exxon Service Station, 460 N. Main Street, Lodi, NJ

Owner Exxon Company, USA Address P.O. Box 4415, Houston, TX 77210

Drilling Method air rotary Sampling Method drill cuttings

Hole Diameter 8" Total Depth 23'

CASING: Type PVC Schedule 40 Diameter 4" Length 5'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 18'

Gravel Pack Size #1 Morie Casing Seal bentonite Static Water Level 12.4'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN		IDENTIFICATION OF SOILS/REMARKS
			CASING	0-6"	Concrete
				6"-1'	Pea GRAVEL and coarse to medium fine SAND, little silt (Fill)
				1'-4'	Brown coarse to medium fine SAND, little (-) silt, trace medium to fine gravel
5'				4'-7'	Red coarse to medium fine SAND, little silt, trace medium to fine gravel
			WELL SCREEN	7'-13'6"	Red medium to fine SAND, some (+) silt, trace medium to fine gravel
10'					
				13'6"-14'	Boulders/fractured bedrock
15'				14'-23'	Bedrock-red sandstone
20'					

NOTE: Hydrocarbon odors were detected from 12'-14' during drilling.

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22788
Atlas Sheet Coordinates 26 : 03 : 529

OWNER IDENTIFICATION - Owner EXXON COMPANY USA
Address P.O. BOX 4415
City HOUSTON State TX Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. W-3
County Bergen Municipality LODI BORO Lot No. 6B, 7, 8 Block No. 219
Address 460 N. Main St., Lodi, NJ.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/21/90
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex of NJ. (KoKoL) Tele. # 536-8500

WELL CONSTRUCTION

Total depth drilled 23 ft.
Well finished to 23 ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.75	4.75	4"	PVC Sch. 40
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4.75	22.75	4"	PVC Sch. 40 Slot 20
Tail Piece	22.75	23.0	4"	"
Gravel Pack	2.5	~~2.5~~ 23.0		#1 Morie
Annular Seal/Grout	0.5	2.5		Bentonite.
Method of Grouting				

Static water level after drilling 12.4 ft.
Water level was measured using electronic probe
Well was developed for .5 hours at 4 gpm
Method of development Surge & bail
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary.
Drilling Fluid N/A Type of Rig Mobile B-80
Name of Driller Sam Berry
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1417
Name of Drilling Company HANDEX CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sam Berry Date 12-19-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

HANDEX OF NEW JERSEY, INC., 500 Campus Drive, P.O. Box 451, Morganville, New Jersey 07751-0451 (908) 536-8500

BORING LOG

Well No. W-2 Permit No. 26-22787 Coord. No. 26.035.29

Date Drilled 11/21/90 County Bergen Use Monitoring

Location Exxon Service Station, 460 N. Main Street, Lodi, NJ

Owner Exxon Company, USA Address P.O. Box 4415, Houston, TX 77210

Drilling Method air rotary Sampling Method drill cuttings

Hole Diameter 8" Total Depth 23'

CASING: Type PVC Schedule 40 Diameter 4" Length 5'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 18'

Gravel Pack Size #1 Morie Casing Seal bentonite Static Water Level 13.8'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			CASING	0-6" Asphalt and gravel
				6"-2' Red/dark brown coarse to medium fine SAND, some (-) silt, little (+) medium to fine gravel
				2'-6' Red coarse to medium fine SAND, some silt boulders/rock fragments at 5'
5'				
			WELL SCREEN	6'-10' Red coarse to medium fine SAND, little (+) silt Boulders/Rock fragments at 8' and 9'
10'				
				10'-13' Red coarse to medium fine SAND, little (+) silt, little medium to fine gravel
15'				13'-23' Bedrock - red sandstone
20'				
				NOTE: No hydrocarbon odors detected during drilling/ installation of well. Film developed in well after purging.

PROJECT Exxon, Lodi

WELL NO. 2

DATE DRILLED 3-22-82

STATIC WATER LEVEL

TANDEM Corp.
703 Ginesi Drive
Morganville, New Jersey 07751
(201) 536-9500

PERMIT NO. 26-5524

COORD. APPLICATION NO. 26-03-529

COUNTY Bergen

USE Monitor

LOCATION 460 North Main Street, Lodi, N.J.

OWNER EXXON COMPANY, USA ADDRESS 111 Madison Avenue, Morristown

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top ____ Bottom ____ Inches TOTAL DEPTH 15' Feet

CASING: Type PVC Diameter 4 Inches Length 5' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes X No ____ GRAVEL SIZE #1

SANITARY SEAL Yes X No ____ TYPE cement GEOLOGIC FRM ____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-2' Red clayey FILL
		2'-5' Brown SAND (backfill of tank)
5'		5'-7'6" Brown and red SAND
		7'6"-12' Red silty SAND, gravel
10'		12'-16' Red SANDSTONE
15'		

0.020 Slot Well Screen

PROJECT Exxon, Lodi

WELL NO. 1

DATE DRILLED 3-22-82

STATIC WATER LEVEL

TANDEX Corp.
703 Gines Drive
Merrimville, New Jersey 07751
(201) 536 8500

PERMIT NO. 26-5523

COORD.
~~APPLICATION~~ NO. 26-03-529

COUNTY Bergen

USE Monitor

LOCATION 460 North Main Street, Lodi, N.J.

OWNER EXXON COMPANY, USA ADDRESS 111 Madison Avenue, Morristown

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top _____ Bottom _____ Inches TOTAL DEPTH 15' Feet

CASING: Type PVC Diameter 4 Inches Length 5' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes X No _____ GRAVEL SIZE #1

SANITARY SEAL Yes X No _____ TYPE cement GEOLOGIC FRM _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-3' Red clayey SAND, fill, brick
5'		3'-13' Red SAND & GRAVEL, trace-trace+ silt
10'		
15'		13'-15' Red SANDSTONE, harder drilling

0.020 Slot well screen

NOTE: No moisture, possibly bed rock

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 25399
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGY
Address 200 GREGG STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10B
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A-17~~
Address Trudy Dr. Lodi - N.J.

TYPE OF WELL (as per Well Permit Categories) ~~REPLACE MONITOR~~ Date well completed 6/6/91
Regulatory Program Requiring Well ECRA Case I.D. # ~~B5664~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 100 ft.
Well finished to 97'-6" ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1'-2"	87'-6"	2	PVC
Outer Casing (Not Protective Casing)	0.5	15	6	Steel
Screen (Note slot size)	87'-6"	97'-6"	2	PVC - .020
Tail Piece	—	—	—	—
Gravel Pack	85'-6"	100	6	Morie #2
Annular Seal/Grout	52'-6" 1'-2"	55'-6" 82'-6"	6 6	Ben Pellets Portland
Method of Grouting	Tremie			

Static water level after drilling 12 ft.
Water level was measured using Tape
Well was developed for NA hours at _____ gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid _____ Type of Rig NA
Name of Driller NA - Don Grahamer
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1213
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Donald J. Graham Date 6/13/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. HMW - 10B
Coordinate No. 26.03.5.37
Permit No. 26-25399
Date Drilled 06/06/91
County Bergen
Use Monitor
Location UTS/BASF Trudy Drive, Lodi, NJ 07664
Owner United Technology, 200 Gregg Street, Lodi, Nj
Drilling Method
Sampling Method cuttings
Hole Diameter 6" Rock Well, 2" PVC well
Total Depth 97.5'
Casing: Type PVC
Diameter 2"
Length 86.5'- 1.2"
Screen: Type PVC
Slot .020
Diameter 2"
Length 10'
Gravel Pack Size #2
Casing Seal pellets & portland
Static Water Level 12'
Geologic Formation Brunswick

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
30'			
60'			
90'			
120'			

		Identification of Soils / Remarks
1'6"-82'6"	GROUT	2" well installed
1'2"-87'6"	SOLID	6" rock monitor well
82'6"-85'6"	PELLETS	steel 15'
85'6"-100'	GRAVEL	depth 100'
87'6"-97'6"	SCREEN	Note: Installed 2" well inside
	OPEN HOLE	6" rock well
97'6"	SET WELL	
	GPM	
	STNDP.	
	MANHOLE	
	VAULT	

OWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59174

Atlas Sheet Coordinates 26 : 03 : 537

[redacted]ER IDENTIFICATION - Owner EXXON MOBIL CORP.
[redacted]ress 1900 E LINDEN AVE
City LINDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address OUTWATER LA & MAIN ST

DATE WELL STARTED 12 / 22 / 00
DATE WELL COMPETED 12 / 22 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Tele. # 732 536 8500

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 12 ft.

Water level was measured using Probe

Well was developed for 1/2 hours at 1 gpm

Method of development Pump & Surge

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geo Probe

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	3/4	PVC	Sch40
Middle Casing (for triple cased wells only)	—		—	—	
Outer Casing (largest diameter)	—		—	—	
Open Hole or Screen (No. Used 1)	5	17	3/4	PVC	10 slot
Blank Casings (No. Used —)	—		—	—	
Tail Piece	—		—	—	
Gravel Pack	3	17	3	Sand	#1
Grout	0	3	3	Neat Cement Bentonite	10 lbs. 1 lbs.

Grouting Method PRESSURE
Drilling Method Direct Push

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HANDEX CORP./CHRIS O'SHAUGHNESSY
Well Driller (Print) Chris O'Shaughnessy
Driller's Signature
Registration No. 11419 Date 12/22/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-17' BROWN silty sand to BEDROCK.

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53935

Atlas Sheet Coordinates 26 : 03 537

OWNER IDENTIFICATION - Owner NJ DEPT OF TRANSPORATION
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Site NW-15
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address I-80

TYPE OF WELL (as per Well Permit Categories) BORING
DATE WELL STARTED 6/11/99
DATE WELL COMPLETED 6/11/99
Regulatory Program Requiring Well N/A Case I.D.# N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 1-609-734-7000

WELL CONSTRUCTION

Total depth drilled 31.5 ft.
Well finished to N/A ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4 ft.

Water level was measured using Tape

Well was developed for N/A hours
at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	lbs. lbs.

Grouting Method Tremi with pump
Drilling Method mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 6" Asphalt
6" to 5' Brn m/f Sand
5' to 31.5' Brn m/f SD grvl & Silt

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) George Thornhill
Driller's Signature George Thornhill
Registration No. 1130 Date 7/3/99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 20608
Atlas Sheet Coordinates 26 : 03 : 555

OWNER IDENTIFICATION - Owner ACHESON, RUSSELL
Address 26 FEDERAL PLAZA / ROOM 2144
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-40C
County Municipality ~~LODI BORO~~ Lot No. ~~14~~ Block No. ~~161~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~ Date well completed 06/02/90
Regulatory Program Requiring Well Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 32.7 ft.
Well finished to ____ ft.
Borehole diameter:
Top ____ in.
Bottom ____ in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling ____ ft.
Water level was measured using
Well was developed for ____ hours at ____ gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity ____ gpm
Pump type:
Drilling Method
Drilling Fluid Type of Rig
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company U.S. ACOE, NY DIST., CENAN-PR-G

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature x James E Knop Date x 8-27-92

COPIES: White & Green: DEP ...

26-03-555 26-20608 Hole No. SR-40c

DRILLING LOG	DIVISION: SOUTH ATLANTIC	INSTALLATION: SAVANNAH DISTRICT	SHEET 1 OF 3 SHEETS

1. PROJECT: LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT
2. LOCATION (Coordinates or Station):
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SR-40 C
5. NAME OF DRILLER: JAMES KNOX
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 17.1'
8. DEPTH DRILLED INTO ROCK: 15.6'
9. TOTAL DEPTH OF HOLE: 32.7'
10. SIZE AND TYPE OF BIT:
11. DATUM FOR ELEVATION SHOWN (TBM or MSL): MSL
12. MANUFACTURER'S DESIGNATION OF DRILL: FAILING 314
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 9; UNDISTURBED
14. TOTAL NUMBER CORE BOXES:
15. ELEVATION GROUND WATER: NOT RECORDED
16. DATE HOLE: STARTED 06/02/90; COMPLETED 06/02/90
17. ELEVATION TOP OF HOLE:
18. TOTAL CORE RECOVERY FOR BORING: %
19. SIGNATURE OF INSPECTOR: GUSTAVE ANDERSON

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	CORE RECOVERY e	SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1'		0.5' ASPHALT & GRAVEL RED FINE TO MEDIUM GRAINED SILTY SAND			
	2' 3'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL.	.6'	1	
	4'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL.	.5'	2	
	5' 6'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL.	.4'	3	
	7'		SM- BROWN FINE TO MEDIUM GRAINED SILTY SAND W/TRACE OF GRAVEL	.4'	4	
	8' 9'		SM- DK. GRAY FINE TO MEDIUM GRAINED SILTY SAND	.7'	5	
	10'		SM- BROWN TO RED FINE TO COARSE GRAINED SILTY SAND W/SOME GRAVEL.	.6'	6	
	11' 12'		SM- REDISH BROWN FINE TO COARSE GRAINED SILTY SAND W/SOME GRAVEL	.6'	7	
			SM- REDISH BROWN FINE TO COARSE GRAINED		8	

SUBJECT TO CORRECTION

09-19-82 09:27PM FROM CESASEN-H

26-03-555 26-20608

DRILLING LOG (Cont Sheet) ELEVATION TOP OF HOLE — Hole No. SR-40C

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT — INSTALLATION SAVANNAH DISTRICT — SHEET 2 OF 3 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. ERY e	NO. OF SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	14'		SC - RED SLIGHTLY CLAYEY SAND, FINE TO MEDIUM GRAINED W/SOME GRAVEL	.7'	9	
	15'		NO SAMPLE			
	16'					
	17'		NO SAMPLE			50+/'
	18'		RED SANDSTONE			BEGAN CORING RUN 1 - 17.1' TO 20.8'
	19'					
	20'					
	21'					RUN 2 - 20.8' TO 22.7'
	22'					
	23'					RUN 3 - 22.7' TO 27.8'
	24'					
	25'					
	26'					
	27'					
	28'		— CONTINUED —			
	29'					

PRELIMINARY

26-03-555 26-20608

DRILLING LOG (Cont Sheet) | ELEVATION TOP OF HOLE

Hole No. SR-40C

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT | INSTALLATION SAVANNAH DISTRICT | SHEET 3 OF 3 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth weathering, etc., if significant) g
	28'		RED SANDSTONE			RUN 4 - 27.8' TO 32.7'
	29'					
	30'					
	31'					
	32'					
	33'		BOTTOM OF HOLE AT 32.7'			

PRELIMINARY
SUBJECT TO CORRECTION

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32080
Atlas Sheet Coordinates 26 03 555

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BTW2
County Municipality LODI BORO Lot No. IA Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/30/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM / Joe PAPERT Tele. #

WELL CONSTRUCTION

Total depth drilled 40' ft.
Well finished to 40' ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	20	8"	STEEL
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	20	40	6"	OPEN ROCK hole
Tail Piece				
Gravel Pack				
Annular Seal/Grout	0	20	Bentonite Pellets/cement	
Method of Grouting	TREMIE			

Static water level after drilling 4.8 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 6 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method AIR ROTORY
Drilling Fluid Type of Rig DrilTech
Name of Driller Jerry Maiack
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1167
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8" - Blacktop - gravel & Stone
8" - 9' Fine sand, silt gravel
9'-13' Fine sand silt gravel cobble
13'- Bedrock Red shale
13-20 Red Bedrock Shale
20' 40' 6" Rock hole thru Red shale & siltstone

BOH 40'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gerard A. Maiack Date 12/30/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 32079
Atlas Sheet Coordinates 26 03 555

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP.
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BTW 1
County Municipality LODI BORO Lot No. 1A Block No. 147A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/30/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joe PAPERT Tele. #

WELL CONSTRUCTION

Total depth drilled 43' ft.
Well finished to 43' ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	20	8"	STEEL
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	20	43	6"	20-43' 6"
Tail Piece				OPEN ROCK HOLE
Gravel Pack				
Annular Seal/Grout	0	20		Bentonite Pellets / Cement
Method of Grouting	Tremie			

Static water level after drilling 43 ft.
Water level was measured using TAPE
Well was developed for 15 min hours at NA gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: —
Drilling Method AIR ROTORY.
Drilling Fluid NONE Type of Rig DRILTECH
Name of Driller Jerry MALACK
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1167
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1' grey Rock
1'-3' SAND TAN Br. Dry
3'-14' Fine SAND silt gravel (RED) wet
14-20' RED SHALE
20'-40' RED SHALE SILT STONE
BOH 40'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gerard A. Malack. Date 12/30/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32081
Atlas Sheet Coordinates 26 03 555

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address UNITED TECHNOLOGIES BUILDING
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BWT 3
County Municipality Lot No. Block No.
Address LODI BORO 1A 147A

TYPE OF WELL (as per Well Permit Categories) Date well completed 12/30/92
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM. Joe PAPert Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	20	6"	Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	20	40	6"	OPEN Rock Hole
Tail Piece				
Gravel Pack				
Annular Seal/Grout	0	20	Bentonite Pellets / Cement	
Method of Grouting				

Static water level after drilling 4.8 ft.
Water level was measured using TAPE
Well was developed for 1 hours at 6 gpm
Method of development Pumping
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method AIR ROTORY.
Drilling Fluid Type of Rig DrilTech
Name of Driller GERARD A. MALACK.
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1167
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1' - Stone (grey)
1-3' Fine SAND TAN Br. Dry SAND
3-14' F SAND SILT + gravel (RED) (DAMP)
14' BEDROCK RED SHALE
14-20 RED SHALE
20'-40' open Rock hole 6" thru BEDROCK SHALE RED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gerard A. Malack. Date 12/30/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

VR-138 M
/98

ENTIRE

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53596

Atlas Sheet Coordinates [illegible] 555

WNER IDENTIFICATION - Owner AIR-MIN INC
ddress 10 DELL GLEN AVE
ty LODI State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
ounty BERGEN Municipality [illegible] Lot No. [illegible] Block No. [illegible]
ddress [illegible]

YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 4/13/99
egulatory Program Requiring Well SRP INVESTIGATION DATE WELL COMPLETED 4/13/99
Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Grant Environmental Technologies & Consc Tele. # [illegible]

WELL CONSTRUCTION

otal depth drilled 20' ft.
ell finished to 20' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

ell was finished: [X] above grade
[ ] flush mounted

finished above grade, casing height (stick p) above land surface 2.5' ft.

as steel protective casing installed?
[X] Yes [ ] No

tatic water level after drilling 15' ft.

ater level was measured using Tape

ell was developed for 3/4 Hour hours
2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5'	5'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	20'	2"	PVC	.020 Slot 40 Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4'	20'		Morie #2	
Grout	0'	4'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Method of development Pump

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity gpm

Pump type:

Drilling Fluid Type of Rig Gus Pech

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO. INC

Well Driller (Print) Al Bambace

Driller's Signature Al Bambace

Registration No. J13751 Date 4 / 15 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR 138A
1/82

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2101 Mid 10
APPLICATION NO _____
COUNTY BERGEN
COORD 11E 4 1/2 9 3/4 P

WELL RECORD

1. OWNER DPC REALTY CO ADDRESS 18 MILL ST LODI N.J
Owner's Well No. MW-4 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION DUX PAINT & CHEMICAL 18 MILL ST LODI N.J
3. DATE COMPLETED 10/11/89 DRILLER E.D.I
4. DIAMETER. Top 12 inches Bottom 12 inches TOTAL DEPTH 15 Feet
5. CASING: Type PVC Diameter 4 inches Length 5 Feet
6. SCREEN. Type PVC Size of Opening .010 Diameter 4 inches Length 10 Feet
Range in Depth { Top 5 Feet / Bottom 15 Feet } Geologic Formation SAND COBBLES ROCK
Tail Piece: Diameter — inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST Date 10/11/89 Yield >1 Gallons per minute
Static water level before pumping _____ Feet below surface
Pumping level _____ feet below surface after _____ hours pumping
Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped SUBMERSIBLE How measured _____
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type — Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR MONITORING AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER — Sample: Yes ____ No ____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0'-8' SAND 8'-15' COBBLES & ROCK Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA EDI
14. DATA OBTAINED BY ENVIRONMENTAL DRILLING, INC. Date 11/29/89
P.O. BOX 323
STAFFORD FORGE ROAD
EAGLESWOOD TWP.
WEST CREEK, NEW JERSEY 08092-0323

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23515-3
Atlas Sheet Coordinates 26 : 05 : 554

OWNER IDENTIFICATION - Owner DPC REALTY CO
Address 18 MILL STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality ~~LODI BORO~~ Lot No. ID Block No. 205D
Address 18 Mill St.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 1/11/91
Regulatory Program Requiring Well ECRA Case I.D. # ~~807704~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ESA, Inc. - Blaine Fresco Tele. # 908-782-0122

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 23'6" ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	18'6"	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	18'6"	23'6"	4	PVC (.010)
Tail Piece	—	—	—	—
Gravel Pack	17'6"	23'6"	—	#2 Sand
Annular Seal/Grout	0	17'6"	—	Cement/Bentonite
Method of Grouting	Pressure grouted w/ tremie pipe			

Static water level after drilling 9' ft.
Water level was measured using tape
Well was developed for 1 hours at 1/4 gpm
Method of development pumped
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig B-80
Name of Driller Wayne Lipscomb
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1217
Name of Drilling Company J. E. FRITTS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'	-	8'	Crushed Stone
8'	-	23'	Till
23'	-	24'	Bed Rock

WELL SEALED 4/23/93

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Wayne Lipscomb Date 1/17/91

D-64

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23833
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner MATHES DIV/ NORAC COMPANY
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1A (2)
County Municipality LODI BORO Lot No. 21 Block No. 153
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/12/91
Regulatory Program Requiring Well UST Case I.D. # 0114897
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 14 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	—	—		
Outer Casing (Not Protective Casing)	+2'	4'	4"	SCH. 40 P.V.C.
Screen (Note slot size)	4'	14'	4"	#.010 P.V.C.
Tail Piece	—	—	—	—
Gravel Pack	3'	14'		#2 SAND
Annular Seal/Grout	0	3'		CEMENT/BENT.
Method of Grouting				

Static water level after drilling 5' ft.
Water level was measured using ELEC. TAPE
Well was developed for 1 hours at < 1 gpm
Method of development PUMPING
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type:
Drilling Method AUGER
Drilling Fluid — Type of Rig C.M.E.-55
Name of Driller JOHN SNYDER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1123
Name of Drilling Company JOHN SNYDER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

LT. BROWN F SAND	3'
GRAY SILTY CLAY TR. F. SAND	8'
LT. BROWN F/M SAND	15'
WEATHERED SAND STONE	
END of BORE	16'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 3/5/91

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 23834
Atlas Sheet Coordinates 26 03 556

OWNER IDENTIFICATION - Owner MATHES DIV/ NORAC COMPANY
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24 (3)
County Municipality LODI BORO Lot No. 21 Block No. 153
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 2/11/91
Regulatory Program Requiring Well MONITORING Case I.D. # 0114897
UST
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 13'8" ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	3'8"	4"	SCH. 40 P.V.C.
Screen (Note slot size)	3'8"	13'8"	4"	P.V.C. - .010
Tail Piece				
Gravel Pack	2'6"	13'8"		#2 SAND
Annular Seal/Grout	0	2'6"		CEMENT BENTONITE
Method of Grouting				

Static water level after drilling 5'6" ft.
Water level was measured using ELEC. TAPE
Well was developed for 1 hours at <1 gpm
Method of development PUMPING
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method — AUGER
Drilling Fluid — Type of Rig C.M.E.-55
Name of Driller JOHN SNYDER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1123
Name of Drilling Company JOHN SNYDER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

ASPHALT 4", STONE 6"	10"
Lt. BROWN F/m SAND TR. F/m GRAVEL	3'
GRAY BROWN, F. SAND SOME SILT + CLAY, TR. F/m TO GRAVEL	12'
Lt. BROWN, C/F SAND LITTLE F/C GRAVEL, TR. CLAY	13 6"
WEATHERED, SAND STONE	
END OF BORE 15'	

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature D.626 Date 3/5/91

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 23832
Atlas Sheet Coordinates 26 03 556

OWNER IDENTIFICATION - Owner MATHES DIV/ NORAC COMPANY
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3A (1)
County Municipality Lot No. Block No.
Address LODI BORO 21 153

TYPE OF WELL (as per Well Permit Categories) Date well completed 2/11/91
Regulatory Program Requiring Well MONITORING UST Case I.D. # 0114897
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 18'6" ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	+ 1'8"	8'6"	4"	Sch. 40 P.V.C.
Screen (Note slot size)	8'6"	18'6"	4"	#10 SLOT P.V.C.
Tail Piece	—	—		
Gravel Pack	7	18'6"		#2 SAND
Annular Seal/Grout	0	~~7'~~		CEMENT/BENT.
Method of Grouting	TREMIE			

Static water level after drilling ~~7~~ 5.5' ft.
Water level was measured using ELEC. TAPE
Well was developed for 1 hours at < 1 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type:
Drilling Method AUGER
Drilling Fluid AIR Type of Rig C.M.E.-55
Name of Driller JOHN SNYDER
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1123
Name of Drilling Company JOHN SNYDER

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

LT. BROWN, F/M SAND, LITTLE F/M GRAVEL	2'6"
GRAY SILTY CLAY	5'
BROWN, M/F SAND, LITTLE F/M GRAVEL	18'
WEATHERED SAND STONE	
END OF BORE	19'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 3/5/91

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23596
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner BERGEN PASSAIC TRANSPORT
Address 53 CENTRAL AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Bergen Municipality ROCHELLE PARK T Lot No. 1 Block No. 23
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1 / 25 / 91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirotech Consultants, Inc. Tele. # 305-8200

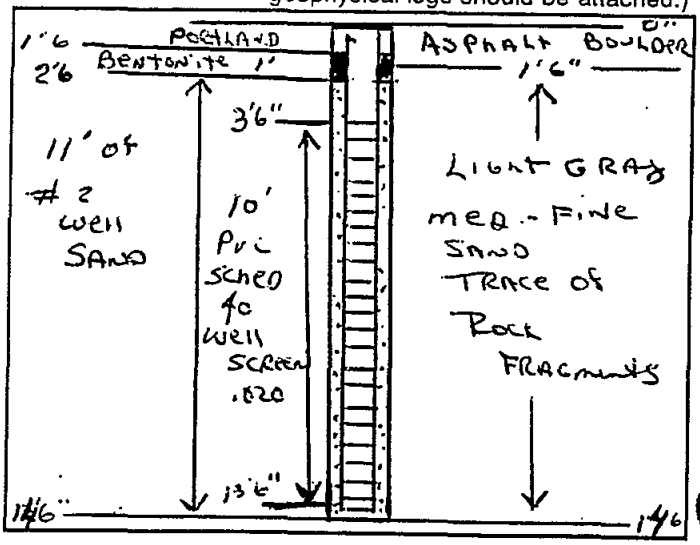
WELL CONSTRUCTION

Total depth drilled 14.5 ft.
Well finished to 13.6 ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	3'6"	4"	Schedule 40 PVC
Outer Casing (Not Protective Casing)	–	–	–	–
Screen (Note slot size)	3'6"	13'6"	4"	Schedule 40 PVC screen .020
Tail Piece	–	–	–	–
Gravel Pack	2'6"	14'6"		#2 well sand
Annular Seal/Grout	6'	2'6"		1' Bentonite pellets 1' Portland Cement
Method of Grouting	grout pump			

Static water level after drilling 5 ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development electric pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity – gpm
Pump type: –
Drilling Method air rotary
Drilling Fluid – Type of Rig IR TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1330
Name of Drilling Company SALOMONE BROS. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Nemetz D-658 Date

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

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MONITORING WELL RECORD

Well Permit No. 26 - 31524
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner COLLUCCI, AL
Address 87 RAILROAD AVE
City WEST HAVERSTRAW State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality Lot No. Block No.
Address 1001 BORO 1.4, 1B 205, 305

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/18/92
Regulatory Program Requiring Well MONITORING Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1	4	PVC Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1	11	4	PVC Sch 40 .010slot
Tail Piece				
Gravel Pack	½	11	11	#1 Morie
Annular Seal/Grout	0	½	11	Cement
Method of Grouting	gravity displacement			

Static water level after drilling 4 ft.
Water level was measured using m-scope
Well was developed for ½ hours at 2 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig Failing F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1546
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1 Asphalt - Fill

1-11 F-M Silty dk red sand and shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Chris Warren Date

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34467
Atlas Sheet Coordinates 26 : Ø3 : 556

OWNER IDENTIFICATION - Owner U-HAUL RENTAL CENTER
Address 210 ROUTE 46 EAST
City SADDLEBROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #9
County BERGEN Municipality SADDLE BROOK TW Lot No. 182A Block No. 12A
Address 210 Route 46 East Saddlebrook, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/8/93
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) MARCOR of PA / JOHN VAN WAGENEN Tele. # (215) 269-3250

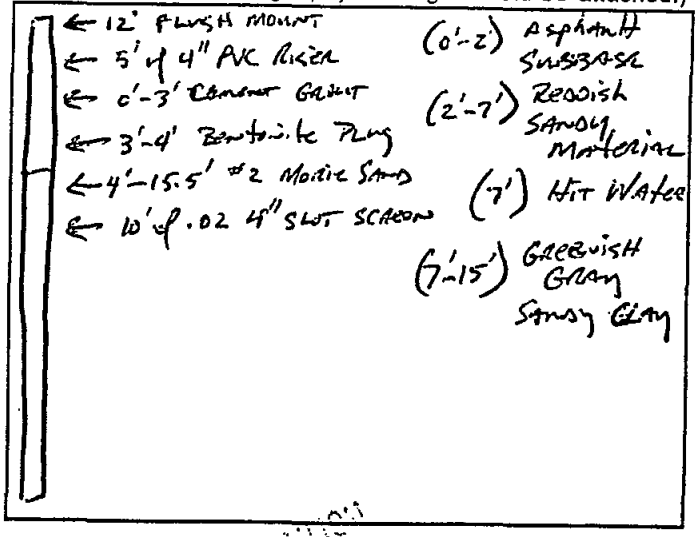
WELL CONSTRUCTION

Total depth drilled 15.5 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch. 40 PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	N.A.	DRILL CAP installed AT 15		
Gravel Pack	4	15.5	-	#2 Morie GRAVEL
Annular Seal/Grout	3 0	4 3		BENTONITE PLUG PORTLAND CEMENT
Method of Grouting	GROUTING WITH TREMIE			

Static water level after drilling 7 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .25 gpm
Method of development Centrifugal Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid NONE Type of Rig MOBILE B-61
Name of Driller DENNIS C. MOORE
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 14471
Name of Drilling Company MARCOR of PA
~~DENNIS C. MOORE~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dennis C Moore Date 9-23-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

4

MONITORING WELL RECORD

Well Permit No. 26 - 31523
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner COLLUCCI, AL.
Address 87 RAILROAD AVE.
City WEST HAVERSTRAW State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ~~LODI BORO~~ Lot No. ~~1.4,1B~~ Block No. ~~203,305~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/18/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2½ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	PVC Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	4	PVC Sch 40 10 slot
Tail Piece				
Gravel Pack	3	14	11	#1 Morie
Annular Seal/Grout	0	3	11	Cement/Bentonite
Method of Grouting	gravity displacement			

Static water level after drilling 5 ft.
Water level was measured using m-scope
Well was developed for ½ hours at 2 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig Failing F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1546
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-14 F-M tan & brown silty sand wet (back-fill)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 31773
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 556

OWNER IDENTIFICATION - Owner ZUCKERBERG'S INDUSTRIAL P
Address 280 MIDLAND AVENUE
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality SADDLE BROOK TW Lot No. 32 Block No. 1202
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 21 / 92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Woodward Clyde Consultants Tele. #

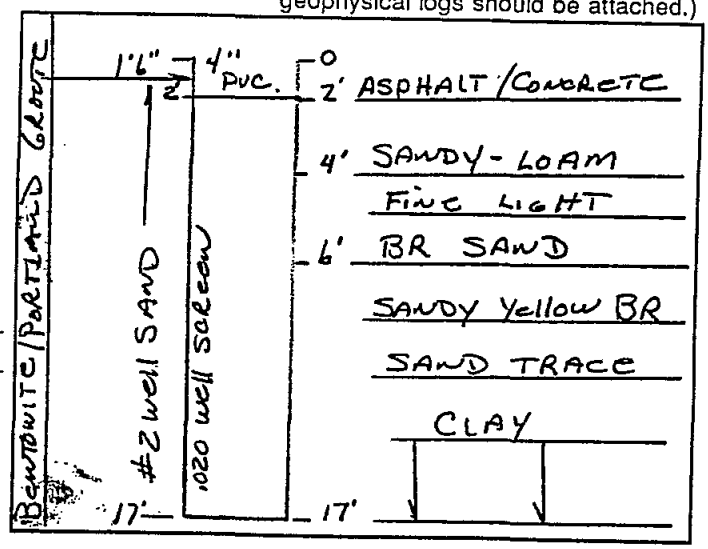
WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	17'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	1' - 6"	17'		
Annular Seal/Grout	6"	1'6"		Bentonite/Neat Cement
Method of Grouting	Grout Pump			

Static water level after drilling 6 ft.
Water level was measured using electric tape
Well was developed for 1 hours at 5 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1330
Name of Drilling Company ~~SBI ENVIRONMENTAL INC.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Joseph Schwarz Date 1-26-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~31521~~
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : ~~556~~

OWNER IDENTIFICATION - Owner _____
Address COLLUCCI, AL
City 87 RAILROAD AVE. State NY Zip Code
WEST HAVERSTRAW

WELL LOCATION - If not the same as owner please give address. Owner's Well No. _____
County _____ Municipality _____ Lot No. _____ Block No. _____
Address LODI BORO 1.4.1B 203.305

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 11/18/92
Regulatory Program Requiring Well MONITORING Case I.D. # _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2½ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1	4	PVC Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1	11	4	PVC Sch 40 10 slot
Tail Piece				
Gravel Pack	½	11	11	#1 Morie
Annular Seal/Grout	0	½	11	Bentonite/Cement
Method of Grouting	gravity displacement			

Static water level after drilling 5 ft.
Water level was measured using M-scope
Well was developed for ½ hours at 2 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig Failing F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1546
Name of Drilling Company M & B SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-11 F-M tan & brown silty sand wet (backfill)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date _____

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 31522
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner COLLUCCI, AL.
Address 87 RAILROAD AVE.
City WEST HAVERSTRAW State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ~~LODI BORO~~ Lot No. ~~1, 4, 15~~ Block No. ~~203, 305~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/18/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	4	PVC Sch 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	14	4	PVC Sch 40 20slot
Tail Piece				
Gravel Pack	3	14	11	#1 Morie
Annular Seal/Grout	0	3	11	Cement/Bentonite
Method of Grouting	gravity displacement			

Static water level after drilling 5 ft.
Water level was measured using M-Scope
Well was developed for ½ hours at 2 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HSA
Drilling Fluid — Type of Rig Failing F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1546
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1 Asphalt - fill
1-14 F-m silty dk red sand & shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Chris C Warren Date

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18881
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RENNIE REAL ESTATE COMP
Address 18 MEADOW WOODS ROAD
City GREAT NECK State NY Zip Code 11020

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW - 1
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~89~~ Block No. ~~224~~
Address Rennie Manufacturing 10-14 Rennie Place Lodi, N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 1/26/90
Regulatory Program Requiring Well ECRA Case I.D. # 882262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Assoc./B Menje Tele. # 201-564-6006

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 19 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	4'	4"	Flush joint P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4'	19'	4"	.020 F.J. P.V.C.
Tail Piece				
Gravel Pack	3'	20'		#1 Morie
Annular Seal/Grout	0'	3'		Cement-bentonite
Method of Grouting	Gravity Placement			

Static water level after drilling 7 ft.
Water level was measured using Electric tape
Well was developed for 1 hours at 2 gpm
Method of development submersible/Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method H.S.A.
Drilling Fluid _____ Type of Rig Failing F-2
Name of Driller Wellington Reeve
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1455
Name of Drilling Company JAMES C. ANDERSON ASSOC. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jim Duffy for W. Reeve Date 2-2-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

#6-3-78-L

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3185
Application No. _____
County Bergen

WELL RECORD

1. OWNER Dept of Public Works ADDRESS Boys Club Site
   Owner's Well No. Test No 2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Main St Lodi N.J.
3. DATE COMPLETED Nov 6 1965 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 12 Inches Bottom 10 Inches 12 TOTAL DEPTH 450 Feet
5. CASING: Type Steel Diameter 10 Inches Length 56 Feet
6. SCREEN: Type none Size of Opening ___ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Nov 6 1965 Yield 175 Gallons per minute
   Static water level before pumping 1 Feet below surface
   Pumping level 250 feet below surface after 28 hours pumping
   Drawdown 249 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Turbine How measured Orific
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Mfrs. Name Owner will supply
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Public Wupply AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ___ No. ___
    Taste no Odor no Color clear Temp. 56 °F
12. LOG 33 Sand, 400 red shale 17 Red with Lime Are samples available? yes
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date Nov 6 1965

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated. Analysis of the water, sketch map, electrical [illegible])

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57785

Atlas Sheet Coordinates ~~26 : 03 558~~

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 81
Address MAIN ST

DATE WELL STARTED 6 / 14 / 00
DATE WELL COMPLETED 6 / 14 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 1/2 ft.
Well finished to 15 ft.

Borehole diameter:
Top 9 in.
Bottom 9 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 6.4 ft.

Water level was measured using MScope

Well was developed for 1/2 hours at less than 1/4 gpm

Method of development Centrifugal Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B-3500

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used, 020)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	15 1/2	9	#1 Sand	250 lbs
Grout	0	3	9	Neat Cement	lbs.
				Bentonite	15 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-15 1/2 Misc. Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company C T & E ENVIRONMENTAL SERVICES
Well Driller (Print) James T. Lewis
Driller's Signature James T Lewis
Registration No. J1617 Date 06 / 15 / 00

J3037

COPIES: White - DEP Canary - Driller 637 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57786

Atlas Sheet Coordinates 26 : 03 5'58

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 81
Address MAIN ST

DATE WELL STARTED 6 / 14 / 00
DATE WELL COMPLETED 6 / 14 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 1/2 ft.
Well finished to 15 ft.

Borehole diameter:
Top 9 in.
Bottom 9 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 5.2 ft.

Water level was measured using M Scope

Well was developed for 1/2 hours
at less than 1/4 gpm

Method of development Centrifugal Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B-3500

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2 1/2	15 1/2	9	#1 Sand	300 lbs
Grout	0	2 1/2	9	Neat Cement	— lbs.
				Bentonite	15 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 15 1/2 Misc Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company C T & E ENVIRONMENTAL SERVICES
Well Driller (Print) James T. Lewis
Driller's Signature James T. Lewis
Registration No. J1617 Date 6 / 15 / 00

053037

COPIES: White - DEP Canary - Driller D-638 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21038
Atlas Sheet Coordinates 26 : 03 : 359

OWNER IDENTIFICATION - Owner FLEXWRAP
Address 40 META LANE
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW#4
County BERGEN Municipality LODI BORO Lot No. 21 Block No. 224
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/9/90
Regulatory Program Requiring Well RCRA Case I.D. # RRA19
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EEA - N. RECCHIA Tele. # 516 746 4400

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	.5	10	2	PVC, 020
Tail Piece	—	—	—	—
Gravel Pack	.5	10	—	#2 MORIE
Annular Seal/Grout	+0.25	.5	—	BPELLETS + PORT.
Method of Grouting	TREMIE			

Static water level after drilling 1 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-57
Name of Driller M. LAURA
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1486
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 9/25/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature _____ Date 7/20/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (201) 722-4266
Toll Free: (800) 242-6648
FAX: (201) 356-1009

WELL LOG

Well No. MW # 3 Coordinate No. 26.03.55.9 Permit No. 26-21037-1

Date Drilled 07/09/90 County Bergen Use Monitor

Location Flexwrap, 40 Meta Lane, Lodi, NJ 07644

Owner Same

Drilling Method Auger Sampling Method none

Hole Diamete 8" Total Depth 10'

Casing: Type PVC Diameter 2" Length 6"

Screen: Type PVC Slot .020 Diameter 2" Length 9.5'

Gravel Pack Size Morie # 2 Casing Seal Pellets

Static Water Level 1' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				+3" - 4" GROUT; 0' - 2' Fill m/ sands & gravel
				0' - 6" SOLID; 2' - 10' Blk. silt w/ some m/f sands.
				4" - 6" PELLETS
				6" - 10' GRAVEL
				8" - 10' SCREEN
				10' SET WELL
				GPM
10'				
20'				
30'				
40'				

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. _____ - _____
Atlas Sheet Coordinates 21037 : _____
26 03 559

OWNER IDENTIFICATION - Owner _____
Address FLEXWRAP
City 40 META LANE State _____ Zip Code 07644
LODI NJ

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #3
County BERGEN Municipality _____ Lot No. _____ Block No. _____
Address SAME LODI BORO 27 224

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 7/9/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CEA - N RECCHIA 88A1 Tele. # 516-746-7450

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
Finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	.5	10	2	PVC .020
Tail Piece	—	—	—	—
Gravel Pack	.5	10	—	#2 MORIE
Annular Seal/Grout	+0.25	5	—	3/8 PELLETS + MORT
Method of Grouting	TREMIE			

Static water level after drilling 1 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-57
Name of Driller M. LAURA
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1486
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 9/25/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/20/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (201) 722-426
Toll Free: (800) 242-6648
FAX: (201) 356-1009

WELL LOG

Well No. MW # 2 Coordinate No. 26.03.55.9 Permit No. 26-21036-3

Date Drilled 07/09/90 County Bergen Use Monitor

Location Flexwrap, 40 Meta Lane, Lodi, NJ 07644

Owner Same

Drilling Method Auger Sampling Method none

Hole Diamete 8" Total Depth 10'

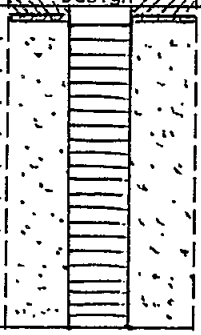
Casing: Type PVC Diameter 2" Length 6"

Screen: Type PVC Slot .020 Diameter 2" Length 9.5'

Gravel Pack Size Morie # 2 Casing Seal Pellets

Static Water Level 1' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



Identification of Soils / Remarks

0' - 2' Fill m/ sands & gravel

2' - 10' Blk. silt w/ some m/f sands.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21036
Atlas Sheet Coordinates 26 : 03 : 559

OWNER IDENTIFICATION - Owner FLEXWRAP
Address 40 META LANE
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW#2
County BERGEN Municipality LODI BORO Lot No. 25 Block No. 224
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/9/90
Regulatory Program Requiring Well ECRA Case I.D. # ECRA
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EEA - N. RECCHIA Tele. # 516 746-4400

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	2	PVC
Outer Casing (Not Protective Casing)	-	-	-	-
Screen (Note slot size)	5	10	2	PVC .020
Tail Piece	-	-	-	-
Gravel Pack	5	10	-	#2 MORIE
Annular Seal/Grout	+0.25	5	-	BPELLETS + PORT.
Method of Grouting	TREMIE			

Static water level after drilling 1 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-57
Name of Driller M. LAURIA
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 14L
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED ... 9/25/92 .....

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/20/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (201) 722-4266
Toll Free: (800) 242-6641
FAX: (201) 356-1009

WELL LOG

Well No. MW # 1 Coordinate No. 26.03.55.9 Permit No. 26-21035-5

Date Drilled 07/09/90 County Bergen Use Monitor

Location Flexwrap, 40 Meta Lane, Lodi, NJ 07644

Owner Same

Drilling Method Auger Sampling Method none

Hole Diamete 8" Total Depth 10'

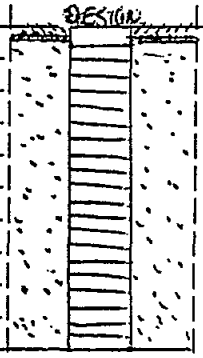
Casing: Type PVC Diameter 2" Length 6"

Screen: Type PVC Slot .020 Diameter 2" Length 9.5'

Gravel Pack Size Morie # 2 Casing Seal Pellets

Static Water Level 1' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



+3" - 4"	GROUT	0' - 2'	Fill m/ sands & gravel
0' - 6"	SOLID	2' - 10'	Blk. silt w/ some m/f sands.
4" - 6"	PELLETS		
6" - 10'	GRAVEL		
8" - 10'	SCREEN		
10'	SET WELL		
	GPM		

Identification of Soils / Remarks

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 24 - 21035
Atlas Sheet Coordinates 26 : 03 : 559

OWNER IDENTIFICATION - Owner FLEXWRAP
Address 40 META LANE
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #1
County BERGEN Municipality LODI BORO Lot No. 20 Block No. 224
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 7/9/90
Regulatory Program Requiring Well MONITORING ELRA Case I.D. # 88417
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EEA - N. RECCHIA Tele. # 516 746 4400

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	.5	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	.5	10	2	PVC .020
Tail Piece	—	—	—	—
Gravel Pack	.5	10	—	#2 MORIE
Annular Seal/Grout	+0.35	.5	—	B. PELLETS + PORT
Method of Grouting				

Static water level after drilling 1 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-57
Name of Driller M LAURA
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 14860
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 9/25/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/20/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

VR-138A
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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15204
APPLICATION NO. _____
COUNTY BERGEN
COORD. 26-03-550

WELL SEALED 4/23/93

WELL RECORD

. OWNER O & C REALTY CO. ADDRESS 18 MILL ST, LODI, N.J.

Owner's Well No. MW 3 SURFACE ELEVATION _____ Feet (Above mean sea level)

2. LOCATION SAME

4. DATE COMPLETED 1/27/89 DRILLER E.D.I

5. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 15 Feet

6. CASING: Type PVC Diameter 4 Inches Length 5 Feet

6. SCREEN: Type PVC Size of Opening .030 Diameter 4 Inches Length 10 Feet

Range in Depth { Top 5 Feet / Bottom 15 Feet } Geologic Formation BOULDERS & SAND

Tail Piece: Diameter — Inches Length _____ Feet

7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface

Water rises to _____ Feet above surface

8. RECORD OF TEST: Date 1/30/89 Yield 3+ Gallons per minute

Static water level before pumping _____ Feet below surface

Pumping level _____ feet below surface after _____ hours pumping

Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown

How pumped SUBMERSIBLE How measured _____

Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

Type _____ Mfrs. Name _____

Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet

Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches

0. USED FOR MONITORING AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }

1. QUALITY OF WATER _____ Sample: Yes ____ No ____

Taste _____ Odor _____ Color _____ Temp. _____ °F.

2. LOG 0 - 15' BOULDERS & SAND Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)

3. SOURCE OF DATA EDI

4. DATA OBTAINED BY ENVIRONMENTAL DRILLING, INC. P.O. BOX 323 STAFFORD FORGE ROAD EAGLESWOOD TWP. WEST CREEK, NEW JERSEY 08092-0323 Date 3/22/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50782

Atlas Sheet Coordinates 26 03 : 559

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-11
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

DATE WELL STARTED 5/27/98
DATE WELL COMPETED 5/27/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION
Total depth drilled 24 ft.
Well finished to 14 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was a protective casing installed? ☐ Yes ☐ No

Static water level after drilling 8 ft.

Water level was measured using TAPE

Well was developed for 1 hours at 1/2 gpm

Method of development ____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid None Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	4	14	2	PVC	40
Blank Casings (No. Used)	—				
Tail Piece Slotted	3	24		#1 Sand-Filter	
Gravel Pack	2	3		#00 SAND Seal	
Grout	0	2		Neat Cement	100 lbs.
				Bentonite	50 lbs.

Grouting Method TREMIE
Drilling Method HS AUGER

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller Signature Scott Alberalla
Registration No. 1320 Date 6/11/98

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

12" Concrete over 6" Brick
18" - 4' - Pump Fine SAND
4' - 14' - Moist & wet F-C sand
14' - 20' - wet VF SAND + SILT
20' - 24' - Wet F-M SAND, some SILT

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (201) 722-426
Toll Free: (800) 242-664
FAX: (201) 356-1009

WELL LOG

Well No. MW # 4 Coordinate No. 26.03.55.9 Permit No. 26-21038-0

Date Drilled 07/09/90 County Bergen Use Monitor

Location Flexwrap, 40 Meta Lane, Lodi, NJ 07644

Owner Same

Drilling Method Auger Sampling Method none

Hole Diamete 8" Total Depth 10'

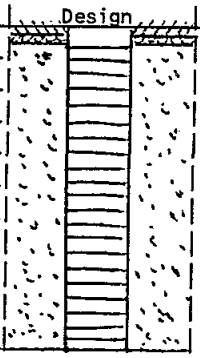
Casing: Type PVC Diameter 2" Length 6"

Screen: Type PVC Slot .020 Diameter 2" Length 9.5'

Gravel Pack Size Morie # 2 Casing Seal Pellets

Static Water Level 1' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			



+3" - 4"	GROUT	0' - 2'	Fill m/ sands & gravel
0' - 6"	SOLID	2' - 10'	Blk. silt w/ some m/f sands.
4" - 6"	PELLETS		
6" - 10'	GRAVEL		
8" - 10'	SCREEN		
10'	SET WELL		
	GPM		

Identification of Soils / Remarks

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50784

Atlas Sheet Coordinates 26 : 03 559

CUSTOMER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-13
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

DATE WELL STARTED 5/21/98
DATE WELL COMPETED 5/21/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EWSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 14 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Well steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling 7.4 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid None Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	4	14	2	PVC	40
Blank Casings (No. Used)	—				
Tail Piece Sand Filter	3	16		#1 sand filter	
Gravel Pack	2	3		#00 Sand Seal	
Grout	0	2		Neat Cement Bentonite	100 lbs. 50 lbs.

Grouting Method Tremie
Drilling Method HS Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0"-6" - Asphalt + 6" Gravel
1'-6' - Moist F-M SAND
6'-8' - Wet SILT + F-SAND
8'-14' - Wet F-C SAND
14'-16' - SILT + CLAY

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller Signature Scott Alberallan
Registration No. 1320 Date 6/11/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50783

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-12
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

DATE WELL STARTED 5/29/98
DATE WELL COMPETED 5/29/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Owen Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 20 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed?
☑ Yes ☐ No

Static water level after drilling 9.9 ft.

Water level was measured using TAPE

Well was developed for 1 hours
at 1.5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid None Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	20	2	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ SAND FILTER	3.5	24		#1 Sand Filter	
Gravel Pack	2	3.5		#00 Sand	Seal
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method TREMIE
Drilling Method H S AUGER

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller's Signature Scott Alberalla
Registration No. 1320 Date 6/11/98

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

2" Asphalt + 6" Gravel
8" - 10' - Damp & Wet F-SAND, A LITTLE SILT, WOOD, SLAG FILL
10' - 16' - Wet F-SAND, A LITTLE SILT + CLAY
16' - 24' - Wet F-M SAND, SOME GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/96

ENTERED

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50786

Atlas Sheet Coordinates 26 : 03 559

)[redacted]ER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
[redacted]ess 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-15
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

DATE WELL STARTED 5/28/98
DATE WELL COMPETED 5/28/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 3/4 hours at 1.5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid None Type of Rig Boring

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	2	PVC	40
Blank Casings (No. Used)	—				
Tail Piece SAND FILTER	3.5	20		#1 SAND FILTER	
Gravel Pack	2	3.5		#00 SAND SEAL	
Grout	0	2		Neat Cement 100 lbs. Bentonite 50 lbs.	

Grouting Method TREMIE
Drilling Method H S AUGER

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6" Asphalt + Gravel
6"-1' - Brn F-SAND, SLAG, COAL
1'-6' - MIXT F-SAND, SLAG, COAL CONCRETE
6'-10' - WET F-M SAND, SOME SILT + CLAY
10'-12' - WET SILT, SME CLAY
12'-16' - WET F-M - SAND
16'-20' - WET F-C SAND, SCATTERED GRAVEL + PEBBLES

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Dri[redacted]s Signature Scott Alberallay
Registration No. 1320 Date 6/11/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/96

ENTERED

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50785

Atlas Sheet Coordinates 26 : 03 559

)WNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
ddress 199 MAIN ST.
ity LODI State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. E-14
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
ddress 199 MAIN ST.

'YPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

DATE WELL STARTED 5/21/98
DATE WELL COMPETED 5/21/98

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) E-M5R Tele. # 908/457-0500

WELL CONSTRUCTION

otal depth drilled 18 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☑ flush mounted

f finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 6.4 ft.

Water level was measured using TAPE

Well was developed for 3/4 hours at 1.5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid None Type of Rig Hollow

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	2	PVC	40
Middle Casing (for triple cased wells only)	–				
Outer Casing (largest diameter)	–				
Open Hole or Screen (No. Used 10)	3	15	2	PVC	40
Blank Casings (No. Used)	–				
~~Tail Piece~~ SAND FILTER	2.5	18		#1 Sand Filter	
Gravel Pack	1.5	2.5		#00 Sand Seal	
Grout	0	1.5		Neat Cement	100 lbs.
				Bentonite	20 lbs.

Grouting Method Tremie
Drilling Method HS Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

6" Asphalt
6"-6' - Brown F-SAND, little silt & clay
6'-10' - wet Silt & F-SAND
10'-14' - wet F-M-SAND, TR of GRAVEL
14'-18' - SILT & CLAY

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller's Signature Scott Alberalla
Registration No. 1320 Date 6/11/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

ENTERED

MONITORING WELL RECORD

Well Permit No. 26 - 50788

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-13D
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

DATE WELL STARTED 5/20/98
DATE WELL COMPETED 5/22/98

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Chas Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to 27 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling 4.5 ft.

Water level was measured using TAPE

Well was developed for 3/4 hours at 1.5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid None Type of Rig Auger

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	22	2	PVC	40
Middle Casing (for triple cased wells only)	-				
Outer Casing (largest diameter)	0	16	6	Steel	
Open Hole or Screen (No. Used 10)	22	27	2	PVC	40
Blank Casings (No. Used)	-				
~~Tail Piece~~ Sand filter	20	27		#1 Sand Filter	
Gravel Pack	18	20		#00 Sand Seal	
Grout OUTER	0	16		Neat Cement	1300 lbs.
	0	18		Bentonite	240 lbs.

Grouting Method TREMIE
Drilling Method H S Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0"-6" - Asphalt & Gravel base
6'-6' - Damp F-M SAND, some gravel
6'-8' - wet F-SAND & SILT
8'-10' - WET F-M SAND
10'-14' - WET. C-SAND & LITTLE GRAVEL
14'-24' - WET SILT/CLAY
24'-27' WET F-C SAND, LITTLE GRAVEL

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller's Signature Scott Alberalla
Registration No. 1320 Date 6/11/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

ENTERED

Well Permit No. 26 - 50787

Atlas Sheet Coordinates 26 Ø3 559

WNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
ddress 199 MAIN ST.
ity LODI State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. E-7D
ounty BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.Ø1
ddress 199 MAIN ST.

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well ISRA SITE Case I.D.# 954ØØ

DATE WELL STARTED 5/30/98
DATE WELL COMPETED 5/21/98

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ensr Tele. # 908/457-0500

WELL CONSTRUCTION

otal depth drilled 27 ft.
/ell finished to 25 ft.

orehole diameter:
Top 8.25 in.
Bottom 8.25 in.

/ell was finished: ☒ above grade ☐ flush mounted

finished above grade, casing height (stick up) above land surface 2.5 ft.

/as steel protective casing installed? ☒ Yes ☐ No

tatic water level after drilling 5 ft.

/ater level was measured using TAPE

/ell was developed for 1/2 hours
t 5 gpm

Method of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid None Type of Rig Tailing

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	20	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	20	25	2	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ SAND FILTER	18	27		#1 SAND FILTER	
Gravel Pack	16	18		#00 SAND SEAL	
Grout	1	16		Neat Cement Bentonite	500 lbs. 100 lbs.

Grouting Method TREMIE
Drilling Method H S AUGER

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

12" Concrete + 6" Bent
1.5'-5' Damp F-SAND, SCATTERED ROCK + GRAVEL FRAGMENT
5'-15' - MOIST TWET F-C SAND
15'-17' - WET F-C SAND, TR OF SILT+CLAY
17'-19' - WET F-C SAND
19'-22' - WET F-C SAND, TR OF SILT+CLAY
22'-26' - WET SILT SME F SAND
26'-27' - WET F-SAND + WEATHERED ROCK

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller's Signature Scott Alberalla
Registration No. 1320 Date 6/11/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58319

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW17
County BERGEN Municipality LODI BORO Lot No. 89 Block No. 25.01
Address 165 MAIN ST

DATE WELL STARTED 8/ 10/ 00
DATE WELL COMPLETED 8/ 10/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours at 1/2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	15'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC
Well Driller (Print) Todd Naugle
Driller's Signature Todd Naugle
Registration No. J16992 Date 8 / 18 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW17 DATE DRILLED: 08/10/2000 COORD #1: 26.03.559 PERMIT #1: 26-58319
COORD #2: PERMIT #2:

SITE: Plumbers Local #14, 165 Main Street, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

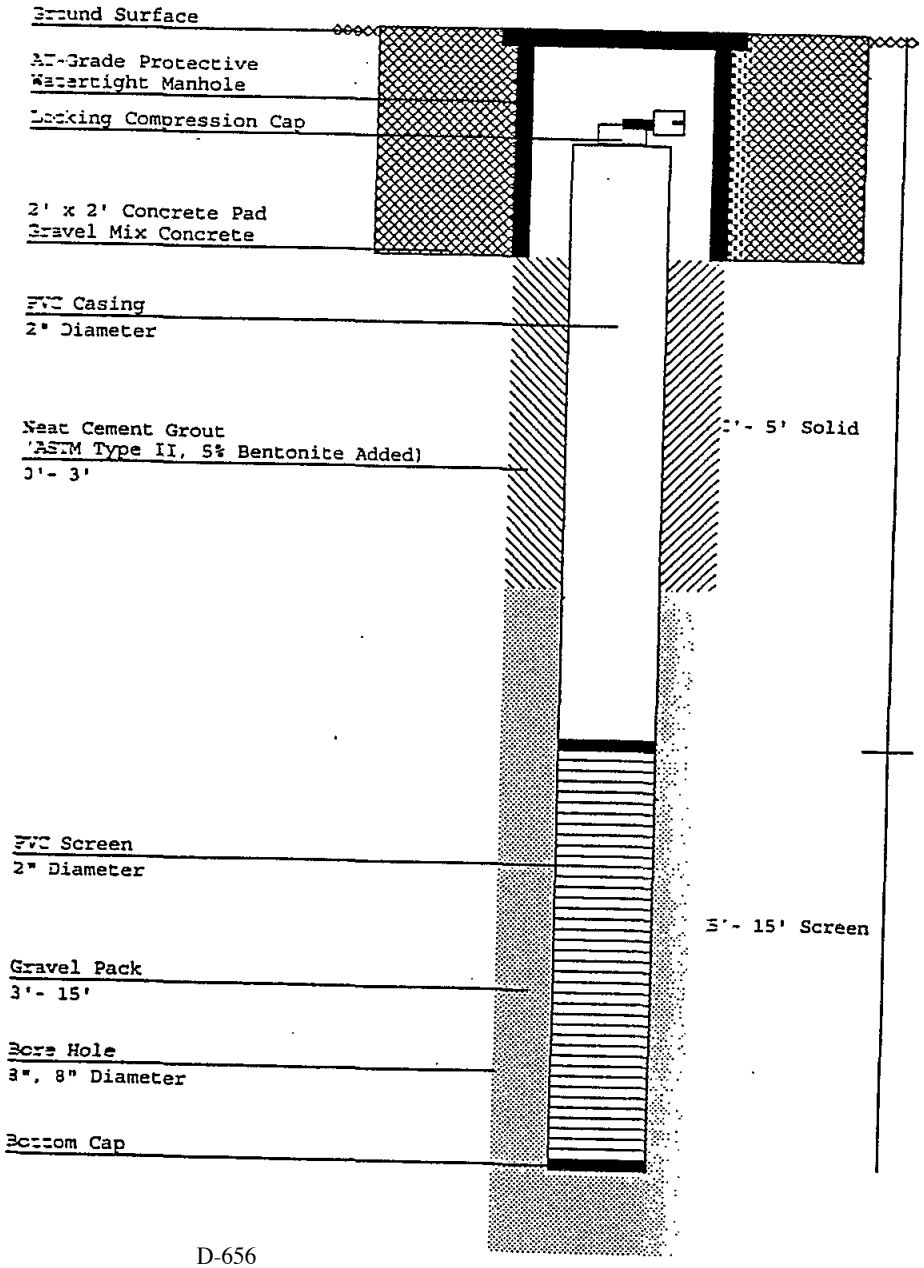
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 3", 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: Todd Naugle
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 15'		Sand & gravel some silt.



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

ENTERED

Well Permit No. 26 - 50790

Atlas Sheet Coordinates 26: 03 559

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-17D
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.01
Address 199 MAIN ST.

DATE WELL STARTED 5/26/98
DATE WELL COMPETED 5/27/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ~~ISRA SITE~~ Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EMSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling _____ ft.

Water level was measured using _____

Well was developed for _____ hours at _____ gpm

Method of development _____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	20	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	0	16	6	steel	
Open Hole or Screen (No. Used 10)	20	25	2	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ Filter	18	25		#1 Sand Filter	
Gravel Pack	16	18		#00 SAND SEAL	
Grout OUTER	0	16		Neat Cement	300 lbs.
	0	16		Bentonite	100 lbs.

Grouting Method TREMIE
Drilling Method H STAUGER/MUD ROTARY

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid None Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberella

Registration No. 1320 Date 6/11/98

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

12" Concrete
12'-12'- Dry & wet F-C SAND Some Gravel
12'-16'- wet F-M SAND, some silt + clay
16'-19'- wet SILT/CLAY
19'-25'- wet F-C SAND, little silt/clay

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

ENTERED

MONITORING WELL RECORD

Well Permit No. 26 - 50789

Atlas Sheet Coordinates 26: Ø3 559

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC.
Address 199 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-16D
County BERGEN Municipality LODI BORO Lot No. 7 & 8 Block No. 81.Ø1
Address 199 MAIN ST.

DATE WELL STARTED 5/26/98
DATE WELL COMPETED 5/28/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Carr Tele. # 908/547-0500

WELL CONSTRUCTION

Total depth drilled 30.5 ft.
Well finished to 30 ft.

Borehole diameter: 8.25
Top ____ in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 10.65 ft.

Water level was measured using TAPE

Well was developed for 1.5 hours at 3.5 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid None Type of Rig Failing

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	25	2	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	0	16	6	Steel	
Open Hole or Screen (No. Used 10)	25	30	2	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ Sand Filter	23	30.5		#1 Sand Filter	
Gravel Pack	21	23		#00 SAND SEAL	
Grout (outer)	0	16		Neat Cement	1500 lbs.
	0	21		Bentonite	240 lbs.

Grouting Method TREMIE
Drilling Method H S Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. 1320 Date 6/11/98

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

18" Concrete
18"-4' - Damp F-Sand, some silt
4'-7' - Moist F-SAND; some silt-clay
7'-12' - Wet F-M SAND, little silt & gravel
12'-23' - Moist SILT/CLAY
23'-30.5' - Wet F-C SAND, little F GRAVEL

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

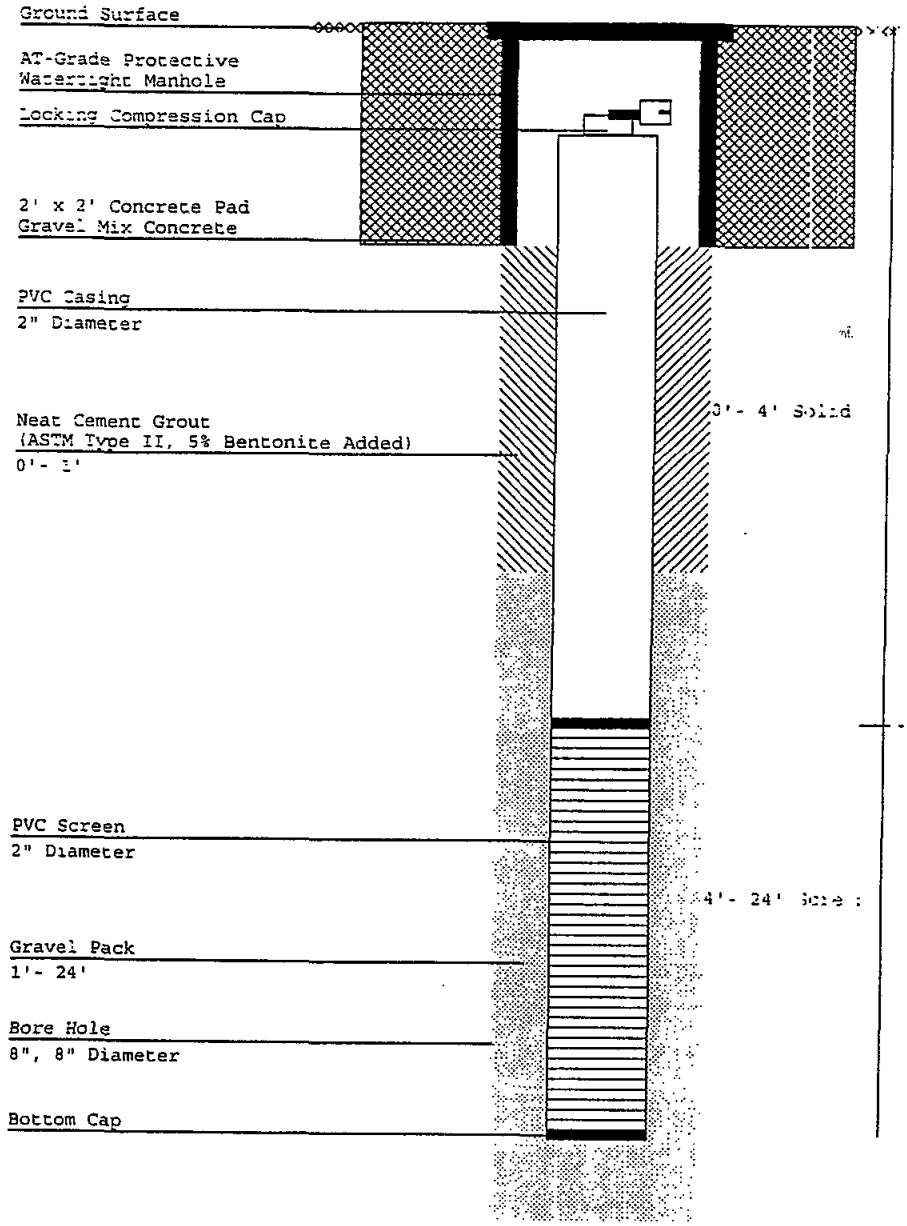
WELL: MW11 DATE DRILLED: 08/31/1999 COORD #1: 26.03.559 PERMIT #1: 26-53721
COORD #2: PERMIT #2:
SITE: Lodi Housing Authority, 20 Rennie Place, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET: Church St / St
USE: Monitor

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Auger
DIAMETER:	2"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	4'	LENGTH:		DIAMETER:	2"	HOLE DIA:	8", 8"
				LENGTH 1:	20'	TOTAL DEPTH:	24'
SET WELL:	24'	GAL PER MIN:	1	LENGTH 2:			
GRAVEL PK SZ:	Morie #1	STAT H2O LVL:	7'	SLOT SIZE:	.010		
DRILLER:	John Vogt	DEVELOPMENT METHOD:	Pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1 Hour	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 24' Red sandstone.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

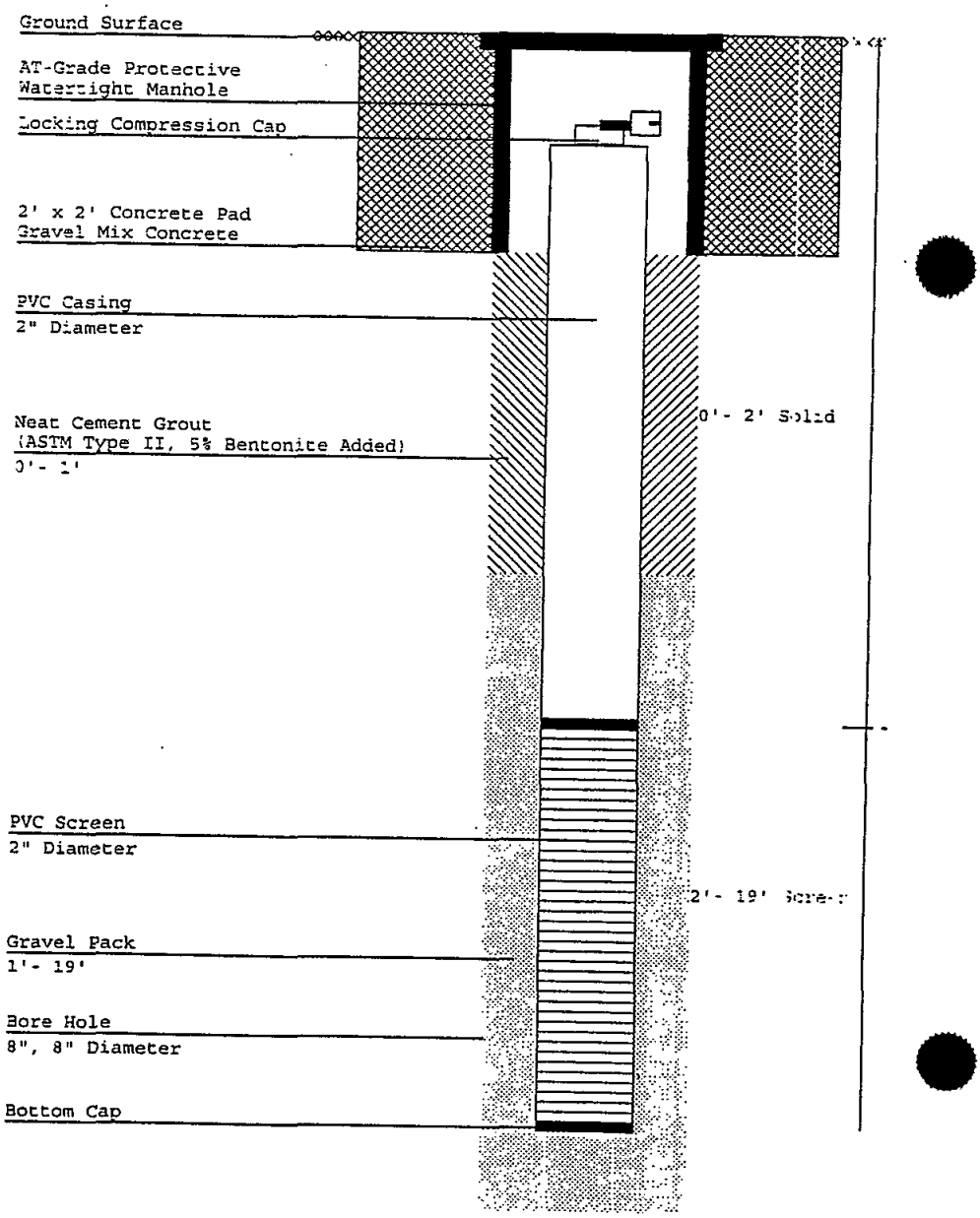
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling[redacted]
email: info@summitdrilling[redacted]

WELL LOG

WELL: MW10 DATE DRILLED: 08/31/1999 COORD #1: 26.03.559 PERMIT #1: 26-53720
COORD #2: PERMIT #2:
SITE: Lodi Housing Authority, 20 Rennie Place, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET: Church St [illegible] St
USE: Monitor

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	2'	LENGTH:	DIAMETER:	2"	HOLE DIA: 8", 8"
			LENGTH 1:	17'	TOTAL DEPTH: 19'
SET WELL:	19'	GAL PER MIN: 1	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 7'	SLOT SIZE:	.010	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
		1'- 19' Red sand & gravel.



DWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53721

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW11
County BERGEN Municipality LODI BORO Lot No. 8.01 Block No. 274
Address 20 RENNIE PLACE

DATE WELL STARTED 8/ 31/ 99
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 8/ 31/ 99
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 24' ft.
Well finished to 24' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 1 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	4'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	4'	24'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	24'		Morie #1	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 9 / 7 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53720

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW10
County BERGEN Municipality LODI BORO Lot No. 8.01 Block No. 274
Address 20 RENNIE PLACE

DATE WELL STARTED 8/ 31/ 99
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 8/ 31/ 99
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 19' ft.
Well finished to 19' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	19'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	19'		Morie #1	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. 1544 Date 9 / 7 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32569
Atlas Sheet Coordinates 26 :Ø3 :562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address UNITED TECH BLDG -MAIL STOP 5Ø
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ~~BM~~ HMW-13A
County Bergen Municipality LODI BORO Lot No. ~~4, 1A~~ Block No. ~~176J~~
Address Trudy Dr. & Pearl Court

TYPE OF WELL (as per Well Permit Categories) Date well completed 4 / 14 / 93
Regulatory Program Requiring Well recovery ECRA Case I.D. # ~~95564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	21.5	6	Steel
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	21.5	40	6	Open Rock Hole
Tail Piece				
Gravel Pack				
Annular Seal/Grout	0.5	21.5		Portland Type I
Method of Grouting	☒ Tremie			

Static water level after drilling 4.83 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development ☒ Developed Previously
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

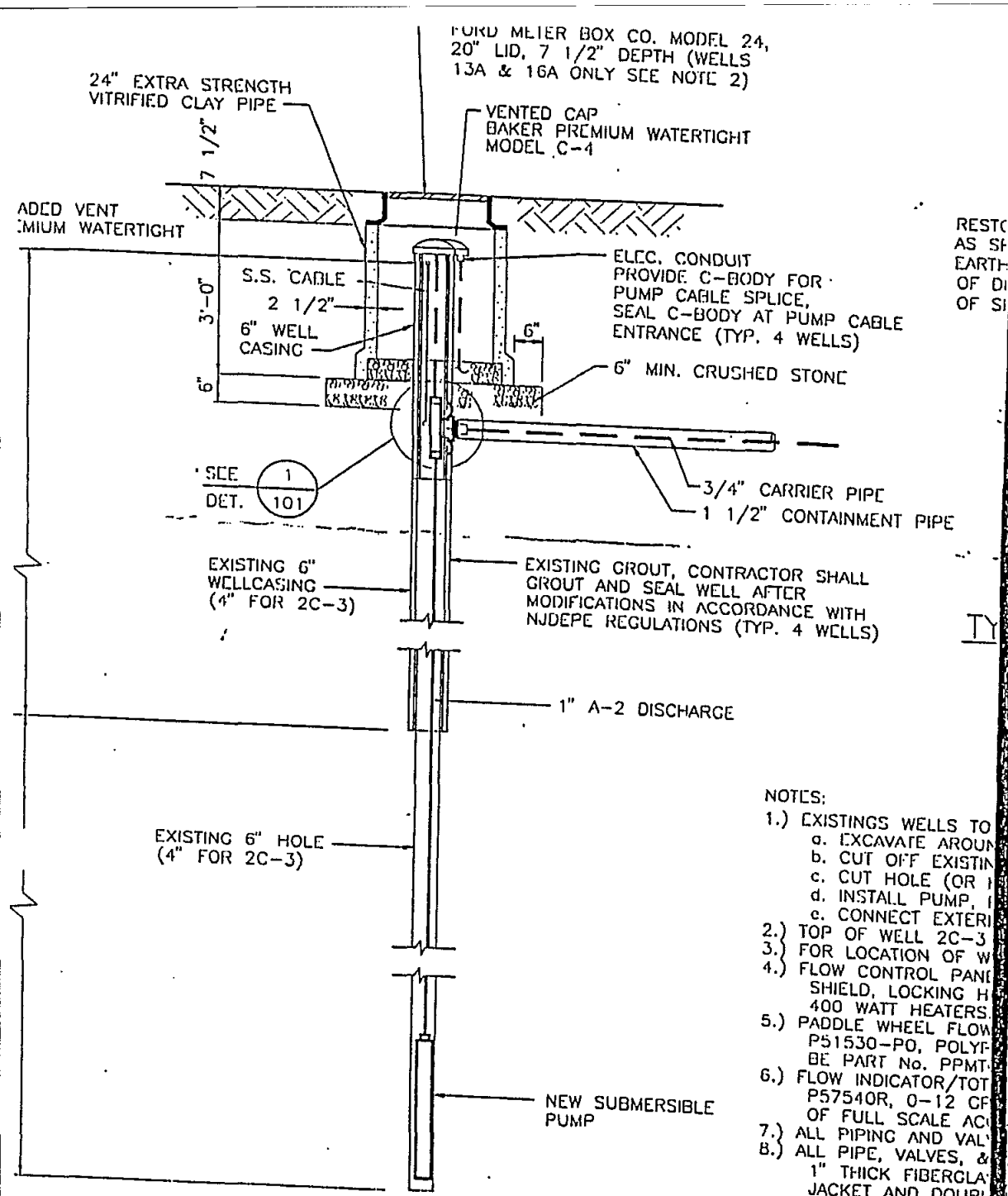
*NOTE: Well was constructed previously under permit #26-27734 by Summit Well Drilling

*See the attached drawing for modification made by A. C. Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss/TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



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NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANE
   SHIELD, LOCKING H
   400 WATT HEATERS.
5.) PADDLE WHEEL FLOW
   P51530-PO, POLYF
   BE PART No. PPMT
6.) FLOW INDICATOR/TOT
   P57540R, 0-12 GP
   OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, &
   1" THICK FIBERGLA
   JACKET AND DOUBL
   INSULATION--SHALL-
   INCH DEEP CORRUG
9.) DIAPHRAGM VALVES
   PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL
   BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH
   SHOWN ON DWG. 1

VELLS HMW-13A, BMW-16A & 2C-3
4/14 4/15 4/26

1/2" 0 1 2 4 6

Compaction T

BCM BCM Engineers Inc.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -32568
Atlas Sheet Coordinates 26 : Ø3 : 562

OWNER IDENTIFICATION - Owner ~~UNITED TECHNOLOGIES CORP.~~
Address UNITED TECH BLDG.-MAIL STOP 5Ø
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BMW-16A
County Bergen Municipality Lot No. 4, 1A Block No. 176J
Address Trudy Dr. & Pearl Court LODI BORO

TYPE OF WELL (as per Well Permit Categories)
Date well completed 4 / 15 / 93
Regulatory Program Requiring Well ~~ECRA~~ recovery Case I.D. # ~~85564~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 44.5 ft.
Well finished to 44.5 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	24	6	Carbon Steel
Outer Casing (Not Protective Casing)				
Open Rock ~~XXXXX~~ Hole (Note slot size)	24	44.5	6	Open Hole
Tail Piece				
Gravel Pack				NA
Annular Seal/Grout	0	24	10	Portland Type I
Method of Grouting	Pressure			

Static water level after drilling 4.83 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development Previously Developed
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

*NOTE: Well Was constructed previously under permit #26-28239 by William ~~XX~~ Stothoff Co.

*See the attached drawing for modifications made by A. C. ~~X~~ Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature Gary Reiss / TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 20955
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW1
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL 416 LANZA AVE SADDLEBROOK, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/30/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.3 ft.
Well finished to 10.3 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.3'	10.3'	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.3'	10.3'		
Annular Seal/Grout	0	5.3		
Method of Grouting	TREMIE			

Static water level after drilling 4.6' ft.
Water level was measured using SOUND
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 46 - 32571
Atlas Sheet Coordinates 26 : Ø3 : 562

OWNER IDENTIFICATION - Owner UNITED TECHNOLOGIES CORP
Address UNITED TECH. BLDG-MAIL STOP 5Ø
City HARTFORD State CT Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. HMW-10A
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~1A~~ Block No. ~~147A~~
Address Pearl Court

TYPE OF WELL (as per Well Permit Categories) recovery Date well completed 4 / 13 / 93
Regulatory Program Requiring Well ECRA Case I.D. # 85564
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BCM Engineers Tele. # 609-386-8800

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface 0 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				NO DATA
Outer Casing (Not Protective Casing)				AVAILABLE
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 5.17 ft.
Water level was measured using M-Scope
Well was developed for -- hours at -- gpm
Method of development M-Scope
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 4 gpm
Pump type: Submersible
Drilling Method *
Drilling Fluid * Type of Rig *
Name of Driller Walter Wark/Gary Reiss (Modifications only)
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. P-0839/J-1514
Name of Drilling Company A.C. SCHULTES INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

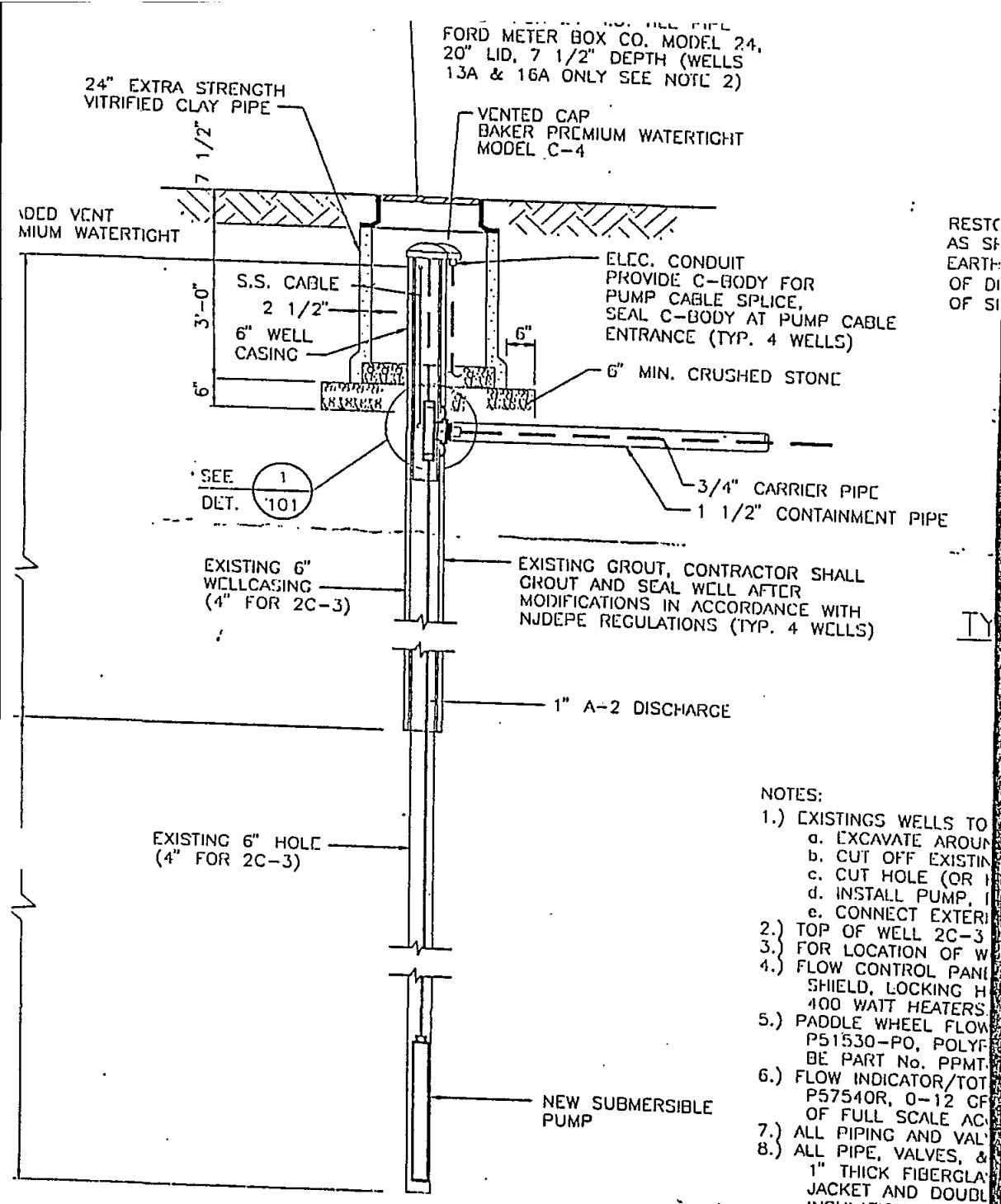
*NOTE: Well was constructed previously under another permit # unknown to A. C. Schultes.

*See attached drawing for modifications made by A. C. Schultes, Inc.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Gary Reiss / TJP Date 6/2/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.



NOTES:

1.) EXISTINGS WELLS TO
   a. EXCAVATE AROUN
   b. CUT OFF EXISTIN
   c. CUT HOLE (OR
   d. INSTALL PUMP,
   e. CONNECT EXTERI
2.) TOP OF WELL 2C-3
3.) FOR LOCATION OF W
4.) FLOW CONTROL PANE SHIELD, LOCKING H 400 WATT HEATERS
5.) PADDLE WHEEL FLOW P51530-PO, POLYF BE PART No. PPMT
6.) FLOW INDICATOR/TOT P57540R, 0-12 GF OF FULL SCALE AC
7.) ALL PIPING AND VAL
8.) ALL PIPE, VALVES, & 1" THICK FIBERGLA JACKET AND DOUBL INSULATION--SHALL- INCH DEEP CORRUG
9.) DIAPHRAGM VALVES PLAIN SPIGOT ENDS
10.) BALL VALVES SHALL BACKING RINGS SE
11.) LIGHT, LIGHT SWITCH SHOWN ON DWG. 1

VELLS HMW-13A, BMW-16A & 2C-3

1/2" 0 1 2 4 6

Compaction T

BCM BCM Engineers Inc.

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DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47999

Atlas Sheet Coordinates 26 : Ø3 : 562

OWNER IDENTIFICATION - Owner ATLANTIC DETROIT DIESEL
Address 180 ROUTE 17 SOUTH
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 2A Block No. 177
Address 180 ROUTE 17 SOUTH

DATE WELL STARTED 7/14/97
DATE WELL COMPETED 7/14/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 97-1-15-0822-44

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ACTIVE TANK Tele. #

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up above land surface N/A ft.

Was steel protective casing installed?
☐ Yes ☑ No

Static water level after drilling 4' ft.

Water level was measured using TAPE

Well was developed for 1 hours
at 2 gpm

Method of development 2" Whaler pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type:

Drilling Fluid N/A Type of Rig D-120

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	-0-	3	8" +4	4" PVC Casing	SCH. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	13'	8" +4	4" P.V.C. SCREEN	SCH. 40 .010 SLOT
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	13'	10"	#1 WELL GRAVEL	
Grout	0	2'		Neat Cement	76 lbs.
				Bentonite	/ lbs.

Grouting Method PLACEMENT
Drilling Method 6¼ HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-1' Asphalt, Road Stone
1-8' MF Sand green some s.lt.
8-13' MF Sand silty clay Brn.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.

Well Driller (Print) JOHN J CAYLE

Driller's Signature

Registration No. WWD-1343 Date 7/14/97

COPIES: White - DEP Canary - Driller D-669 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~48761~~

OWNER IDENTIFICATION - Owner ~~VORNADO REALTY TRUST~~ Atlas Sheet Coordinates ~~26~~ : ~~Ø3~~ : ~~562~~
Address ~~PARK 8Ø WEST, PLAZA II~~
City ~~SADDLE BROOK~~ State ~~NJ~~ Zip Code 07663

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-1 (Site)
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~2,6,7~~ Block No. ~~192B~~
Address ~~ROUTE 17~~

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~ DATE WELL STARTED 10 / 9 / 97
Regulatory Program Requiring Well N/A Case I.D.# N/A DATE WELL COMPETED 10 / 9 / 97

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Langan Eng Tele. # 201-794-6900

WELL CONSTRUCTION

Total depth drilled 35 ft.
Well finished to N/A ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid Bentonite Type of Rig ACKERMAN II

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement	___ lbs.
				Bentonite	___ lbs.

Grouting Method Tremi With Pump
Drilling Method Mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0" to 3" Concrete
3" to 6" Stone
6" to 1' gray f/m Sd Tr Slt, Tr gravel
1' to 5' Same with peat
5' to 6' gray c/m Sd Trs. it Tr gravel
6' to 7' Red Till
7' to 15' Red m/f Sd Tr Slt + gravel
15 to 20' Same Tr decomposed rock
20 to 25' Decomposed Sand Stone
25' to 35' Sand Stone

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING CORPORATION
Well Driller (Print) George Thornhill
Driller's Signature George Thornhill
Registration No. J1306 Date 10 / 18 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18883
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner ~~RENNIE REAL ESTATE COMP.~~
Address 18 MEADOW WOODS ROAD
City GREAT NECK State NY Zip Code 11020

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County Bergen Municipality LODI BORO Lot No. 89 Block No. ~~224~~
Address Rennie Manufacturing 10-14 Rennie Place Lodi, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/30/90
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~882262~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Assoc. / B. Mouse Tele. # 201-564-6006

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 19 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	4'	4"	Flush joint P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4'	19'	4"	.020 F.S. P.V.C
Tail Piece				
Gravel Pack	3'	20'		#1 Morie
Annular Seal/Grout	0'	3'		Cement-bentonite
Method of Grouting	Gravity Placement			

Static water level after drilling 7 ft.
Water level was measured using Electric tape
Well was developed for 1 hours at 2 gpm
Method of development Submersible / Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method H.S.A.
Drilling Fluid _____ Type of Rig Failing F-2
Name of Driller Wellington Reeve
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1455
Name of Drilling Company JAMES C. ANDERSON ASSOC. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Jim Duffy for W. Reeve Date 2-2-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

JCA

26-03-582
26-18882

DRILLING CONTRACTOR

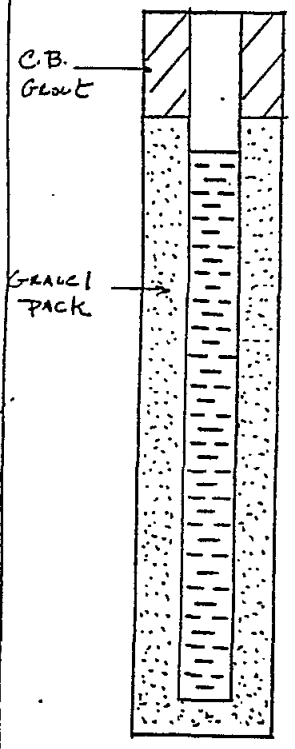
907 Pleasant Valley Avenue Mount Laurel, New Jersey 08054 (609) 722-6700

PROJECT: Rennie Manufacturing Monitoring Wells
CLIENT: Dan Raviv Associates

Sheet 1 of 1
Job No. DRE-024
I. D. No. MW-2
Date Started 1-29-90
Date Finished 1-29-90
Driller W. Reeve
Elevation
Inspector

GROUNDWATER			DRILLING METHOD	DEPTH
Date	Time	Depth	H.S.A.	0' to 20'
		7'		to
			Coord. # 26 03 582	to

WELL CONSTRUCTION	ROD SIZE	STATE PERMIT NO.	SPOON SIZE
	AW___ N___	261882	2"___ 3"___



Depth Feet	SAMPLE No.	SAMPLE Depth/Type	SAMPLE Blows Per 6"	SAMPLE N.	CLASSIFICATION	REMARKS
0					Asphalt	
					Dark Gray medium to course sand & gravel	→ wet
5						
10					Dark Gray silty sand	
15					Gray-Brown fine to med. sand	
20						E.O.B.
25						
30						

UNDISTURBED SAMPLE ☒ SPLIT SPOON SAMPLE

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18882
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RENNIE REAL ESTATE COMP.
Address 18 MEADOW WOODS ROAD
City GREAT NECK State NY Zip Code 11020

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~89~~ Block No. ~~224~~
Address Rennie Manufacturing 10-14 Rennie Place Lodi, N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 1/29/90
Regulatory Program Requiring Well ECRA Case I.D. # 882262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Assoc. / B. Menge Tele. # 201-564-6066

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 19 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	4'	4"	Flush joint P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4'	19'	4"	.020 FJ. P.V.C.
Tail Piece				
Gravel Pack	3'	20'		#1 Morie
Annular Seal/Grout	0'	3'		Cement-bentonite
Method of Grouting	Gravity Placement			

Static water level after drilling 7 ft.
Water level was measured using Electric tape
Well was developed for 1 hours at 2 gpm
Method of development Submersible / Bailer
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method H.S.A.
Drilling Fluid _____ Type of Rig Failing F-2
Name of Driller Wellington Reeve
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1455
Name of Drilling Company JAMES C. ANDERSON ASSOC INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jim Duffy for W. Reeve Date 2-2-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

JCA

JAMES C. ANDERSON ASSOCIATES INC.
DRILLING CONTRACTOR

26-03-582
26-18881

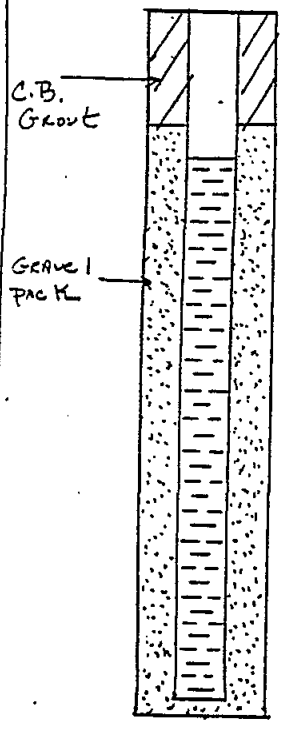
907 Pleasant Valley Avenue Mount Laurel, New Jersey 08054 (609) 722-670

PROJECT: Rennie Manufacturing Monitoring Wells
CLIENT: Dan Raviv Associates

Sheet 1 of 1
Job No. DRE-024
I.D. No. MW-1
Date Started 1-26-90
Date Finished 1-26-90
Driller W. Reeve
Elevation
Inspector

GROUNDWATER			DRILLING METHOD	DEPTH
Date	Time	Depth	H.S.A.	0' to 20'
		7		to
			Coord. # 26 03 582	to

WELL CONSTRUCTION	ROD SIZE	STATE PERMIT NO.	SPOON SIZE
	AW___ N___	261881	2"___ 3"___



Depth Feet	SAMPLE No.	SAMPLE Depth / Type	SAMPLE Blows Per 6"	SAMPLE N.	CLASSIFICATION	REMARKS
0					Dark Gray medium sand w/ trace gravels.	
5						
10					Dark Gray silty sand	
15					Brown fine to medium sand w/ trace gravels	
20						E.O.B.
25						
30						

UNDISTURBED SAMPLE SPLIT SPOON SAMPLE

JCA

26-03-582
26-18883

JAMES C. ANDERSON ASSOCIATES INC.
DRILLING CONTRACTOR

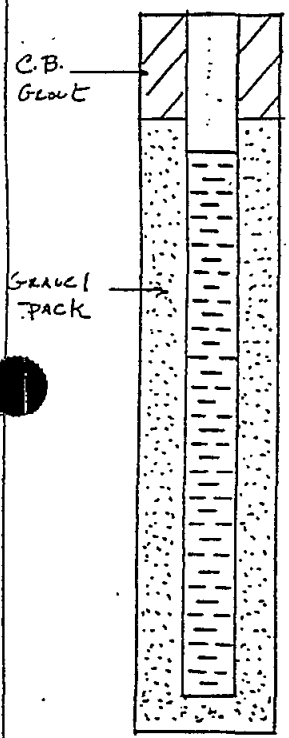
907 Pleasant Valley Avenue Mount Laurel, New Jersey 08054 (609) 722-6700

PROJECT: Rennie Manufacturing Monitoring Wells
CLIENT: Dan Raviv Associates

Sheet 1 of 1
Job No. DRE-024
I.D. No. MW-3
Date Started 1-30-90
Date Finished 1-30-90
Driller W. Reeve
Elevation
Inspector

GROUNDWATER			DRILLING METHOD	DEPTH
Date	Time	Depth	H.S.A.	0' to 20'
		7		to
			Coord. # 26 03 582	to

WELL CONSTRUCTION	ROD SIZE	STATE PERMIT NO.	SPOON SIZE
	AW___ N___	2618883	2"___ 3"___



Depth Feet	SAMPLE No.	SAMPLE Depth/Type	SAMPLE Blows Per 6"	SAMPLE N.	CLASSIFICATION	REMARKS
0					Fill - Brick, asphalt concrete	
					Brown fine to med. sand w/ trace silt	
5						
					Brown fine to med. sand w/ trace silt.	
10						
15					Gray-Brown fine to med. sand	
20						
25						
30						

UNDISTURBED SAMPLE ☒ SPLIT SPOON SAMPLE

DWR-138 M
5/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23779
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RENNIE REAL ESTATE CO.
Address 18 MEADOW WOODS RD.
City GREAT NECK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. P-2
County Bergen Municipality LODI BORO Lot No. 89 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/11/91
Regulatory Program Requiring Well ECRA Case I.D. # 88262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) DAN RAVIV Tele. # 564-6006

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 11 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 4 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	1	2	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	1	11	2	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	1	11	4	#2 well gravel
Annular Seal/Grout	0	1	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6 ft.
Water level was measured using Tape dropline
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Casing - Rotary Portable
Drilling Fluid N/A Type of Rig
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 11306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 11 3/4" Concrete
11 3/4" to 12'
RD Brn Gly STy C/F Sd with Cobbles

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 2/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24944
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner JACOBSON, DAN
Address 18 MEADOW WOODS ROAD
City GREAT NECK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-1
County Bergen Municipality LODI BORO Lot No. 89 Block No. 224
Address 10-14 Rennie pl

TYPE OF WELL (as per Well Permit Categories) Date well completed 7/19/91
Regulatory Program Requiring Well recovery ECRA Case I.D. # 88-262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) DAN RAVIV ASSO. Tele. # 564-6006

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 12 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	12.5	4	Sch 40 pvc. 020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3.5	12.5	6	#2 well gravel
Annular Seal/Grout	0	3.5	6	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 8 ft.
Water level was measured using Tape drop line
Well was developed for ____ hours at ____ gpm
Method of development Centrifugal pump
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity 1 gpm
Pump type: Westinghouse Auto Skimmer
Drilling Method CASING
Drilling Fluid N/A Type of Rig Tri-pod
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 4" Concrete
4" to 13.5' Red Brn gravelly
Silty C/F Sand with Cobbles

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature George Thornhill Date 7/20/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
- 89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23780
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RENNIE REAL ESTATE CO.
Address 18 MEADOW WOODS RD.
City GREAT NECK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. P-3
County Bergen Municipality LODI BORO Lot No. 89 Block No. 224
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 2,8,91
Regulatory Program Requiring Well MONITORING ECRA Case I.D. # 88262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) DAN RAVIV Tele. # 564-6006

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	12	2	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	13	4	#2 well gravel
Annular Seal/Grout	0	3	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6 ft.
Water level was measured using Tape drop line
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Casing-Rotary Portable
Drilling Fluid N/A Type of Rig
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 13606
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0" to 8" Concrete
8" to 13' Rd Brn Gly
Sty C/F Sd
with Cobbles

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 2/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]
Atlas Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner JACOBSON, DAN
Address 18 MEADOW WOODS ROAD
City GREAT NECK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-2
County Bergen Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address 10-14 Rennie place

TYPE OF WELL (as per Well Permit Categories) RECOVERY Date well completed 5/28/92
Regulatory Program Requiring Well ECRA Case I.D. # [illegible]
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) DAN RAVIV ASSO. Tele. # 201-564-6006

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft..
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No Flush mount Cover
Static water level after drilling 6.5 ft.
Water level was measured using Tape drop line
Well was developed for 1 hours at .5 gpm
Method of development Bailer
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity N/A gpm
Pump type: Passive Skimmer
Drilling Method Auger
Drilling Fluid N/A Type of Rig CME 45
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 13306
Name of Drilling Company JERSEY BORING

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	3	13	4	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	13	9 5/8	#2 well gravel
Annular Seal/Grout	0	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with Pump			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 4" Concrete
4" to 6' Brn m/c Sd & gravel
Tr Cinders Tr Clay
6' to 13' Gry m/c Sand & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 6/6/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 22428
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner DAN Jacobson
Address 18 Meadowwoods Rd Great Neck, N.Y.
City _____ State _____ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County Bergen Municipality Lodi N.J. Lot No. 89 Block No. 224
Address 10-14 Rennie Place

TYPE OF WELL (as per Well Permit Categories) Monitoring Date well completed 10/11/90
Regulatory Program Requiring Well ECRA Case I.D. # 88-262
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) DAN RAVIV ASSO. Tele. # 201-564-6006

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 1½ in.
Bottom 1½ in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No Flush mount

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	1½	Galvanized Drive Type
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	5	12	1½	Galvanized/Screen Driv Typ
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	N/A	N/A	N/A	N/A
Annular Seal/Grout	N/A	N/A	N/A	N/A
Method of Grouting	N/A			

Static water level after drilling 10 ft.
Water level was measured using Tape drop line
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hand Driven
Drilling Fluid N/A Type of Rig Hand Driven
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company Jersey Boring & Drilling Co.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 12' Brn Silty Sand & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 10/27/90

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-1:8A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26127[illegible]
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corp. ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. TB SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 7 & 10, Block# 81A & 161A Lodi
3. DATE COMPLETED 8/9/88 DRILLER J.E. Fritts & Assoc., Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 12' Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138 M
11/96

E
DMQ

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 50143

Atlas Sheet Coordinates 26 03

OWNER IDENTIFICATION - Owner JACOBSON, DAN
Address 18 MEADOW WOODS RD
City GREAT NECK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B-1
County BERGEN Municipality LODI BORO Lot No. 22A Block No. 89
Address 10-14 RENNIE PL.

DATE WELL STARTED 3/6/98
DATE WELL COMPETED 3/6/98

TYPE OF WELL (as per Well Permit Categories) BORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 88262

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to ft.

Borehole diameter:
Top 2 in.
Bottom 2 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling ft.

Water level was measured using

Well was developed for hours at gpm

Method of development NA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid none Type of Rig Geoprobe

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) (None) D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter) •					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	24		Neat Cement Bentonite	47 lbs. 2.5 lbs.

Grouting Method Tremie
Drilling Method Direct

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-24' Red-Tan silty sand, some gravel
24' - Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JAMES C. ANDERSON ASSOC. INC.
Well Driller (Print) Wellington Reeve
Driller's Signature Wellington Reeve
Registration No. J1455 Date 3/17/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36598
Atlas Sheet Coordinates 26 : 03 : 583

OWNER IDENTIFICATION - Owner L B K ASSOCIATAES
Address 86 ROUTE 46
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #4
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~3A~~ Block No. ~~122~~
Address SCS CITGO, 120 ROUTE 46, LODI, NJ

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 04 / 22 / 94
Regulatory Program Requiring Well ~~UST~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HUDSON ENV. SERVICES Tele. # (908) 686-5959

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	1'	4"	PVC, ~~BEDROCK FLUSHMOUNT~~
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'	11'	4"	PVC, SLOT .020 BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	½'	11'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	½'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	TREMMY			

Static water level after drilling APRX. 4 ft.
Water level was measured using STEEL TAPE
Well was developed for ~~5~~ 1 hours at <3 gpm
Method of development PUMPED
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ~~N/A~~ gpm
Pump type: N/A
Drilling Method AUGER
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Timothy Westover Date 5/20/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36599
Atlas Sheet Coordinates 26 : 03 - 583

OWNER IDENTIFICATION - Owner L B K ASSOCIATAES
Address 86 ROUTE 46
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #5
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~3A~~ Block No. ~~122~~
Address ~~SCS CITGO, 120 ROUTE 46, LODI, NJ~~

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 04 22 / 94
Regulatory Program Requiring Well UST Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HUDSON ENVIRONMENTAL SERVICES Tele. # 908-686-5959

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	1'	4"	PVC BEDROCK FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'	11'	4"	PVC, SLOT .020 BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	½'	11'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	½'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	TREMMY			

Static water level after drilling APRX 4 ft.
Water level was measured using STEEL TAPE
Well was developed for ~~5~~ hours at ~~23~~ gpm
Method of development PUMPED
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AUGER
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date 5/20/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

#974

Well Permit No. 26 - 37525
Atlas Sheet Coordinates 26: Ø3: 583

OWNER IDENTIFICATION - Owner ~~MENDON LEASING FACILITY~~
Address 224 UNION ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 8-14 Block No. 115
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/30/94
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~93-04-07-1605~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tri-State Tele. #

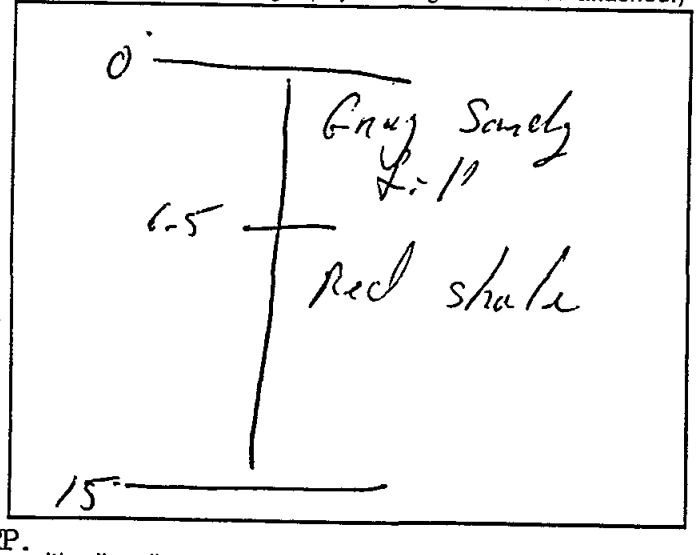
WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	4	20 Slot PVC
Tail Piece				
Gravel Pack	4	15	#2	Ricci
Annular Seal/Grout	2	4	Ton	Ricci
Method of Grouting	0-2 Concrete Placement			

Static water level after drilling 8.5 ft.
Water level was measured using TAPE
Well was developed for 15 hours at 5 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig T-64
Name of Driller Charles Kitzenberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 10166
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 8/2/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

8-15E

974

Well Permit No. 26 - 376000
Atlas Sheet Coordinates 26 : 03 : 583

OWNER IDENTIFICATION - Owner ~~MENDON LEASING FACILITY~~
Address 224 UNION ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No MW-2
County BERGEN Municipality LODI BORO Lot No. 8-14 Block No. 115
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/30/94
Regulatory Program Requiring Well UST Case I.D. # ~~93-04-07-1605~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tri-State Tele. #

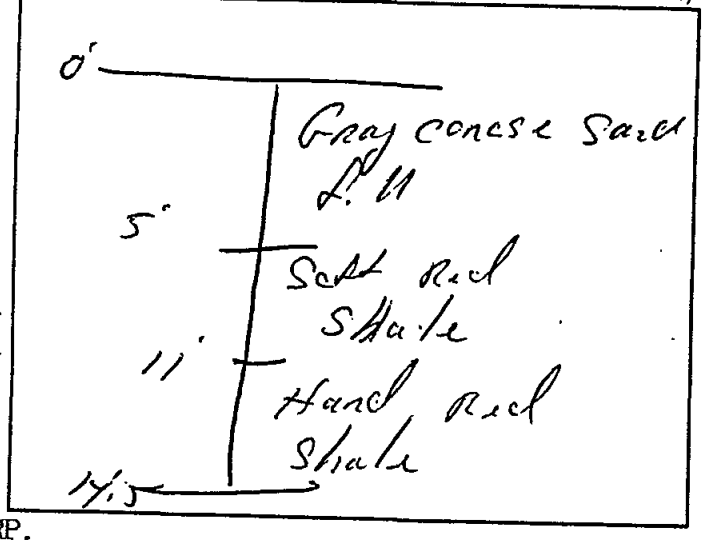
WELL CONSTRUCTION

Total depth drilled 14.5 ft.
Well finished to 14.5 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4.5	4"	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4.5	14.5	4"	20 Slot PVC
Tail Piece				
Gravel Pack	3.5	14.5	#2	Ricc.
Annular Seal/Grout	2	3.5	#00	Ricci
Method of Grouting	Concrete 0-2 Placement			

Static water level after drilling 8 ft.
Water level was measured using TAPE
Well was developed for 1.5 hours at 3 gpm
Method of development Air Lift
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig T64
Name of Driller Charles Liebergen
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 10166
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 8/12/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

LP

MONITORING WELL RECORD

Well Permit No. 26 - 3935 4
Atlas Sheet Coordinates 26 : C 2 : 573

OWNER IDENTIFICATION - Owner Meadow Leasing Facility
Address 224 Union ST
City Lodi State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County Bergen Municipality Lodi Lot No. 2-14 Block No. 115
Address same

TYPE OF WELL (as per Well Permit Categories) Monitoring Date well completed 2/14/95
Regulatory Program Requiring Well UST Case I.D. # 93 04 CP 1605

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	4	.010 Slot Sch 40 PVC
Tail Piece				
Gravel Pack	3/3	15/4	#8	#1/#2 Silica Sand
Annular Seal/Grout	1	3	8	Cement Bentonite
Method of Grouting	Pressure Tremie Grout			

Static water level after drilling 8.5 ft.
Water level was measured using Electric Tape
Well was developed for .5 hours at 2 gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Schramm T-64
Name of Driller Chad Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 10-1627 & 001364
Name of Drilling Company Tetra Tech Drilling Corp

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 – 6: Reddish Brown Sands and decomposed Rock
6 – 15: Red Shale Bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Chad Hitzelberger Date 3-2-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

CL

Well Permit No. 26 - 40453
Atlas Sheet Coordinates 26 : 03 : 583

1214

OWNER IDENTIFICATION - Owner NITTING, LOUIS RESIDENCE
Address 216 UNION ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~5~~ Block No. ~~115~~
Address SAME AS ABOVE

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 5/6/95
Regulatory Program Requiring Well UST Case I.D. # 93-4-7-1605
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tristate Environmental Tele. # (201) 670-6655

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	2	PVC SCH 40
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	15	2	PVC .010 SCH 40
Tail Piece				
Gravel Pack	3	15	8	Ricci #1
Annular Seal/Grout	1	3	8	Ricci #00
Method of Grouting	Flushmount Concrete 0-1' Placement			

Static water level after drilling 9 ft.
Water level was measured using Tape measure
Well was developed for 1.5 hours at .5 gpm
Method of development Submersable
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid None Type of Rig D-120
Name of Driller Karl D. Hitzelberger
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 6001266 J-1533
Name of Drilling Company TABASCO DRILLING CORP.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 Brunswick shale

9 Lenses of Brunswick shale rock 6" to 8" thick with powder in between.

15

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Karl D Hitz Date 5/6/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

Form 87-5M-4-49

RECEIVED
JAN 10 1950
Department of Conservation & Economic Development
Geological & Topographical Survey

26-03-566 [P]

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply
WELL RECORD

Permit No. 26-130
Application No.
County Bergen

1. OWNER The Interchemical Corp ADDRESS PO Box 167 Hawthorne, N.J.

Owner's Well No. 1 SURFACE ELEVATION 10' (Above mean sea level) Feet

2. LOCATION Lodi, N.J. Bergen Co.

3. DATE COMPLETED Dec 23, 1949 DRILLER Wm. Stothoff Co. Inc.

4. DIAMETER: Top 10 Inches Bottom 10 Inches TOTAL DEPTH 435' Feet

5. CASING: Type Drive pipe Diameter 10 Inches Length 16'11" Feet

6. SCREEN: Type Size of Opening Diameter Inches Length Feet

Range in Depth {Top Feet Geologic Formation
{Bottom Feet

Tail piece: Diameter Inches Length Feet

7. WELL FLOWS NATURALLY Gallons per Minute at Feet above surface

Water rises to Feet above surface

8. RECORD OF TEST: Date Dec 21&22 Yield 187 Gallons per minute

Static water level before pumping 8 Feet below surface

Pumping level 186' feet below surface after 12 hours pumping

Drawdown 178 Feet Specific Capacity Gals. per min. per ft. of drawdown

How Pumped Turbine pump How measured Orifice

Observed effect on nearby wells none

9. PERMANENT PUMPING EQUIPMENT:

Type ? Capacity Gallons per minute

How Driven Horse Power R.P.M.

Depth of pump in well Feet Depth of foot piece in well Feet

10. USED FOR Factory use AMOUNT {Average Gallons Daily
{Maximum Gallons Daily

11. QUALITY OF WATER Sample: Yes No.

Taste none Odor none Color clear Temperature 50 °F

12. LOG See other side (Give details on back of sheet or on separate sheet) Are samples available? no

13. SOURCE OF DATA Well Statement

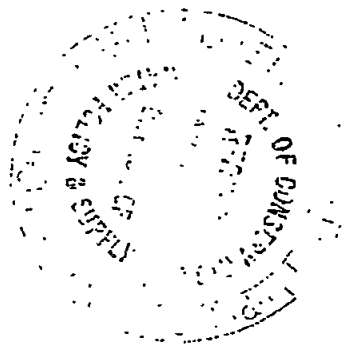
14. DATA OBTAINED BY H.J.Stothoff DATE Jan 6, 1950

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1819

26-03-566
26-130

Record of well
10" well 435' deep.
Drove 10" pipe to and tight in the rock 16'11" from the surface and drilled 10" hole on in the rock.
Formation.
0' - 5' open hole
5' - 10' red clay & large gravel stone
10' - 15' red hard pan.
15' - 435' red rock
Test on well with turing pump 200' setting flow 187 GPM 186' drawdown from the surface.
Static water level 8'
Well drilled Oct 26-Dec 23, 1949



WELREC 085 1920

26.03.5.62

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: _____
PERMIT NO. 2611887
APPLICATION NO. _____
COUNTY Bergen

WELL RECORD

1. OWNER Boro of Lodi ADDRESS Kennedy Park CODINT
   Owner's Well No. Soil BORINGS SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Above
3. DATE COMPLETED 12/11/87 DRILLER Environmental Drilling
4. DIAMETER: Top 7" inches Bottom 7" inches TOTAL DEPTH 12 Feet
5. CASING: Type None Diameter — Inches Length — Feet
6. SCREEN: Type — Size of Opening — Diameter — Inches Length — Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY — Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date — Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type — Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Soil Information AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-1ft Topsoil 1-12ft Sandy silty Red clay Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA EDI
14. DATA OBTAINED BY ENVIRONMENTAL DRILLING, INC. P.O. BOX 323 STAFFORD FORGE ROAD EAGLESWOOD TWP. WEST CREEK, NEW JERSEY 08092-0323 Date 12/17/87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

Borings sealed with Cement/Bentonite slurry

WELREC 085 1742

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26,03,6,51
Permit No. 26-15614-8
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
PHONE (201) 722-4266 FAX (201) 356-1009

26-03-651

1. OWNER Acme Quality Products ADDRESS 205 S. Newman St., Hackensack, NJ 07601

Owner's Well No. Replacement SURFACE ELEVATION _____

2. LOCATION Same

3. DATE COMPLETED 2/16/89 DRILLER Summit Drilling Co., Inc.

4. DIAMETER: Top 10 inches Bottom 10 inches TOTAL DEPTH 8 " feet

5. CASING: Type PVC Diameter 4 inches Length 3 feet

6. SCREEN: Type PVC Size of Opening .010 Diameter 4 inches Length 5 feet

Range in Depth: Top _____ feet
Bottom _____ feet Geologic Formation _____
Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

Static water level before pumping 3 - 4 feet below surface

Pumping level _____ feet below surface after _____ hours pumping

Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

How pumped _____ How measured _____

Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

Type N/A Mfrs. Name _____

Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Mark Laura (Lic. #1486) Date 2/16/89

WELREC 085 2124

VR-13SA
58

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-825
APPLICATION NO. _____
COUNTY _____
COORD 26-03-562

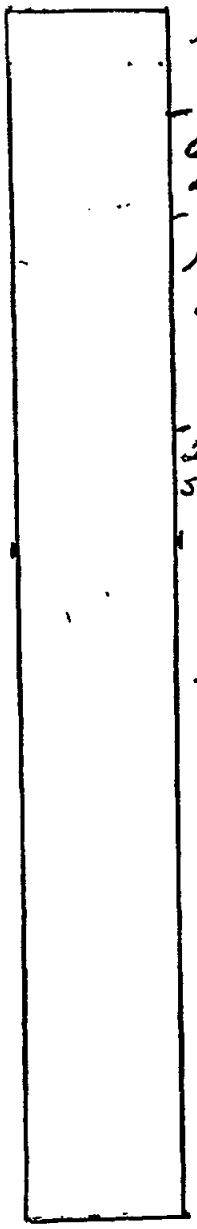
WELL RECORD

1. OWNER Lodi Realty Corp. ADDRESS 165 Main St. Lodi, NJ
   Owner's Well No. 1 SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Lodi, NJ
3. DATE COMPLETED 12-28-53 DRILLER Ernest S. Richardson
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 105 Feet
5. CASING: Type drive Diameter 6 Inches Length 26 Feet
6. SCREEN: Type no Size of Opening ____ Diameter ____ Inches Length ____ Feet
   Range in Depth { Top ____ Feet / Bottom ____ Feet } Geologic Formation ____
   Tail Piece: Diameter ____ Inches Length ____ Feet
7. WELL FLOWS NATURALLY no Gallons per minute at ____ Feet above surface
   Water rises to ____ Feet above surface
8. RECORD OF TEST: Date 12-28-53 Yield 50 Gallons per minute
   Static water level before pumping 6 Feet below surface
   Pumping level 20 feet below surface after 1 hours pumping
   Drawdown 14 Feet Specific Capacity ____ Gals. per min. per ft. of drawdown
   How pumped bailer test How measured ____
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type shallow well Mfrs. Name ____
   Capacity 35 G.P.M. How Driven electric H.P. 1½ R.P.M. 3750
   Depth of Pump in well 30 Feet Depth of Footpiece in well 30 Feet
   Depth of Air Line in well ____ Feet Type of Meter on Pump ____ Size ____ Inches
10. USED FOR Industrial AMOUNT { Average 1,000 Gallons Daily / Maximum 2,000 Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes ____ No X
    Taste none Odor none Color clear Temp. 51 °F.
12. LOG See reverse side Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA driller
    DATA OBTAINED BY E.S. Richardson Date 5/21/54

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

Depth of Well 86'
Drive Casing 34'
Dia. 6"

26-03-563
26-787



1'-6'
FILL DIRT

6'-12'
BLACK LOAM

12'-28'
Red Hardpan

28'-34'
SAND

Drive Shoe

34'-86'
Red Sandstone

RECEIVED
JUL 6 1954
Department of Conservation & Economic Development
Geologic & Top. Survey

WELREC 085 1809

FORM 87

26-03-566

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-213
Application No.
County Bergen

WELL RECORD

1. OWNER Frank Dini Co ADDRESS Route #17 Lodi N.J.
Owner's Well No. One SURFACE ELEVATION +35 Feet (Above mean sea level)
2. LOCATION South of #17 on West Side of building.
3. DATE COMPLETED Oct. 6, 1950 DRILLER Rinbrand Well Drilling Co. Inc.
4. DIAMETER: top 8 Inches Botton 8 Inches TOTAL DEPTH 200 Feet
5. CASING: Type Steel Diameter 8 Inches Length 32 Feet
6. SCREEN: Type Size of Opening Diameter Inches Length Feet
Range { Top Feet Bottom Feet Geologic Formation
Tail piece. Diameter Inches Length Feet
7. WELL FLOWS NATURALLY Gallons per Minute at Feet above surface
Water rises to Feet above surface
8. RECORD OF TEST: Date Oct. 6, 1950 Yield 55 Gallons per minute
Static water level before pumping 5 Feet below surface
Pumping level 20 feet below surface after 8 hours pumping
Drawdown 15 Feet Specific Capacity Gals. per min. per ft. of drawdown
How Pumped Piston How measured barrel
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Fairbanks Morse Mfrs. Name
Capacity 35 G.P.M. How Driven electric H.P. 3 R.P.M. 3500
Depth of Pump in well 60 Feet Depth of Footpiece in well none Feet
Depth of Air Line in well Feet Depth of Meter on Pump
10. USED FOR Plant AMOUNT Average Gallons Daily
Maximum Gallons Daily
11. QUALITY OF WATER Sample: Yes No. X
Taste good Odor none Color clear Temp. 60 °F
12. LOG Clay, hard pan, gravel Red rock. Are samples available no
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand
14. DATA OBTAINED BY Adam F Rinbfand Date Nov. 21, 1950

(NOTE: Use the reverse side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 095 1910

DWR-139A
7-88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-787
APPLICATION NO.
COUNTY
COORD. 26-03-563

WELL RECORD

1. OWNER Reisch Trucking & Trans. Co. Inc. ADDRESS Palisades Park, NJ
   Owner's Well No. 1 SURFACE ELEVATION 20 Feet (Above mean sea level)
2. LOCATION Route #17 Lodi, NJ
3. DATE COMPLETED 10-24-54 DRILLER Ernest S. Richardson
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 86 Feet
5. CASING: Type drive Diameter 6 Inches Length 34 Feet
6. SCREEN: Type no Size of Opening — Diameter — Inches Length — Feet
   Range in Depth { Top — Feet / Bottom — Feet
   Geologic Formation —
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY no Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date 10-24-53. Yield 50 Gallons per minute
   Static water level before pumping 10 Feet below surface
   Pumping level 18 feet below surface after 1 hours pumping
   Drawdown 8 Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped bailer test How measured —
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT: no
   Type — Mfrs. Name —
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR Industrial AMOUNT { Average 2,000 Gallons Daily / Maximum 4,000 Gallons Daily
11. QUALITY OF WATER Good Sample: Yes — No X
    Taste none Odor none Color clear Temp. 51 °F.
12. LOG see reverse side Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA driller
14. DATA OBTAINED BY E. S. Richardson Date 5/21/54

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62383

Atlas Sheet Coordinates 26 : 03 : 534

WNER IDENTIFICATION - Owner AMOCO OIL COMPANY
ddress 300 INTERPACE PKWY
ity PARSIPPANY State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6
ounty BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
ddress 80 ESSEX STREET @ RIVERVIEW

YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 9/20/01
egulatory Program Requiring Well DATE WELL COMPLETED 9/20/01
Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

otal depth drilled 25' ft.
ell finished to 25' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) e land surface ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 10' ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

ethod of development pump

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity gpm

ump type:

rilling Fluid Type of Rig Gus Pech

ealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company SUMMIT WELL DRILLING CO INC

Well ller (Print) Todd Naugle

riller's Signature Todd Naugle

egistration No. M16992 Date 9 / 28 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Well Owner

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-66
FAX: (732) 356-10
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

L: MW6 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62383
COORD #2: PERMIT #2:
E: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 COUNTY: Bergen
ER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 XSTREET:
USE: Monitor

ER CASING: PVC
METER: 4"
GTH: 5'

WELL: 25'
VEL PK SZ: Morie #2
LLER: Todd Naugle
FACE COMPLETION: M

OUTER CASING:
DIAMETER:
LENGTH:

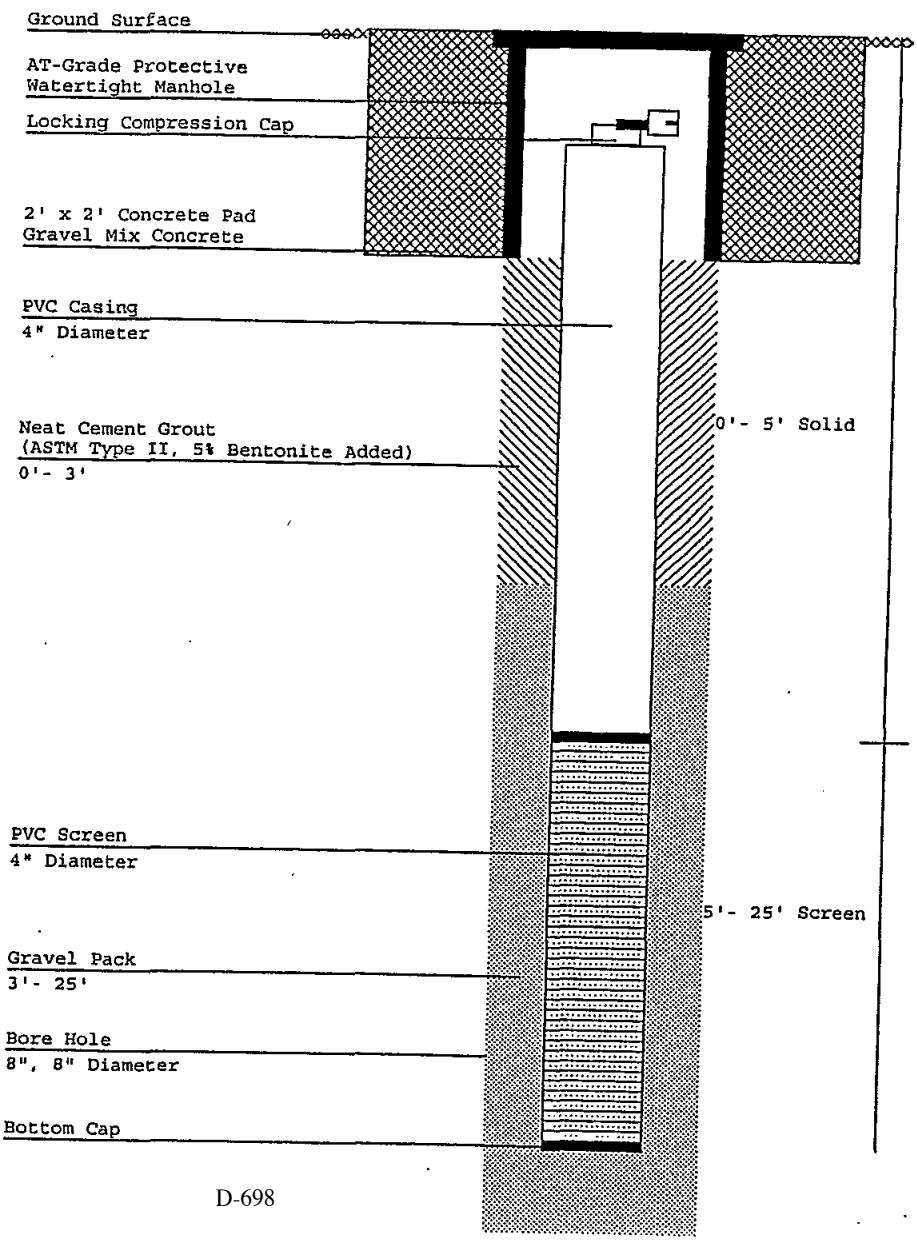
GAL PER MIN: 1/2
STAT H2O LVL: 10'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 20'
LENGTH 2:
SLOT SIZE: .020

CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 25'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
12'		Sand & silt some gravel.
- 25'		Weathered sandstone.



)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62384

Atlas Sheet Coordinates 26 : 03 : 5

)WNER IDENTIFICATION - Owner AMOCO OIL COMPANY
Address 300 INTERPACE PKWY
City PARSIPPANY State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
Address 80 ESSEX STREET @ RIVERVIEW

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 9/ 20/ 0
Regulatory Program Requiring Well DATE WELL COMPLETED 9/ 20/ 0
Case I.D.#

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick above land surface ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Method of development pump
Grouting Method gravity
Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 9 / 28 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner

D-699

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-426
Toll Free: (800) 2
FAX: (732) 35
http://www.summitdrilling.com
email: info@summitdrilling.com

SUMMIT® DRILLING CO., INC.

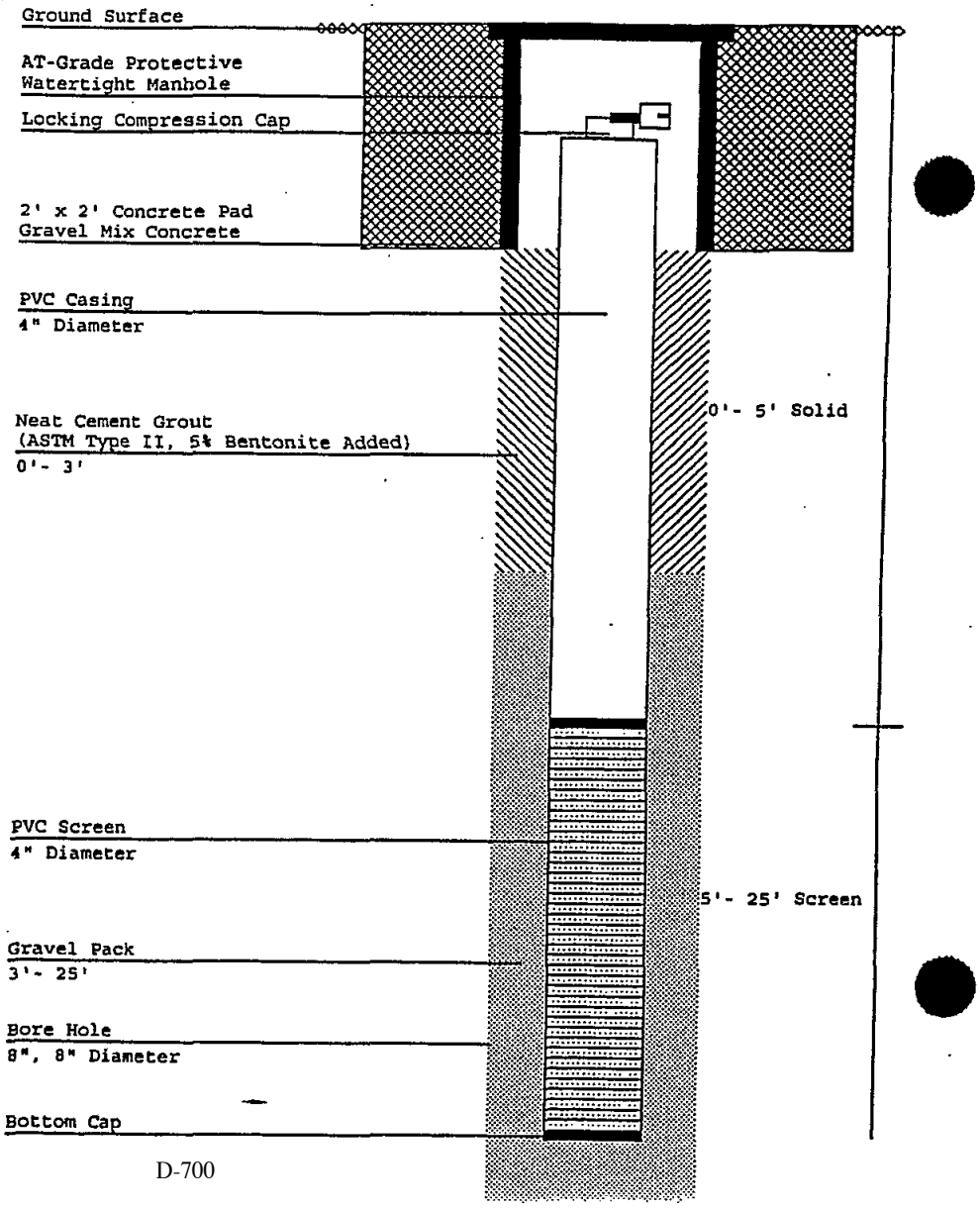
JVIRONMENTAL SPECIALISTS

WELL LOG

L: MW7 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62384
COORD #2: PERMIT #2: COUNTY: Bergen
E: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 XSTREET:
ER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 USE: Monitor

ER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Air Rotary
METER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
GTH:	5'	LENGTH:	DIAMETER:	4"	HOLE DIA: 8", 8"
			LENGTH 1:	20'	TOTAL DEPTH: 25'
WELL:	25'	GAL PER MIN: 1/2	LENGTH 2:		
VEL PK SZ:	Morie #2	STAT H2O LVL: 10'	SLOT SIZE:	.020	
LLER:	Todd Naugle	DEVELOPMENT METHOD: pump	CASING SEAL:	Portland	
FACE COMPLETION:	M	DEVELOPMENT TIME: 1/2	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
12'		Sand & silt some gravel.
- 25'		Weathered sandstone.



)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62385

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner AMOCO OIL COMPANY
Address 300 INTERPACE PKWY
City PARSIPPANY State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW8
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
Address 80 ESSEX STREET @ RIVERVIEW

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 9/20/01
DATE WELL COMPLETED 9/20/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 scn 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 9 / 28 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
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Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-10[illegible]
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

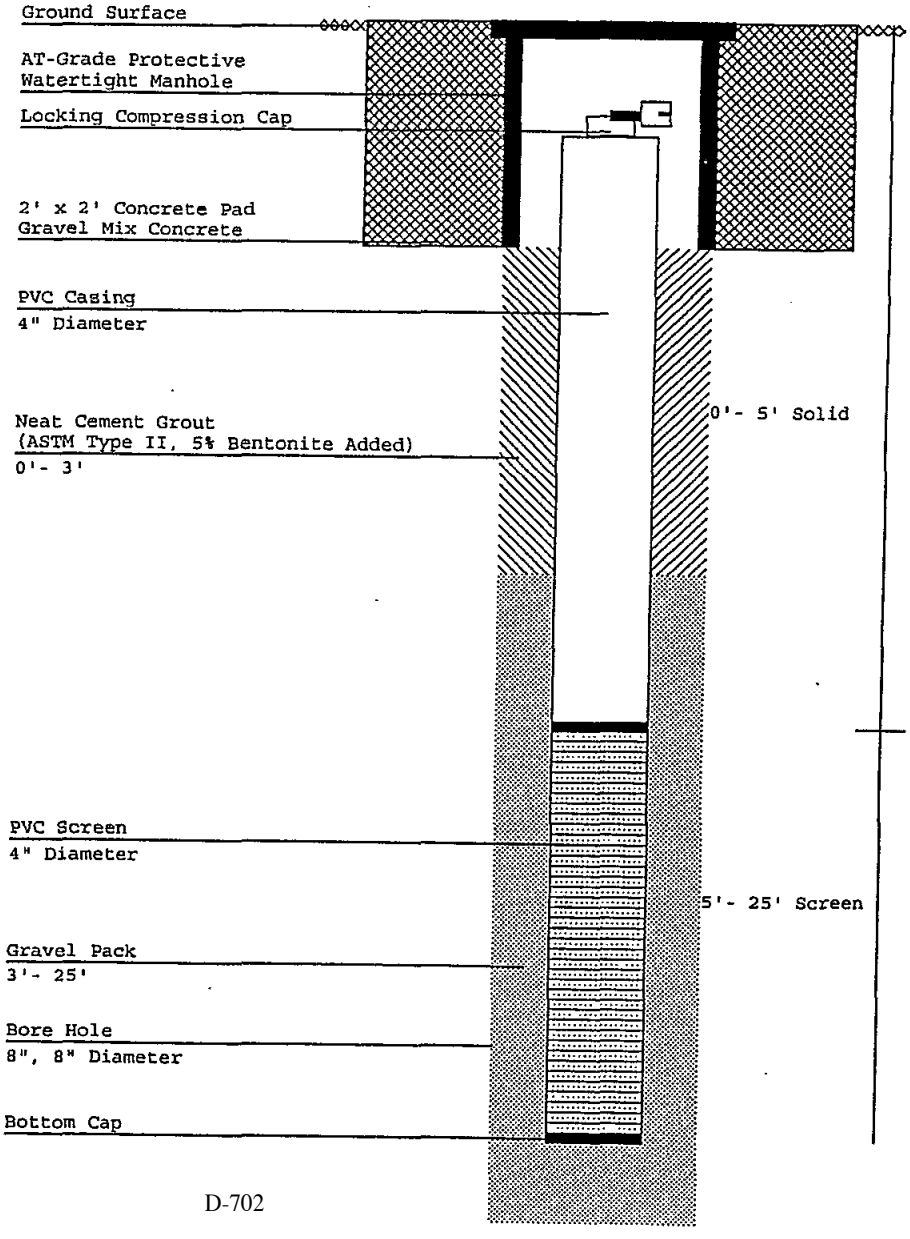
.L: MW8 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62385
COORD #2: PERMIT #2:
:E: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 COUNTY: Bergen
IER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 XSTREET:
USE: Monitor

IER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1:	PVC	DRILLING METHOD:	Air Rotary
AMETER:	4"	DIAMETER:		SCREEN TYPE 2:		SAMPLING METHOD:	
IGTH:	5'	LENGTH:		DIAMETER:	4"	HOLE DIA:	8", 8"
				LENGTH 1:	20'	TOTAL DEPTH:	25'
T WELL:	25'	GAL PER MIN:	1/2	LENGTH 2:			
AVEL PK SZ:	Morie #2	STAT H2O LVL:	10'	SLOT SIZE:	.020		
ILLER:	Todd Naugle	DEVELOPMENT METHOD:	pump	CASING SEAL:	Portland		
RFACE COMPLETION:	M	DEVELOPMENT TIME:	1/2	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

MARKS / SOILS IDENTIFICATION

- 12' Sand & silt some gravel.
'- 25' Weathered sandstone.



DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~25~~ ~~45835~~
Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~538~~

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 05-4 (53-4)
County BERGEN Municipality LODI BORO Lot No. Block No.
Address ROUTE 80 WESTBOUND Date well started ~~N/A~~ 11/25/96 N/A
TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/27/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Garrett Fleming Tele. # 908-562-0[illegible]

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 50 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	40	1.25	Sch 40 pve
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	40	50	1.25	Sch 40 pve .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	38	55	4	#2 morie
Annular Seal/Grout	0	38	4	Bensea
Method of Grouting	Tremi with pump			

Static water level after drilling 45' ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud
Drilling Fluid N/A Type of Rig Acker AD-II
Name of Driller Sean Conroy
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 51522
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 1' 6" BLK Top Over 6" Stone
1' to 15' Brn c/FSD m/f gravel Tr SH
15 to 20' Red c/F gravel Lt Cly SH
20 to 50', Rd Brn Sd SFt gravel
50' to 55' Decomp. Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature [signature] Date 12/28/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0480

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 45840
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 54-2 (54-1)
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 11/4/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/5/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 908-562-0112

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 40 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	35	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	35	40	1.25	Sch 40 PVC .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	33	50	4	#2 Morie
Annular Seal/Grout	0	33	4	Bensell Cement
Method of Grouting	Tremi with pump			

Static water level after drilling 27 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Brn f/m sd Tr Silt
5' to 10' Brn c/gravel & f/c Sd
10' to 25' Brn f/m Sand Tr Silt Tr gravel
25' to 30' Brn f/sty Sd Tr gravel
30' to 35' Brn f sty Sand
35' to 46' Brn f Silt Tr Varved Clay
46 to 50' Brn f Silty Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 11/16/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ ~~45834~~
Atlas Sheet Coordinates ~~26~~ : ~~Ø3~~ ~~538~~

OWNER IDENTIFICATION - Owner ~~NJ DOT~~
Address PARKWAY AVE
City ~~TRENTON~~ State ~~NJ~~ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 53-5
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 11/27/96
TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 11/27/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Garnett-Fleming Tele. # 908-562-0112

WELL CONSTRUCTION

Total depth drilled 35 ft.
Well finished to 35 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [ ] Yes [X] No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	25	1.25	sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	25	35	1.25	sch 40 pvc .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	23	35	4	#2 Morie
Annular Seal/Grout	0	23	4	BenSeal
Method of Grouting	Tremi With pump			

Static water level after drilling 1 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? [ ] Yes [X] No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 21306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0" to 4" Top Soil
4" to 20' Red Brn Sd, gravel & Silt
20' to 30' Red Brn C/F Sd & C/F gravel
30' to 35' Red Brn Shale

98 DEC 31 AM 11:51

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/21/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WEL REC 151 0479

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 45833
Atlas Sheet Coordinates 26 : 03 538

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-3-9
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 11 / 25 / 96
TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11 / 25 / 96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 609-561-4800

WELL CONSTRUCTION

Total depth drilled 55'6" ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 11' ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method MUD ROTARY
Drilling Fluid BENTONITE Type of Rig CME 75
Name of Driller Mike Blejwas
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B
N.J. Registration No. B0185
Name of Drilling Company JERSEY BORING & DRILLING CO.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" Asphalt
6" - 2' Gray coarse gravel.
2' - 15' Gray coarse to fine gravel, with some red brown fine to medium sand and silt.
15' - 35' Red brown fine to medium sand and silt.
35' - 40' Red brown fine to coarse sand, trace silt.
40' - 50' Red medium to fine sand & silt, with fine to coarse gravel.
50' - 55'6" Rock.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Michael Blejwas Date 12/26/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0178

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 44604
Atlas Sheet Coordinates 26 : 03 :538

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-21A
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address RT. 80 EAST BOUND Date well started 6/5/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 6/6/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 14 ft.
Borehole diameter: Top 5 in. Bottom 5 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	9	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	9	14	1.25	Sch 40 PVC .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	7	15	5	#2 morie
Annular Seal/Grout	0	7	5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 10' ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller Victor Rotunda
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 51273
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6' Red Brn clfsd ½ gravel
6' to 13' Red Brn clfsd Trace of Clayey Silt
13' to 15' Red Brn clfsd Some m/f gravel Trace Silt

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Victor Rotunda Date 6/15/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0477

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26-45032
Atlas Sheet Coordinates 26 : 03 : 591

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. S1-04
County BERGEN Municipality SADDLE BROOK TW Lot No. _____ Block No. _____
Address ROUTE 80 WESTBOUND Date well started N/A 10/18/96 N/A
TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/21/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 609-561-4800

WELL CONSTRUCTION

Total depth drilled 52' ft.
Well finished to N/A ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 15' ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method MUD ROTARY
Drilling Fluid BENTONITE Type of Rig CME 75
Name of Driller Frank Carrozza
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. B0270
Name of Drilling Company JERSEY BORING DRILLING CO.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" Asphalt
6" - 15' Fine to medium sand with silt.
15' - 25' Red sand with coarse gravel, cobbles and boulders.
25' - 32' Red sand with silt & gravel and cobbles.
32' - 52' Rock

WATER ALLOCATION
RECEIVED
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I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Frank M Carrozza R. Date 12/26/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151.0120

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41622
Atlas Sheet Coordinates 26 : Ø3 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-21
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/22/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	9	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	9	15	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	8	15	4	#2 morie
Annular Seal/Grout	0	8	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 1 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller George VANNESS
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12666
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 5' Red Brn Silt Sand & gravel
5' to 15' Decomposed Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanVleet Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0468

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41623
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BW-10-11
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9,15,95
Regulatory Program Requiring Well N/A Case I.D.# N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele.# 609-734-7000

WELL CONSTRUCTION

Total depth drilled 5 ft.
Well finished to 5 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	2	5	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	1	5	4	#2 morie
Annular Seal/Grout	0	1	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 2 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller George VanNess
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 5' Red Brn Sand & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George VanNess Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0469

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41624
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-21
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9,5,95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 34.5 ft.
Well finished to 25 ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	20	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	20	25	1.25	Sch 40 pvc - .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	18	25	4.5	#2 morie
Annular Seal/Grout	0	18	4.5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Note: Bore hole sealed with Bentonite from 25' to 34.5'

Static water level after drilling 15 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker ADII
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 15' Red Brn Sd, gravel & Silt
15' to 23' Red Brn Sd Silt & gravel
23' to 34.5' Decomposed Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9-16-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0465

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41625
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SS-2
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/12/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	15	1.25	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	9	15	4	#2 morie
Annular Seal/Grout	0	9	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil Max
Name of Driller George Vanness
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 7' Red Brn Silty Sand
7' to 15' Red Brn Sand, Silt & gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Van Ness Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0470

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41626
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PM-11
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/12/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25' ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	20	1.25	Sch 40 PVC.
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	20	25	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	18	25	4.5	#2 Morie
Annular Seal/Grout	0	18	4.5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 25' Brown C/F Sand
Some C/F gravel Little Silt
Trace Shale Fragments

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9/16/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0466

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41627
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-24
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9,14,95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	5	10	1.25	Sch 40 pvc .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	4	10	4	#2 morie
Annular Seal/Grout	0	4	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Soil MAX
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 4' Red Brn Sand & gravel
4' to 6' Black Sandy Silt with gravel
6' to 8' Gray Sand with Silt
8' to 10' Red Brn Silty Sand with gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0471

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41628
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-22
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/20/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 34.5 ft.
Well finished to 20 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	15	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	15	20	1.25	Sch 40 pvc - 020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	13	20	4	#2 morie
Annular Seal/Grout	0	13	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Note: Hole grouted with Cement/Bentonite from 20' to 34.5'

Static water level after drilling 1.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Red Brn Sand Silt & gravel
5' to 15' Red gray Brn Sand Silt gravel & Rock Fragments
15' to 29.5' Red Brn Sand, gravel & Sand Stone Fragments
29.5' to 34.5' Sand Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 10/28/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0472

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41629
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-30
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10/27/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	15	1.25	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	9	15	4	#2 morie
Annular Seal/Grout	0	9	4	Cement/Bentonite
Method of Grouting	Tremi With Pump			

Static water level after drilling 4 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker Hillbilly
Name of Driller George Vanness
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51266
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to 2' Red Brn Silty c/F Sd & gravel
2'to 6' Same with Trace of wood (Fill)
6'to 10' Red Brn c/F Sd & gravel
10'to 12.5' gray f Sd & Silt Tr
Clay Tr organic

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Van Ness Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0473

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41630
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-25
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9.28.95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 39.5 ft.
Well finished to 35 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	30	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	30	35	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	28	39.5	4"	#2 morie
Annular Seal/Grout	0	28	4	cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 9 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig ACKER AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to5' Brn m/F Sd Sm gravel Trace Black Top. (Fill)
5'to13' Brn c/F Sd Sm c/F gravel Tr Silt
13'to25' Brn cly Silt Lt f/Sd Tr gravel
25'to 34'6" Brn c/F Sd Sm c/F gravel Tr Sandstone
34'6" to 39'6" Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 11/11/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0474

DWR-138 M
11/94

LAS

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41631
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PM 13
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9.29.95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	15	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	15	20	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	14	20	4	#2 morie
Annular Seal/Grout	0	14	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 10 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thorahill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 8' Brn C/FSd & C/F gravel (Fill)
8 to 12' Brn org m/FSd Tr f gravel & Shale Frag.
12' to 15' Blk-Brn FSd Sm silt Tr C/F gravel & Shale Frag.
15 to 20' Brn m/FSd Tr silt & Sandstone Frag.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thorahill Date 11/11/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0475

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41633
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-8 (Blanket)
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/24/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 18.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid Bentonite Type of Rig Acker Hillbilly
Name of Driller Jerrold Klaus
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B0195
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 2' Brn Silt Tr f Sd Tr Roots
2' to 2'6" Sand Stone Frag
2'6" to 19' Red Brn Silt Sd & gravel
19' to 20' Red Brn Silty Sand & Sand Stone Fragments
20' to 25' Sand Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jerrold Klaus Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0476

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41640
Atlas Sheet Coordinates 26 : 03 : 523

OWNER IDENTIFICATION - Owner PARKWAY GARDEN ASSOCIATES
Address 128 ROCHELLE AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 110
Address 128 ROCHELLE AVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/8/95
Regulatory Program Requiring Well UST Case I.D. # UST #01704408

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ANS Tele. # 908-754-8383

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	SCH 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	SCH 40 C.020")
Tail Piece				
Gravel Pack	9	20		MORIE #1
Annular Seal/Grout	8	9		BENTONITE PELLETS
Method of Grouting	TREMIE GROUT: 0-8 (Bentonite)			

Static water level after drilling ± 13 ft.
Water level was measured using TAPE
Well was developed for 1.0 hours at ± 5 gpm
Method of development AIR LIFT
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGER
Drilling Fluid — Type of Rig MOBILE B-61
Name of Driller R. KIMLEY
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1506
Name of Drilling Company CRAIG TEST BORING CO., INC.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

MF SAND
F. GRAVEL
0 - 20'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 9-11-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0382

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
1-10-89		0	18		
1-18-89		18	26		

EMPIRE SOUNDVIEW ENTERPRISES INC.

FIELD LOG

HOLE NO. MW-19

GRD. ELEV.

26-03-526

26-15319-0

PROJECT

LOCATION

Sheet ____ of ____

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										Drilled to 10' ft.		
10-12	1	15	17				W	RBr	14	fine Sand Some Gravel		
			8	6								
12-14	2	5	7				W	RBr	18	same		
			8	4								
14-16	3	9	7	8			W	GY	12	Same		
			8	5								
18-20	4	18	15				W	Gr	20	Gray Silty Clay		
			14	21								
20-22	5	16	9				W			fine → med Sand and Gravel		H8-89
			33	14								
24-26	6	32	50/5				W			fine → med Sand and Gravel		

DRILLERS CLASSIFICATION

NOTATION: SIZE AUGERS / CASING 7 7/8 of 6 1/4 10" Cm. SIZE SPOON 2"

SIZE THIN-WALLED TUBE ____ SIZE CORE ____

N = NO. OF BLOWS TO DRIVE "SPOON "WITH lb. WEIGHT FALLING PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 1303

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
11/08-09	1:00	0		COOL	40°

EMPIRE

FIELD LOG

HOLE NO. S-2

GRD. ELEV. 2615318

2G-03-526

PROJECT FINE ORGANICS

LOCATION LODI NJ

Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										AUGER TO 12.0'	H_2O @ 6.2'	
12-14	1	16	19	25	20					Brown-Red fine to coarse SAND AND GRAVEL		
14-16	2	23	9	6	6					Red-Brown SILT AND CLAY	15.5'	
										END OF BORING @ 16.0'		
										1/2 Barrel		

NOTATION: SIZE AUGERS / CASING 4¼ SIZE SPOON 2"

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 6 "WITH 140 lb. WEIGHT FALLING 30 PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 1301

DWR-138-M
*12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26-15318
Atlas Sheet Coordinates 26 : 03 : 526

OWNER IDENTIFICATION - Owner Fine Organics Corp.
Address 210 Main St.
City Lodi State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. S-2
County Bergen Municipality Lodi Lot No. 10 Block No. 81A
Address

TYPE OF WELL (as per Well Permit Categories) Boring Date well completed 1/18/89
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
NA ☐ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	NA			
Outer Casing (Not Protective Casing)	NA			
Screen (Note slot size)	NA			
Tail Piece	NA			
Gravel Pack	NA			
Annular Seal/Grout	0	16	Bentonite/cement	
Method of Grouting	Tremie			

Static water level after drilling 6-2 ft.
Water level was measured using Tape
Well was developed for NA hours at NA gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Auger
Drilling Fluid None Type of Rig Acker AD II
Name of Driller Jim Stavola
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. MD 466
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jim Stavola Date 10/5/92
Supervised by: Roger Lodge

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1300

GWR-139 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26-15317
Atlas Sheet Coordinates 26:03:526

OWNER IDENTIFICATION - Owner Fine Organics Corp.
Address 210 Main St.
City Lodi, [redacted] State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. S-1
County Bergen Municipality Lodi Lot No. 10 Block No. 81A
Address

TYPE OF WELL (as per Well Permit Categories) Boring Date well completed 1/18/89
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade NA ☐ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? NA Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	NA			
Outer Casing (Not Protective Casing)	NA			
Screen (Note slot size)	NA			
Tail Piece	NA			
Gravel Pack	NA			
Annular Seal/Grout	0	14	Bentonite/cement	
Method of Grouting	Tremie			

Static water level after drilling 6 ft.
Water level was measured using Tape
Well was developed for NA hours at NA gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Auger
Drilling Fluid None Type of Rig Acker APII
Name of Driller Jim Stavola
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 19466
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jim Stavola Date 10/5/92
Supervised by Roger Loyel

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WEI REC 085 1298

PROJECT Texaco

WELL NO. 4

DATE DRILLED 10-27-82

STATIC WATER LEVEL dry

HANDEX Corp.
703 Ginesi Drive
Morganville, New Jersey 07751
(201) 536-8500

PERMIT NO. 26-5891

COORD. ~~APPLICATION~~ NO. 26-03-526

COUNTY Bergen

USE monitor

LOCATION 68 Essex Street, Lodi, New Jersey

OWNER Texaco, Inc. ADDRESS 910 Delancy Street, Newark, NJ

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top _____ Bottom _____ Inches TOTAL DEPTH 20' Feet

CASING: Type PVC Diameter 4 Inches Length 10' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes _____ No X GRAVEL SIZE _____

SANITARY SEAL Yes X No _____ TYPE bentonite GEOLOGIC FRM _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-18' Red silty SAND, some clay, little small gravel
10'		18'-20' SANDSTONE
20'		Well Screen
30'		

WELREC 085 1297

PROJECT Texaco

WELL NO. 3

DATE DRILLED 10-27-82

STATIC WATER LEVEL dry

HANDEX Corp.
703 Ginesi Drive
Morganville, New Jersey 07751
(201) 536-8500

PERMIT NO. 26-5890

COORD, ~~APPLICATION~~ NO. 26-03-526

COUNTY Bergen

USE monitor

LOCATION 68 Essex Street, Lodi, New Jersey

OWNER Texaco, Inc. ADDRESS 910 Delancy Street, Newark, NJ

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top _____ Bottom _____ Inches TOTAL DEPTH 20' Feet

CASING: Type PVC Diameter 4 Inches Length 10' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes _____ No X GRAVEL SIZE _____

SANITARY SEAL Yes X No _____ TYPE bentonite GEOLOGIC FRM _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
10'		0'-18' Red silty SAND, some clay, little small gravel
20'		18'-20' SANDSTONE
30'		

Well Screen

WELREC 085 1296

PROJECT Texaco

WELL NO. 2

DATE DRILLED 10-27-82

STATIC WATER LEVEL dry

HANDEX Corp.
703 Ginesi Drive
Morganville, New Jersey 07751
(201) 536-8500

PERMIT NO. 26-5889

COORD. ~~APPLICATION~~ NO. 26-03-526

COUNTY Bergen

USE monitor

LOCATION 68 Essex Street, Lodi, New Jersey

OWNER Texaco, Inc. ADDRESS 910 Delancy Street, Newark, NJ

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top _____ Bottom _____ Inches TOTAL DEPTH 20' Feet

CASING: Type PVC Diameter 4 Inches Length 10' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes _____ No X GRAVEL SIZE _____

SANITARY SEAL Yes X No _____ TYPE bentonite GEOLOGIC FRM _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-17' Red silty SAND, some clay, little small gravel
10'		17'-20' SANDSTONE
20'		
30'		

Well Screen

WELREC 085 1295

PROJECT Texaco

WELL NO. 1

DATE DRILLED 10-27-82

STATIC WATER LEVEL dry

HANDEX Corp.
703 Ginesi Drive
Morganville, New Jersey 07751
(201) 536-8500

PERMIT NO. 26-5888

COORD. APPLICATION NO. 26-03-526

COUNTY Bergen

USE monitor

LOCATION 68 Essex Street, Lodi, New Jersey

OWNER Texaco, Inc. ADDRESS 910 Delancy Street, Newark, NJ

DRILLING METHOD air rotary SAMPLING METHOD cuttings

DIAMETER: Top _____ Bottom _____ Inches TOTAL DEPTH 20' Feet

CASING: Type PVC Diameter 4 Inches Length 10' Feet

SCREEN: Type PVC Size of Opening 0.020 Diameter 4 Inches Length 10' Feet

GRAVEL PACK Yes _____ No X GRAVEL SIZE _____

SANITARY SEAL Yes X No _____ TYPE bentonite GEOLOGIC FRM _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
10'		0'-16' Red silty SAND, some clay, little small gravel
20'		16'-20' SANDSTONE
30'		

Well Screen

WELREC 085 1294

DWR-135A
'88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-1620
APPLICATION NO. 846
COUNTY _____
COORD. 26-03-538

WELL RECORD

1. OWNER Borough of Lodi ADDRESS Lodi, New Jersey
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lodi, New Jersey
3. DATE COMPLETED 5-29-57 DRILLER Artesian Well & Equip. Co.
4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 403 Feet
5. CASING: Type Steel Diameter 12 Inches Length 48 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Trias. SS & Shi
Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 5-29-57 Yield 600 Gallons per minute
Static water level before pumping 1' 11" Feet below surface
Pumping level 111 feet below surface after 24 hours pumping
Drawdown 110' 11" Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped Deep Well Turbine How measured Orifice
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See other side Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Artesian Well & Equipment Co., Inc
14. DATA OBTAINED BY Artesian Well & Equipment Date 6-3-57

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1101

Form 87-5M

26-03-535

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 26-1025
Application No. _____
County _____

1. OWNER Mr Joseph Brizak ADDRESS 48 Woodland Ave.
   Owner's Well No. One SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Rochelle Park Bergen Co N.J.
3. DATE COMPLETED Sept 22 1954 DRILLER Andy Hickerson
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH 100 Feet
5. CASING: Type Steel Diameter 6 Inches Length 15 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet Bottom _____ Feet Geologic Formation _____
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Sept 22 1954 Yield 10 Gallons per minute
   Static water level before pumping 5 Feet below surface
   Pumping level 20 feet below surface after 2 hours pumping
   Drawdown 15 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped bailor How measured Bbl
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type Deming SW Jet Capacity 10 Gallons per minute
   How Driven electric Horse Power 1/2 R.P.M. 3500
   Depth of pump in well 30 Feet Depth of Foot piece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste no Odor no Color clear Temperature 56 °F
12. LOG Hard pan red rock Are samples available? no
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand DATE Nov 4 1954

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1383

WELL SEALED 5/9/86

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751 (201) 536-8500

26-03-523

BORING LOG

Well No. 1 Application No. _____ Permit No. 26-6967
Date Drilled August 23, 1984 County Bergen Use monitor
Location ATI Service station, 660 Main Street, Lodi, New Jersey
Owner Solar Oil Address Hope, New Jersey
Drilling Method air rotary Sampling Method cuttings
Hole Diameter 7-7/8" Total Depth 18'

Casing:
Type PVC Schedule 40 Diameter 4" Length 3'

Screen:
Type PVC Schedule 40 Slot 20 Diameter 4" Length 15'
Gravel Pack Size #1 Casing Seal bentonite
Static Water Level 8.7' Geologic Formation Trb

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			Well Screen	0'-2' Brown fine SAND, little+ silt, little medium to fine gravel
				2'-3'6" Red brown medium to fine SAND, little medium to fine gravel
10'				3'6"-18'6" Redbrown SANDSTONE
20'				
30'				

WELREC 085 1286

WELL SEALED 5/9/86

Handex

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751 (201) 536-8500

26-03-523

BORING LOG

Well No. 2 Application No. _____ Permit No. 26-6968
Date Drilled August 23, 1984 County Bergen Use monitor
Location ATI service station, 660 Main Street, Lodi, New Jersey
Owner Solar Oil Address Hope, New Jersey
Drilling Method air rotary Sampling Method cuttings
Hole Diameter 7-7/8" Total Depth 14'

Casing:
Type PVC Schedule 40 Diameter 4" Length 4'

Screen:
Type PVC Schedule 40 Slot 20 Diameter 4" Length 10'
Gravel Pack Size #1 Casing Seal bentonite
Static Water Level 6.3' Geologic Formation Trb

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-1' FILL--asphalt
				1'-3' Green brown fine SAND, some silt, trace fine gravel
				3'-5' Brown fine SAND, little silt, trace+ fine gravel, slight gasoline odor
			Well Screen	5'-10' Broken SANDSTONE
10'				
				10'-15' SHALE, fairly tight, harder
20'				
30'				

JAN 28 1985

WELL SEALED 5/9/86

Handex

26-03-523

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751 (201) 536-8500

BORING LOG

Well No. 3 Application No. _____ Permit No. 26-6969
Date Drilled August 23, 1984 County Bergen Use monitor
Location ATI service station, 660 Main Street, Lodi, New Jersey
Owner Solar Oil Address Hope, New Jersey
Drilling Method air rotary Sampling Method cuttings
Hole Diameter 7-7/8" Total Depth 17'

Casing:
Type PVC Schedule 40 Diameter 4" Length 3'

Screen:
Type PVC Schedule 40 Slot 20 Diameter 4" Length 14'
Gravel Pack Size #1 Casing Seal bentonite
Static Water Level 5.8' Geologic Formation Trb

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			Well Screen	0'-1' FILL--asphalt
				1'-3' Green brown fine SAND, some silt, trace fine gravel
				3'-5'6" Brown medium to fine SAND, little silt, trace medium to fine gravel
10'				
				5'6"-17' Red brown weathered SHALE
20'				
30'				

JAN 28 1985

WELREC 085 1288

WELL SEALED 5/9/86

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751 (201) 536-8500 26-03-523

BORING LOG

Well No. 4 Application No. _____ Permit No. 26-6970
Date Drilled August 23, 1984 County Bergen Use monitor
Location ATI service station, 660 Main Street, Lodi, New Jersey
Owner Solar Oil Address Hope, New Jersey
Drilling Method air rotary Sampling Method cuttings
Hole Diameter 7-7/8" Total Depth 12'

Casing:
Type PVC Schedule 40 Diameter 4" Length 2'

Screen:
Type PVC Schedule 40 Slot 20 Diameter 4" Length 10'
Gravel Pack Size #1 Casing Seal bentonite
Static Water Level 5.2' Geologic Formation Trb

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-3' Green brown SILT
			Well Screen	3'-4'8" Brown fine SAND, little+ silt, gasoline odor at 4'
				4'8"-6' Brown fine SAND, little+ silt
10'				6'-12' Redbrown SHALE, 10'-11' seam--soft
20'				
30'				

JAN 28 1985

WELREC 085 1289

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.57
Permit No. 26-16435-3
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Sydney Barlow ADDRESS 85 Arnot St., Lodi, NJ 07644

   Owner's Well No. MW # 2 SURFACE ELEVATION _____

2. LOCATION Mark Tex Corp., same address as above

3. DATE COMPLETED 5/31/89 DRILLER Summit Drilling Co., Inc., Mark Laura # 1486

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25' feet

5. CASING: Type PVC Diameter 2 inches Length 12 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 4 inches Length 15 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level *before pumping* 14.5 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Depth of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc. D-735

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

26-16435-

Well No. ~~MW-2~~ MW-2 Coordinates 26-03-557 Permit No. ~~26-16435~~

Date Drilled 5/31/89 County Bergen Use Monitor

Location Mark Tex Corp., 65 Arnot St., Lodi, NJ 07644

Owner Sydney Barlow, 65 Arnot St., Lodi, NJ 07644

Drilling Method Auger Sampling Method Split Spoon

Hole Diameter 12" Total Depth 25'

Casing: Type PVC Diameter 2" Length 12'

Screen: Type PVC Slot .020 Diameter 2" Length 15'

Gravel Pack Size Morie # 2 Casing Seal Bentonite

Static Water Level 14.5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	5-7-5-6
2' - 4'	2	5-7-5-8
4' - 6'	3	17-18-22-25
6' - 8'	4	22-32-37-50
8'-10'	5	26-27-62-35
10'-12'	6	16-28-50/5"
12'-14'	7	21-25-27-22
14'-16'	8	14-39-[illegible]

Well Design

5' x 6" protective standpipe

17' - 8' PELLETS

8' - 25' GRAVEL

2' ABOVE GROUND TO 10' - RISER

10' - 25' SCREEN

25' WELL SET

Identification of Soils / Remarks

0' - 2' Brn. silty m/f sand

2' - 4' Crn./brn. m/f sands

4' - 6' Red/brn. m/f sands

6' - 8' Red/brn. m/f sands, some sm. gravels

8' - 10' yel./brn. c/ sands

10' - 16' Red/brn. m/c sands w/ some sm. gravels and rock frags (sandstone)

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.57
Permit No. 26-16436-1
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER Sydney Barlow ADDRESS 85 Arnot St., Lodi, NJ 07644

   Owner's Well No. MW # 3 SURFACE ELEVATION _____

2. LOCATION Mark Tex Corp., same address as above

3. DATE COMPLETED 6/1/89 DRILLER Summit Drilling Co., Inc., Mark Laura # 1486

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25' feet

5. CASING: Type PVC Diameter 2 inches Length 10 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 4 inches Length 15 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 16 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. *PERMANENT PUMPING EQUIPMENT:*

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. H.P. Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

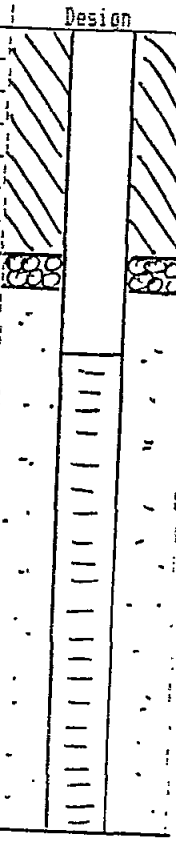
Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. MW - 3
Date Drilled 6/1/89
Coordinate No. 26.03.5.57
Permit No. 26-16436-1
County Bergen
Location Mark Tex Corp., 85 Arnot St., Lodi, NJ 07644
Use Monitor
Owner Sydney Barlow, 85 Arnot St., Lodi, NJ 07644
Drilling Method Auger
Sampling Method Split Spoon
Hole Diameter 12"
Casing: Type PVC Diameter 2" Total Depth 25'
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie # 2 Casing Seal Bentonite Length 15'
Static Water Level 16' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	13-8-9-9
2' - 4'	2	5-7-12-12
4' - 6'	3	9-50/5"
6' - 8'	4	18-22-32-38
8'-10'	5	10-12-28-19
10'-12'	6	14-21-25-26
12'-14'	7	21-22-50/5"
14'-16'		rock @ 14'
15'-17'	8	39-32-22-36
17'-19'	9	9-15-18-25
20'		
30'		
40'		



Well Design

8" WT manhole
7' - 8' PELLETS
8' - 25' GRAVEL
10' - 25' SCREEN
25' WELL SET

Identification of Soils / Remarks

0' - 6' Brn. silty m/f sand

6' - 10' Red/brn. m/f sands, some sm. gravels

10' - 19' Red/brn. m/c sands w/ some sm. - lg. gravels and sm. cobbles

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.57
Permit No. 26-17753-6
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-1266 FAX (201) 356-1009

1. OWNER George Pappageorge, Mark-Tex Corp. ADDRESS 161 Coolidge Ave., Englewood, NJ

   Owner's Well No. MW-4 SURFACE ELEVATION _____

2. LOCATION Mark-Tex Corp., 85 Arnot St., Lodi, NJ

3. DATE COMPLETED 10/26/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer, Jr. Lic. #1212

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25 feet

5. CASING: Type PVC Diameter 2 inches Length 9.5 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 2 inches Length 15 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____
   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

   RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 15 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor well AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

    QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc. D-739

BORING LOG

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. MW-4 Coordinate No. 26.03.5.37 Permit No. 26-17753-6
Date Drilled 10/26/89 County Bergen Use Monitor
Location Mark-Tex Corp., 85 Arnot St., Lodi, NJ
Owner George Pappageorge, Mark-Tex Corp., 161 Coolidge Ave., Englewood, NJ
Drilling Method Auger Sampling Method split spoon
Hole Diameter 12" Total Depth 25'
Casing: Type PVC Diameter 2" Length 9.5'
Screen: Type PVC Slot .020 Diameter 2" Length 15'
Gravel Pack Size Morie # 2 Casing Seal Portland, bentonite
Static Water Level 15' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	19-22-41-35
5' - 7'	2	19-30-58-43
10.5'- 12.5'	3	22-38-47-35
15'-17'	4	27-30-67-26
20'-22'	5	7-9-29-30
25'-27'	6	50/3"
30'		
40'		

Well Design

0' - 6"	CONCRETE	0' - 1'	Top soil
6" - 10'	SOLID	1' - 5'	Lt. brn. m/f sand, some silt
6' - 8'	PELLETS		
8' - 25'	GRAVEL		
10' - 25'	SCREEN	5' - 7'	R-brn. c/f sand, c/f gravel, little silt
25'	SET WELL		
<1	GPM	7' - 25'	Red-brn. m/f sand, some silt, little to some c/f gravel, tr. cobbles

Identification of Soils / Remarks

WELL RECORD

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Coord 26.03.5.57
Permit No. 26-17754-4
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

1. OWNER George Pappageorge, Mark-Tex Corp. ADDRESS 161 Coolidge Ave., Englewood, NJ

Owner's Well No. MW-5 SURFACE ELEVATION _____

2. LOCATION Mark-Tex Corp., 85 Arnot St., Lodi, NJ

3. DATE COMPLETED 10/25/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer, Jr. Lic. #1212

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25 feet

5. CASING: Type PVC Diameter 2 inches Length 12 feet

6. SCREEN: Type PVC Size of Opening .020 Diameter 2 inches Length 15 feet

Range in Depth: Top _____ feet
Bottom _____ feet Geologic Formation _____
Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

Water rises to _____ feet above surface

RECORD OF TEST: Date N/A Yield _____ Gallons per minute

Static water level before pumping 15 feet below surface

Pumping level _____ feet below surface after _____ hours pumping

Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

How pumped _____ How measured _____

Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

Type N/A Mfrs. Name _____

Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor well AMOUNT: Average _____ Gallons Daily
Maximum _____ Gallons Daily

QUALITY OF WATER _____ Sample: Yes _____ No _____

Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc. D-741

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21568
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4D.
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1.09~~ Block No. ~~67~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 8/16/90
Regulatory Program Requiring Well ECRA Case I.D. # 88879
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) KILLAM - R. REDMOND. Tele. # 379-3400

WELL CONSTRUCTION

Total depth drilled 43 ft.
Well finished to 43 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	33	2	PVC
Outer Casing (Not Protective Casing)	0	30	6	STEEL
Screen (Note slot size)	33	43	2	PVC, 020
Tail Piece	-	-	-	-
Gravel Pack	32	43	-	#2 MORIE
Annular Seal/Grout	0	32	-	B PELLETS + PORT
Method of Grouting	TREMIE			

Static water level after drilling -40 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller S. CONROY
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1522
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 10/4/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - [illegible]

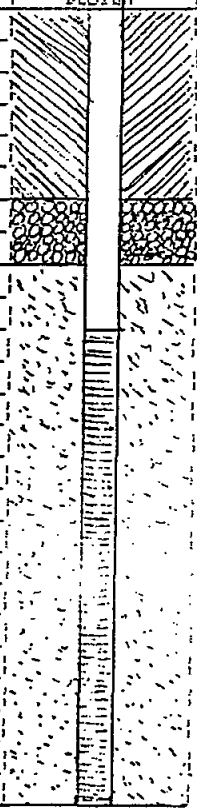
BORING LOG

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 256-1009

Well No. MW-5 Coordinate No. 26.93.5.37 Permit No. 26-17754-4
Date Drilled 10/25/89 County Bergen Use Monitor
Location Mark-Tex Corp., 85 Arnot St., Lodi, NJ
Owner George Pappageorge, Mark-Tex Corp., 161 Coolidge Ave., Englewood, NJ
Drilling Method Auger Sampling Method split spoon
Hole Diameter 12" Total Depth 25'
Casing: Type PVC Diameter 2" Length 12'
Screen: Type PVC Slot .020 Diameter 2" Length 15'
Gravel Pack Size Morie # 2 Casing Seal Portland, bentonite
Static Water Level 15' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	2-3-6-7
5' - 7'	2	2-2-3-8
10'-12'	3	22-48
15'-17'	4	16-30-33-41
20'-22'	5	6-22-20-41
25'-27'	6	61-58/3"
30'		
40'		



Identification of Soils / Remarks

0' - 8' Top soil like fill

8' - 13' R-brn. c/f sand, little c/f gravel, tr. + silt

13' - 22' R-brn. a/f (mostly fine) sand, some silt, some c/f gravel, tr. cobbles, tr. rock frags.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 4D Coordinate No. 26.03.557 Permit No. 26-21568-3
Date Drilled 08/16/90 County Bergen Use Monitor
Location Mark-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rotary Sampling Method split spoons
Hole Diameter 6" Total Depth 43'
Casing: Type Steel/PVC Diameter 6"/2" Length 30' Steel/33' PVC
Screen: Type PVC Slot .020 Diameter 2" Length 10'
Gravel Pack Size Morie # 2 Casing Seal pellets, portland
Static Water Level 40' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Identification of Soils / Remarks
10'			0' - 30' Red Brown m/c silty sand
20'			
29.5'-31.5'	1	24-68/5"	30' - 43' Weathered rock, shale and sandstone

Well Design:
0' - 27' GROUT
0' - 33' SOLID
27' - 32' PELLETS
32' - 43' GRAVEL
33' - 43' SCREEN
43' SET WELL
GPM

6" STEEL to 30'
2" PVC to 33'
2" SCREEN TO 43'

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 . 21569
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County BERGEN Municipality LODI BORO Lot No. 1.09 Block No. 67
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/17/90
Regulatory Program Requiring Well ECRA Case I.D. # 88879
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) KILLAM - R. REDMOND Tele. # 379-3400

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ~ ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	2	PVC
Outer Casing (Not Protective Casing)	-	-	-	-
Screen (Note slot size)	10	25	2	PVC, 020
Tail Piece	-	-	-	-
Gravel Pack	8	25	-	#2 MORIE
Annular Seal/Grout	0	8	-	BPELLETS + PORT
Method of Grouting	TREMIE			

Static water level after drilling 20 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller S. COWDRY
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1522
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Cowdry Date 10/4/90

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

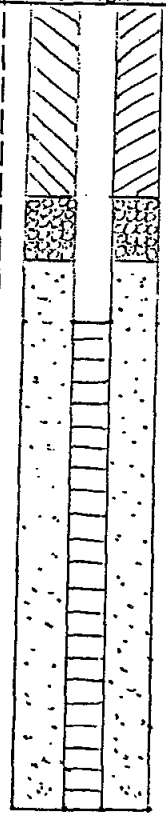
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 6 Coordinate No. 26.03.557 Permit No. 26-21569-1
Date Drilled 08/17/90 County Bergen Use Monitor
Location Mark-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rotary Sampling Method split spoons
Hole Diameter 8" Total Depth 25'
Casing: Type PVC Diameter 2" Length 10'
Screen: Type PVC Slot .020 Diameter 2" Length 15'
Gravel Pack Size Morie # 2 Casing Seal pellets, portland
Static Water Level 20' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
0' - 2'	1	5-2-7-5
5' - 7'	2	4-2-3-2
10'-12'	3	4-15-15-8
15'-17'	4	8-28-32-35
20'-22'	5	20-32-35-41
30'		

Well Design



0' - 6'	GROUT	
0' - 10'	SOLID	
6' - 8'	PELLETS	
8' - 25'	GRAVEL	
10' - 25'	SCREEN	
25'	SET WELL	
	GPM	

Identification of Soils / Remarks

0' - 1'	Top soil
1' - 10'	Red/brown silty sand
10' - 25'	Weathered rock

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21570
Atlas Sheet Coordinates 26 : 05 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County BERGEN Municipality LODI BORO Lot No. 109 Block No. 67
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/17/90
Regulatory Program Requiring Well ECRA Case I.D. # 88879
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) KILLAM - R. REDMOND Tele. # 379-3400

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	15	2	PVC
Outer Casing (Not Protective Casing)	-	-	-	-
Screen (Note slot size)	15	25	2	PVC .020
Tail Piece	-	-	-	-
Gravel Pack	13	25	-	#2 MORIE
Annular Seal/Grout	0	13	-	B. PELLETS + PORT
Method of Grouting	TREMIE			

Static water level after drilling 20 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller S CONROY
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. _____
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 10/4/90

D747

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 . 21571
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1.09~~ Block No. ~~67~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/17/90
Regulatory Program Requiring Well ECRA Case I.D. # 88879
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) KILLAM - R. REDMOND. Tele. # 379-3400

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	17	2	PVC .020
Tail Piece	—	—	—	—
Gravel Pack	1.5	17	—	#2 MORIE
Annular Seal/Grout	0	1.5	—	BPELLETS + PORT
Method of Grouting	TREMIE			

Static water level after drilling 5 ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method _____
Drilling Fluid _____ Type of Rig B-80
Name of Driller S. COWROY
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1522
Name of Drilling Company DONALD GRAHAMER, SR. - C/O SUMMIT

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Cowan D748 Date 10/4/90

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 7 Coordinate No. 26.03.557 Permit No. 26-21570-5

Date Drilled 08/17/90 County Bergen Use Monitor

Location Mark-Tex Corp., 85 Arnot Street, Lodi, NJ 07644

Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644

Drilling Method Air Rotary Sampling Method drive hammer

Hole Diameter 6" Total Depth 25'

Casing: Type PVC Diameter 2" Length 15'

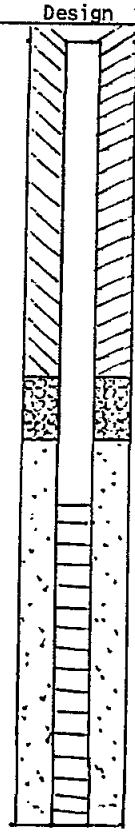
Screen: Type PVC Slot .020 Diameter 2" Length 10'

Gravel Pack Size Morie # 2 Casing Seal pellets

Static Water Level 20' Geologic Formation sands

Depth Below Surface	Sample Number	Blows per 6" on Sampler
5' - 7'	1	8-14-20-21
10'-12'	2	7-18-14-22
15'-17'	3	9-18-26-50
20'		
30'		
40'		

Well Design



1' - 11'	GROUT	0' - 1'	Fill
6" - 15'	SOLID	1' - 10'	F/ sands
11' - 13'	PELLETS		
13' - 25'	GRAVEL		
15' - 25'	SCREEN		
25'	SET WELL		
	GPM		

Identification of Soils / Remarks

10' - 15' Hard sand

15' - 25' Rock

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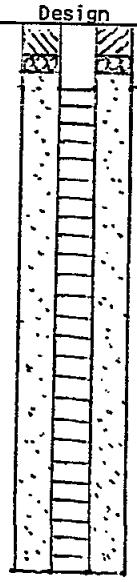
WELL LOG

Well No. MW - 8 Coordinate No. 26.03.557 Permit No. 26-21571-3
Date Drilled 08/17/90 County Bergen Use Monitor
Location Mark-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rotary Sampling Method none
Hole Diameter 6" Total Depth 17'
Casing: Type PVC Diameter 2" Length 2'
Screen: Type PVC Slot .020 Diameter 2" Length 15'
Gravel Pack Size Morie # 2 Casing Seal pellets
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		

Well Design



0' - 1'	GROUT	0' - 1'	Asphalt & stone
0' - 2'	SOLID	1' - 17'	Brown m/c sand
1' - 1.5'	PELLETS		
1.5' - 17'	GRAVEL		
2' - 17'	SCREEN		
17'	SET WELL		
	GPM		

Identification of Soils / Remarks

Fillam

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23554 - 4
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner ~~BARLOW, SIDNEY~~
Address ~~85 ARNOT STREET~~
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7D
County Bergen Municipality LODI BORO Lot No. 1.09 Block No. 87
Address 55 Arnot St. Lodi, NJ. 07644

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/11/91
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~87647~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 70 ft.
Well finished to 70 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	60	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	60	70	6	OPEN HOLE
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	60	10	Portland
Method of Grouting	TRIMIE			

Static water level after drilling 20 ft.
Water level was measured using TAPE
Well was developed for 1/2 hours at 5 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Mud Air Rotary
Drilling Fluid Bentonite Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 3/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Gold - Consultant

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
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Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 7D Coordinate No. 26.03.55.7 Permit No. 26-23554-4
Date Drilled 02/11/91 County Bergen Use monitor
Location Mar-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rovary/Mud Rotary Casing Sampling Method n/a
Hole Diameter 0' - 60' = 10" 60' - 70' = 6" Total Depth 70'
Casing: Type 6" steel Diameter 6" Length 60'
Screen: Type Rock well Slot ____ Diameter 6" Length open hole
Gravel Pack Size ____ Casing Seal casing & grout
Static Water Level 20' Geologic Formation rock

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
20'			
40'			
60'			

0' - 60'	GROUT	0' - 25'	brn. c to f sand & gravel tr. clay silt
0' - 60'	SOLID		
	PELLETS		
	GRAVEL		
	OPEN HOLE		
70'	SET WELL		
	GPM		
	STNDP. OR		
X	MANHOLE		
		25' - 70'	hard sandstone

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23555 - 2
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner ~~BARLOW, SIDNEY~~
Address 85 ARNOT STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9
County Bergen Municipality LODI BORO Lot No. 1.09 Block No. 67
Address 85 Arnot St. Lodi, N.J. 07644

TYPE OF WELL (as per Well Permit Categories) Date well completed 3/1/91
Regulatory Program Requiring Well ~~EDTA~~ MONITORING Case I.D. # ~~87647~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing *height (stick up) above land surface* _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	10	25	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	8	25	8	Morie #2
Annular Seal/Grout	0	6	8	Bentonite Portland
Method of Grouting	Tremie			

Static water level after drilling 16 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 3 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid N.A. ; Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12110
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 3/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

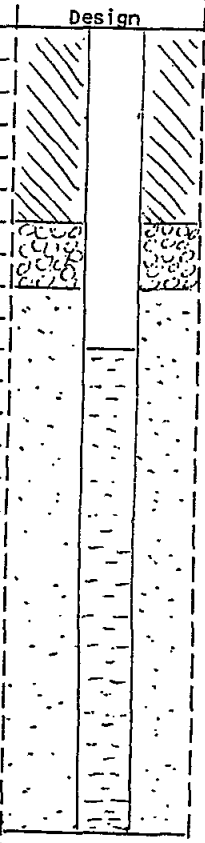
SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4
Toll Free: (800)-242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 9 Coordinate No. 26.03.55.7 Permit No. 26-23555-2
Date Drilled 03/01/91 County Bergen Use monitor
Location Mar-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rotary Sampling Method n/a
Hole Diameter 10" Total Depth 25'
Casing: Type PVC Diameter 4" Length 10'
Screen: Type PVC Slot .020 Diameter 4" Length 15'
Gravel Pack Size Morie # 2 Casing Seal pellets & grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



	GROUT	0' - 1'	top soil, grout
0' - 10'	SOLID	0' - 25'	brn. c to f sand tr. silt tr.
6' - 8'	PELLETS		c to f gravel
8' - 25'	GRAVEL		
10' - 25'	SCREEN		
25'	SET WELL		
	GPM		
	STNDP. OR		
X	MANHOLE		

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6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23556 -1
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9A
County Bergen Municipality LODI BORO Lot No. 1.09 Block No. 67
Address 85 Arnot St. Lodi N.J. 07644

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed / /
Regulatory Program Requiring Well ECRA Case I.D. # 87647
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 70 ft.
Well finished to 70 ft.
Borehole diameter:
Top 10 in.
Bottom 3 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	60	4	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	60	70	3	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	60	10	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 25 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 5 gpm
Method of development Sub Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Rotary
Drilling Fluid Water Type of Rig Gus Pech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 3/13/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 9D Coordinate No. 26.03.55.7 Permit No. 26-23556-1
Date Drilled 03/05/91 County Bergen Use monitor
Location Mar-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method roller bit water recirculate Sampling Method n/a
Hole Diameter 10" Total Depth 70'
Casing: Type 4" steel Diameter 4" Length 60'
Screen: Type steel Slot ____ Diameter ____ Length open hole 60'-70'
Gravel Pack Size ____ Casing Seal grout
Static Water Level ____ Geologic Formation red/brn. sandstone

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
				GROUT 0' - 15' grout (8 portland, 2 benseal)
				SOLID 0' - 60' casing set
				PELLETS
				GRAVEL
				OPEN HOLE
				70' SET WELL
				GPM
				STNDP. OR
				X MANHOLE
20'				
40'				
60'				60' - 70' drill out (red/brn. sandstone)
				B.O.H. 70'

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23557 -9
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner BARLOW, SIDNEY
Address 85 ARNOT STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10S
County Bergen Municipality LODI BORO Lot No. 1.09 Block No. 67
Address 85 Arnot St. Lodi N.J. 07644

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/11/91
Regulatory Program Requiring Well ECRA Case I.D. # 87647
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 70 ft.
Well finished to 70 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	60	6	Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	60	70	6	Open Hole
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	60	10	Portland grout
Method of Grouting	Tremie			

Static water level after drilling 25 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 5 gpm
Method of development Sub Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Mud & Air Rotary
Drilling Fluid Bentonite Type of Rig Gus Rech
Name of Driller Carmine De Corso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine De Corso Date 3/18/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 10D Coordinate No. 26.03.55.7 Permit No. 26-23557-9
Date Drilled 02/11/91 County Bergen Use monitor
Location Mar-Tex Corp., 85 Arnot Street, Lodi, NJ 07644
Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
Drilling Method Air Rotary/Mud Rotary Casing Sampling Method n/a
Hole Diameter 0' - 60' = 10" 60' - 70' = 6" Total Depth 70'
Casing: Type 6" steel Diameter 6" Length 60'
Screen: Type Rock well Slot Diameter 6" Length open hole
Gravel Pack Size Casing Seal casing & grout
Static Water Level Geologic Formation rock & overburden

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design		Identification of Soils / Remarks	
				0' - 40' GROUT	0' - 40'	brn. c to f sand & gravel tr. clay silt
				0' - 40' SOLID		
				PELLETS		
				GRAVEL		
				OPEN HOLE		
				70' SET WELL		
				GPM		
				STNDP. OR		
				X MANHOLE		
20'						
40'					40' - 70'	sandstone
60'						

Form DWR-138
11/80

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2611048

Coordinate #
26.035.57

26-03-557

APPLICATION NO. _____

WELL RECORD

COUNTY Bergen

1. OWNER Fine Organics ADDRESS 205 Main St., Lodi, New Jersey
   Owner's Well No. 1503 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot: 10A Block: 81A
3. DATE COMPLETED 6/25/87 DRILLER EMPIRE SOILS INVESTIGATIONS, INC.
4. DIAMETER: Top 1 1/2 inches Bottom 1 1/2 inches TOTAL DEPTH 12.0' Feet
5. CASING: Type PVC Diameter 1 1/2 Inches Length 2.0' Feet
6. SCREEN: Type PVC Size of Opening 020 Diameter 1 1/2 Inches Length 10.0' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date NONE Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type NONE Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Piezometer AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
    DATA OBTAINED BY Alan Garcia & Supervisor Gerry Malack Date July 16. 1987
    #1167

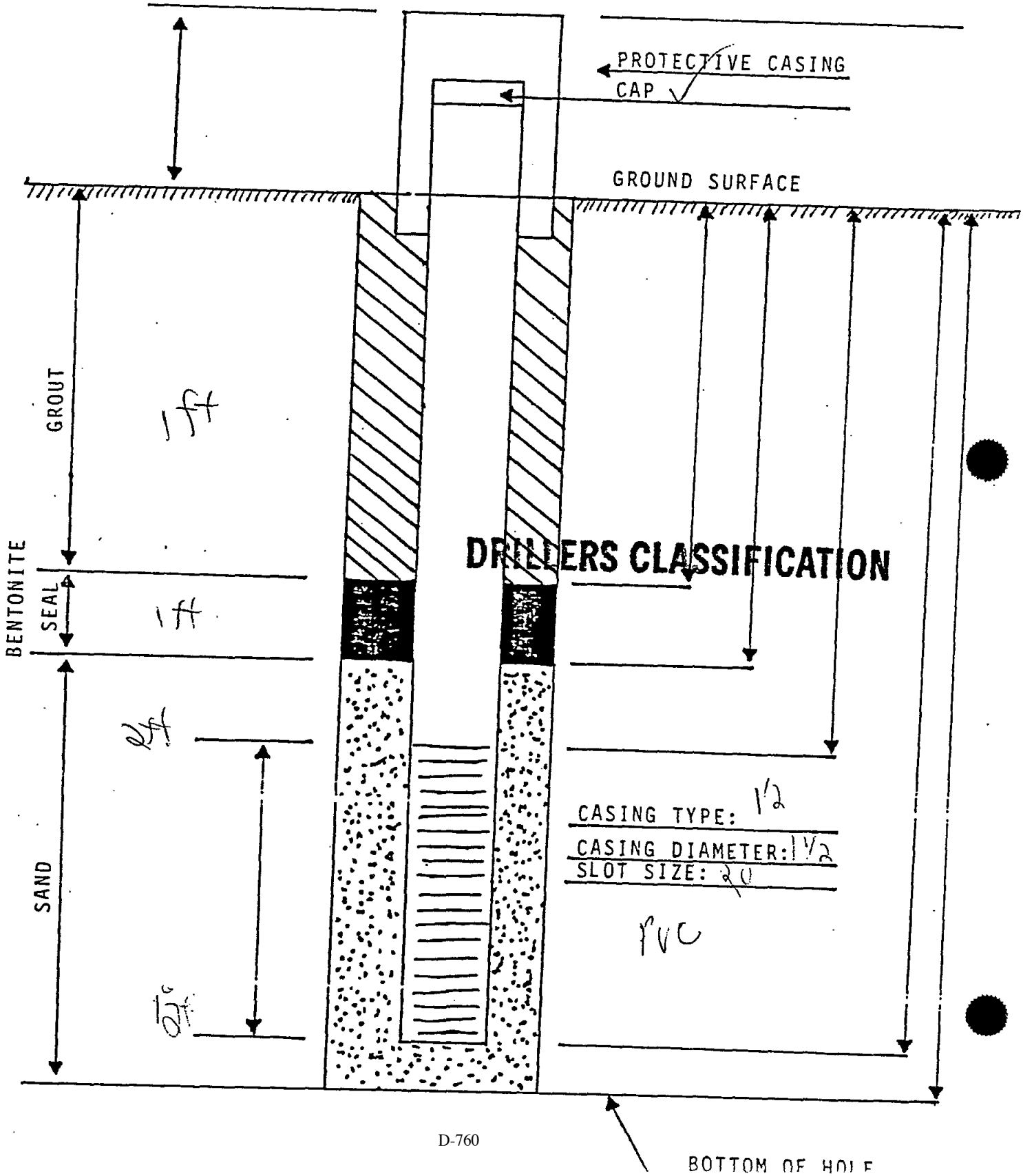
(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

EMPIRE
OILS INVESTIGATIONS INC.

26-03-557

BORING NO.: 503
WELL PERMIT NO.: 2611048
DRILLER:
DATE: 6/25/87

PROJECT:



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10

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26|1047

APPLICATION NO. _____

COUNTY Bergen

26-03-557

WELL RECORD

[redacted]ate # [redacted]57

6.035.57

1. OWNER Fine Organics ADDRESS 205 Main St., Lodi, New Jersey
   Owner's Well No. 1502 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot: 10A Block: 81A
3. DATE COMPLETED 6|25|87 DRILLER EMPIRE SOILS INVESTIGATIONS, INC.
4. DIAMETER: Top 1½ inches Bottom 1½ inches TOTAL DEPTH 14.0' Feet
5. CASING: Type PVC Diameter 1½ Inches Length 3.0' Feet
6. SCREEN: Type PVC Size of Opening 020 Diameter 1½ Inches Length 11.0' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date NONE Yield _____ Gallons per minute
   [redacted] Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type NONE Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Piezometer AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
    [redacted] SOURCE OF DATA _____
14. DATA OBTAINED BY Alan Garcia & Supervisor Gerry Malack Date July 16. 1987
    #1167

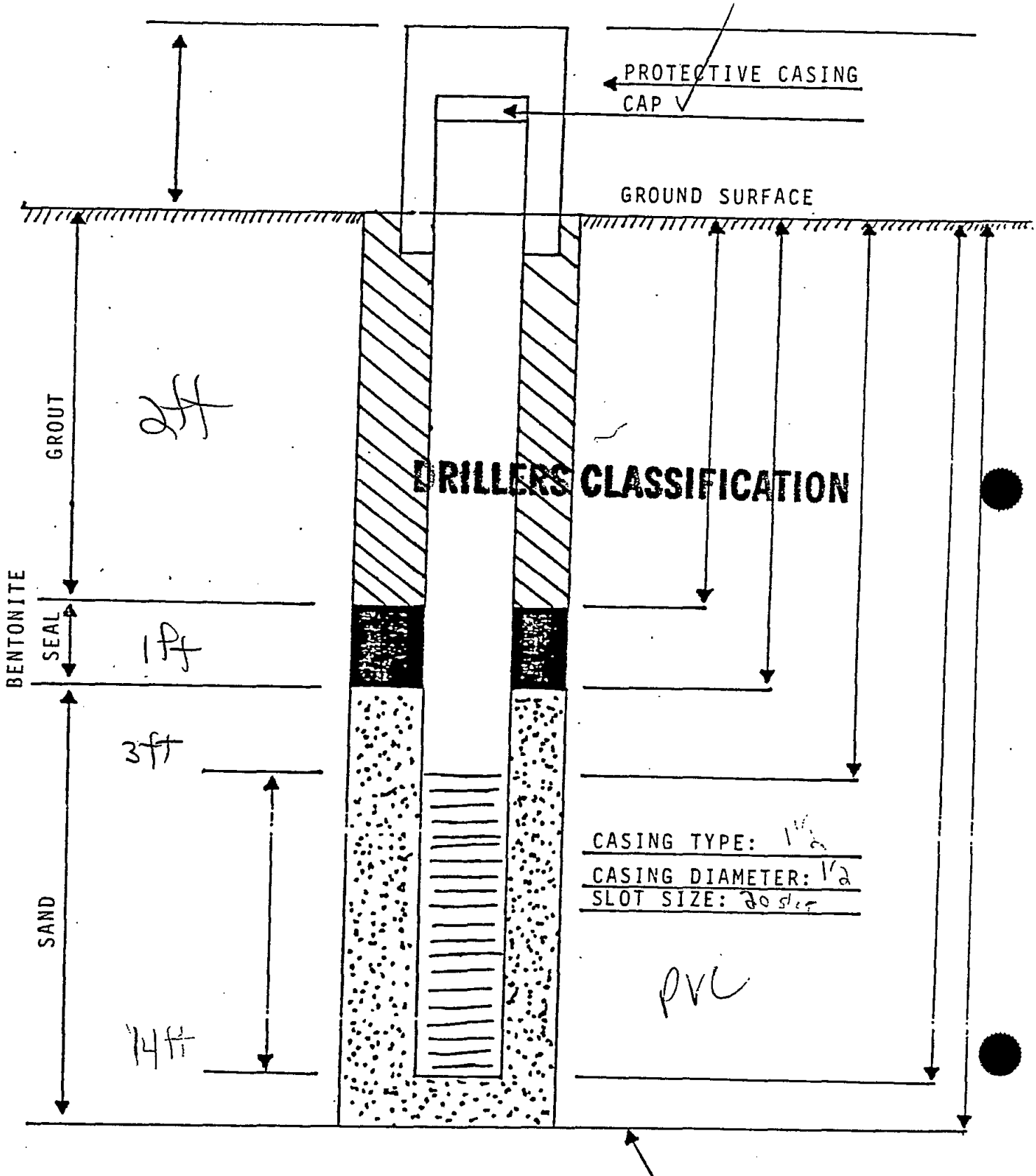
(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

EMPIRE
OILS INVESTIGATIONS INC.

26-03-557

BORING NO.: 1502
WELL PERMIT NO.: 2611047
DRILLER:
DATE: 6/25/87

PROJECT:



NR-138 M
/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59217

Atlas Sheet Coordinates 26 : 03 555

WELL IDENTIFICATION - Owner HEXCEL CORP
Address 5794 W LAS POSITAS BLVD
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1 P-1
County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01
Address 205 MAIN ST

DATE WELL STARTED 10/24/00
DATE WELL COMPETED 10/24/00

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well ISRA Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 8 ft.
Well finished to 8 ft.

Borehole diameter:
Top 2 1/2" in.
Bottom 2 1/2" in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 0 ft.

Water level was measured using —

Well was developed for — hours
— gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	-3'	1"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 1)	-3'	-8'	1"	PVC	010 Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	-2'	-8'	2 1/2"	#1 well gravel	20 lbs
Grout	-1'	-2'	2 1/2"	Neat Cement Bentonite	— lbs. 10 lbs.

Grouting Method ~~Tremie PPG~~ direct push
Drilling Method direct push

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: — (Direct Push)

Drilling Fluid — Type of Rig GeoProbe

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC
Well Driller (Print) Steve C GRASSO
Driller's Signature Steve C Grasso
Registration No. #1050 Date 10/31/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

No Samples Retrieved At this drilling Event.

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59218

Atlas Sheet Coordinates 26 : 03 555

OWNER IDENTIFICATION - Owner HEXCEL CORP
Address 5794 W LAS POSITAS BLVD
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 111-111 P-2
County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01
Address 205 MAIN ST

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
DATE WELL STARTED 10/24/00
DATE WELL COMPETED 10/24/00
Regulatory Program Requiring Well ISRA Case I.D.# 860009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) H&A Tele. #

WELL CONSTRUCTION:
Total depth drilled 9 3/4' ft.
Well finished to 9 3/4' ft.
Borehole diameter: Top 2 1/2" in. Bottom 2 1/2" in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☐ Yes ☑ No
Static water level after drilling 0 ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: — (Direct Push)
Drilling Fluid — Type of Rig GeoProbe
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	-4 3/4'	1"	P.V.C.	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 1)	-4 3/4'	-9'	1"	P.V.C.	010 Sch #40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	-2'	-9'	2 1/2"	#4 Weil Gravel	20 lbs
Grout	-1'	-2'	2 1/2"	Neat Cement — lbs. Bentonite 10 lbs.	

Grouting Method Tremie P.D.P.O.
Drilling Method direct Push

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC
Well Driller (Print) Steve C GRASSO
Driller's Signature Steve C Grasso
Registration No. #1050 Date 10/31/00

GEOLOGIC LOG
Note each depth where water was encountered in consolidated formations.

No Samples Retreived at this drilling Event

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59219

Atlas Sheet Coordinates 26 : 03 555

OWNER IDENTIFICATION - Owner HEXCEL CORP
Address 5794 W LAS POSITAS BLVD
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MMP-3
County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01
Address 205 MAIN ST

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
DATE WELL STARTED 10/24/00
DATE WELL COMPETED 10/24/00
Regulatory Program Requiring Well ~~LSRA~~ Case I.D.# 860004

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION
Total depth drilled 11 3/4 ft.
Well finished to 11 3/4 ft.
Borehole diameter:
Top 2 1/2" in.
Bottom 2 1/2" in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☐ Yes ☐ No
Static water level after drilling — ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Fluid — Type of Rig GeoProbe (Direct Push)
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3'	-6 3/4'	1"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	-6 3/4'	-11'	1"	PVC	010 Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	-4 3/4'	-11'	2 1/2"	#1 Well Gravel	20 lbs
Grout	~~-2 3/4'~~	-4 3/4'	2 1/2"	Neat Cement Bentonite	— 20 lbs.

Grouting Method Tremie Pipe
Drilling Method Direct Push

GEOLOGIC LOG
Note each depth where water was encountered in consolidated formations.

No Samples Retrieved
Attn's Drilling Event

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC
Well Driller (Print) Steve C Grasso
Driller's Signature Steve C Grasso
Registration No. #1050 Date 10/31/00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

FORM 87

26-03-556 ☐

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26352
Application No. _____
County _____

WELL RECORD

1. OWNER James V. Failla ADDRESS Garfeild, N.J.
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 212 Market Street, Garfeild, N.J.
3. DATE COMPLETED Oct.8,1965 DRILLER John Lauritsen
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH ~~80~~ 90 Feet
5. CASING: Type Steel Drive Casing Diameter 6 Inches Length 40 Feet
6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation Clay & Redshale
   Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Sepober,8,1965 Yield 25 Gallons per minute
   Static water level before pumping 15 Feet below surface
   Pumping level 60 feet below surface after 8 hours pumping
   Drawdown 60 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Submersible Pump How measured 5 gallon Pail
   Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Household AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ___ No. ___
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated)

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57783

Atlas Sheet Coordinates 26 : 03 555

OWNER IDENTIFICATION - Owner HEXCEL CORP
Address 5794 W LAS POSITAS BLVD
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Test borings only (Blanket)
County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01
Address 205 MAIN ST

DATE WELL STARTED 7/15/00
DATE WELL COMPLETED 7/15/00

TYPE OF WELL (as per Well Permit Categories) BORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley & Aldrich Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to N/A ft.

Borehole diameter:
Top 1 1/4 in.
Bottom 1 1/4 in.

Well was finished: ☐ above grade ☐ flush mounted N/A

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling N/A ft.

Water level was measured using N/A

Well was developed for N/A hours at N/A gpm

Method of development N/A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)		Borehole only			
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	24'	1 1/4"	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Pressure Grout
Drilling Method Direct Push

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A Direct Push Geoprobe

Drilling Fluid N/A Type of Rig 6620

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC

Well Driller (Print) BAXTER E. DUFFY

Driller Signature

Registration No. B-0098 Date 9/13/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 – 4' fill
4' – 16' interbedded sands and gravels water at 12'
16' – 18' gravel
18' – 24' interbedded sands and gravels
24' bedrock refusal

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009

WELL LOG

WELL: MW1 DATE DRILLED: 04/13/1999 COORD #1: 26.03.555 PERMIT #1: 26-53596
COORD #2: PERMIT #2:
SITE: Air-Win Inc., 10 Dell Glen Avenue, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: Air-Win Inc., 10 Dell Glen Avenue, , Lodi, NJ 07644 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 7.5'

SET WELL: 20'
GRAVEL PK SZ: Morie #2
DRILLER: Al Bambace
SURFACE COMPLETION: S

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 2
STAT H2O LVL: 15'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 3/4 Hour

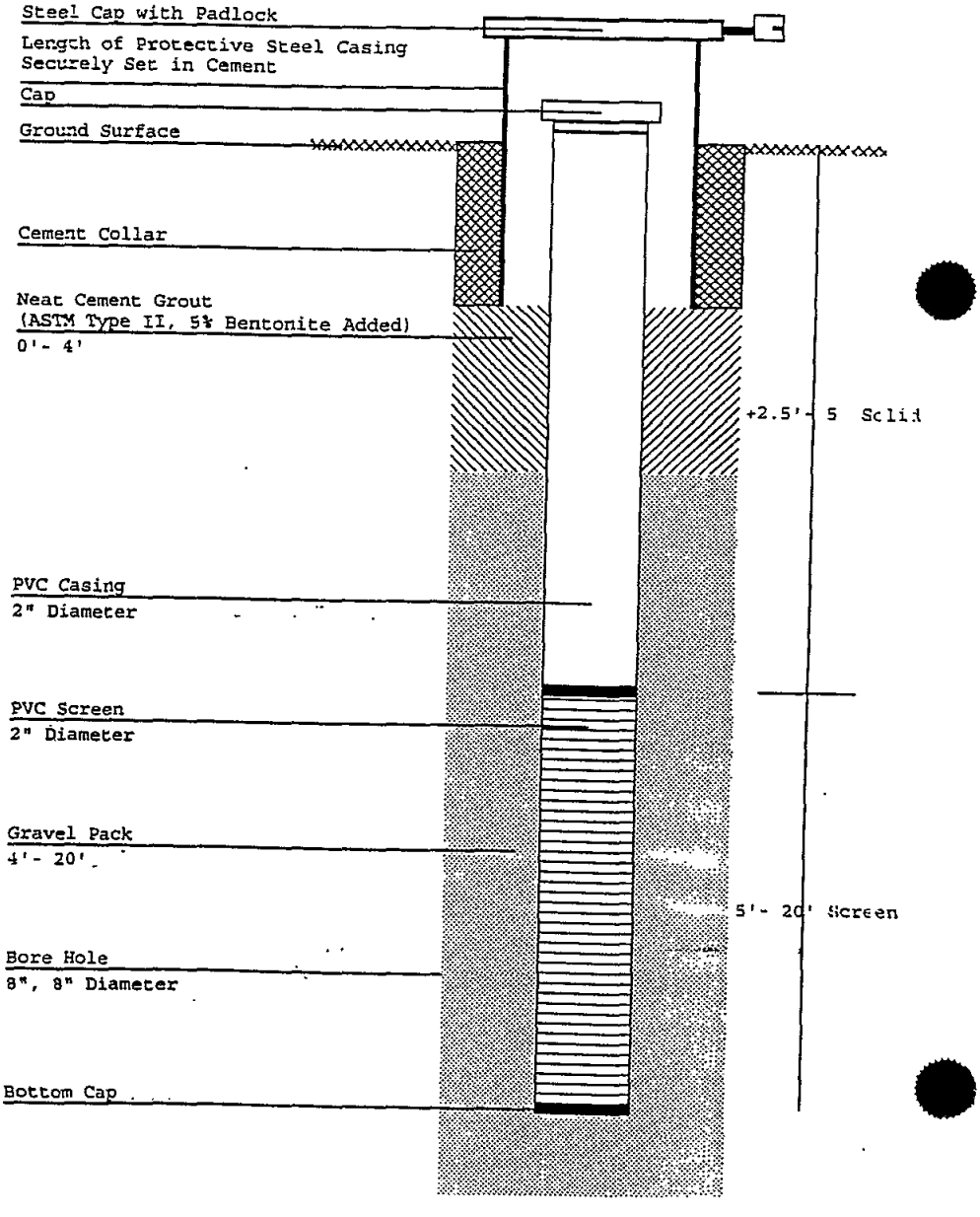
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 15'
LENGTH 2:
SLOT SIZE: .020
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 20'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 1' M/c sand & gravel.
1'- 6' M/c sand & gravel with fill material, concrete, bricks & wood & glass.
6'- 20' Black m/c sand & silt with some small gravel & ome wood.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 57529

Atlas Sheet Coordinates 26 03 554

[redacted]ER IDENTIFICATION - Owner HEXCEL CORP.
Address 205 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VE-1
County BERGEN Municipality LODI BORO Lot No. 10A Block No. 81A
Address 205 MAIN ST.

DATE WELL STARTED 5/15/00
DATE WELL COMPLETED 5/15/00

TYPE OF WELL (as per Well Permit Categories) GAS VENT
Regulatory Program Requiring Well UST Case I.D.# 36009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley & Aldridge Tele. # 973-361-360

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: [X] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

W[redacted]eel protective casing installed? [X] Yes [ ] No

Static water level after drilling 4 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	1	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	1	9	4	PVC V-Wire	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.75	9		#1 Morie	
Grout	0	.75		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-1 Top Soil
1-9 Br~ Silty M/F Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.
Well Driller (Print) Sean Conroy
D[redacted]s Signature Sean Conroy
Registration No. 1522 Date 6/1/00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

OWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57530

Atlas Sheet Coordinates 26 : 03 : 554

OWNER IDENTIFICATION - Owner HEXCEL CORP.
Address 205 MAIN ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VE-2
County BERGEN Municipality LODI BORO Lot No. 10A Block No. 81A
Address 205 MAIN ST.

DATE WELL STARTED 5/15/00
DATE WELL COMPLETED 5/15/00

TYPE OF WELL (as per Well Permit Categories) GAS VENT
Regulatory Program Requiring Well UST Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley & Aldridge Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: [X] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? [X] Yes [ ] No

Static water level after drilling 4 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	2	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	2	10	4	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5	10		#1 Morie	
Grout	0	1.5		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-1 Asphalt + Gravel
1-10 Brn Silty MF Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.
Well Driller (Print) Sean Conroy
Driller's Signature Sean Conroy
Registration No. 1522 Date 6/1/00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60448

Atlas Sheet Coordinates 26 : 03 : 554

WELL IDENTIFICATION - Owner HEXCEL CORP

Address 11711 DUBLIN BLVD-PO BOX 2363

City DUBLIN State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M-1

County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01

Address 205 MAIN ST

DATE WELL STARTED 3/9/01

DATE WELL COMPLETED 3/9/01

TYPE OF WELL (as per Well Permit Categories) MONITORING

Regulatory Program Requiring Well ISRA Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley & Aldrich Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 13 ft.

Well finished to 13 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Well protective casing installed? ☒ Yes ☐ No

Static water level after drilling 5 ft.

Water level was measured using TAPE

Well was developed for 1 hours at 8 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	3	4	STAINLESS	SCH 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3	13	4	STAINLESS	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	13		#1 MORIE	
Grout	0	[illegible]		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method GRAVITY

Drilling Method HSA

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.

Well Driller (Print) SEAN CONROY

Driller's Signature [signature]

Registration No. 1522 Date 3/14/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-5 FILL

5-12 GRAY MF SAND, LITTLE SILT

12-13 GRAY SILT

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __ ° __ ' __.__ " LONGITUDE: __ ° __ ' __.__ "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60449

Atlas Sheet Coordinates 26 : 03 : 554

OWNER IDENTIFICATION - Owner HEXCEL CORP
Address 11711 DUBLIN BLVD-PO BOX 2363
City DUBLIN State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M-2
County BERGEN Municipality LODI BORO Lot No. 12-01 Block No. 81-01
Address 205 MAIN ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 3/9/01
DATE WELL COMPLETED 3/9/01
Regulatory Program Requiring Well ISRA Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley + Aldrich Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: [X] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? [X] Yes [ ] No

Static water level after drilling Dry ft.

Water level was measured using —

Well was developed for — hours
at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	10'	4	Slawless	Sch 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	—	—	—	—	—
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	10		#1 Morie	
Grout	0	3		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method GRAVITY
Drilling Method HSA

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity — gpm

Pump type: —

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.

Well Driller (Print) Sean Conroy

Driller's Signature Sean Conroy

Registration No. 1520 Date 3/14/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-5 Fill
5-10 Gray mf SAND little silt

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60450

Atlas Sheet Coordinates 26 : 03 : 554

WATER IDENTIFICATION - Owner HEXCEL CORP

Address 11711 DUBLIN BLVD-PO BOX 2363

City DUBLIN State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M-3

County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01

Address 205 MAIN ST

DATE WELL STARTED 3 / 9 / 01

DATE WELL COMPLETED 3 / 9 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING

Regulatory Program Requiring Well ISRA Case I.D.# 96009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley + Aldrich Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 10 ft.

Well finished to 10 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling Dry ft.

Water level was measured using TAPE

Well was developed for — hours

at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	10	4	Stainless	sch 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	—	—	—	—	—
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	10		#1 Morie	
Grout	0	3		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity

Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.

Well Driller (Print) Sean Conroy

Driller's Signature Sean Conroy

Registration No. 1522 Date 3/14/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-5 Fill

5-10 Gray m/f sand little silt

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60451

Atlas Sheet Coordinates 26 : 03 : 554

OWNER IDENTIFICATION - Owner HEXCEL CORP
Address 11711 DUBLIN BLVD-PO BOX 2363
City DUBLIN State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M-4
County BERGEN Municipality LODI BORO Lot No. 10-01 Block No. 81-01
Address 205 MAIN ST

DATE WELL STARTED 3/9/01
DATE WELL COMPLETED 3/9/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.# 86009

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Haley & Aldrich Tele. # 973-361-3600

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: [X] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? [X] Yes [ ] No

Static water level after drilling Dry ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2	10	4	Stainless	sch 5
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	—	—	—	—	—
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	10		#1 Morie	
Grout	0	3		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Gravity
Drilling Method HSA

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity — gpm

Pump type: —

Drilling Fluid NONE Type of Rig B-47

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HAMER, INC.

Well Driller (Print) SEAN CONROY

Driller's Signature Sean Conroy

Registration No. 1522 Date 3/14/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-5 Fill

5-10 GRAY MF SAND little silt

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.__" LONGITUDE: ___° ___' ___.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-774

DWR-138
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 — 49151
Atlas Sheet Coordinates 26 : 03 : 554

OWNER IDENTIFICATION - Owner HEXCEL CORPORATION
Address 5794 WEST LASPOSITAS BLVD.
City PLEASONTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address
County BERGEN Municipality LODI BORO Owner's Well No. MW32B
Address 205 MAIN ST. Lot No. 10A Block No. 81A
Date well started 11/18/97
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/18/97
Regulatory Program Requiring Well ISRA SITE Case I.D. # 86079
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Geo Engineering Tele. #

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.
Borehole diameter: Top 8 in. Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 1/2 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig B-80
Name of Driller Al Bambace
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. Registration No. 13757
Name of Drilling Company SUMMIT WELL DRILLING CO INC

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	9	4	Sch 40 PVC .010
Tail Piece				
Gravel Pack	2	9		Morie #1
Annular Seal/Grout	0	2		Portland
Method of Grouting	gravity			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Al Bambace Date 12/5/97

COPIES: White - DEP Yellow - Driller Pink - Owner

JS-1

26.03.554

DATE	DRILLED FROM	DRILLED TO	WEATHER	TEMP.	TIME
10/23/86	0	20			
10/28/88	20	47			

ESI FIELD LOG

HOLE NO.
GRD. ELEV. 150
G.W. DEPTH
26-14040.3

SHEET 1 OF 1

PROJECT
LOCATION

Depth of Sample	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	CLASSIFICATION OF MATERIAL DRILLED	OTHER DATA
0-2	1	6	5	15	24		Dry	Br	Top Soil & f sand silt	Red Rock 18 FT
2-4	2	18	23	25	28		Dry	Br	f sand silt sand clay, Gravel	
4-6	3	15	12	12	10		wet	Br	f sand silt Gravel some clay	water level 6 FT
6-8	4	15	14	14	14		wet	Red Br	f sand clay, Gravel	
8-10	5	24	16	21	26		wet	Red Br	f sand clay, Gravel	
10 12	6	14	20	24	32		wet	Red Br	f sand clay, Gravel	
12-14	7	20	24	22	30		wet	Red Br	f ton sand clay, Gravel	
14-16	8	24	26	28	30		wet	Red Br	f ton sand clay, Gravel	
16-18	9	36	36	60	48		wet	Red Br	f ton sand clay, Gravel	
18-20	10	100/2"						Red Br	Rock frags clay, Gravel	
									grout in 10" casing at 20 FT	
								RD	RUN # 1 5 FT Rec 100%	
								25	RUN # 2 5 FT Rec 100%	
								30	RUN # 3 5 FT Rec 100%	
								35		

LATER CLASSIFICATION

NOTATION: SIZE CORE
SIZE SHELBY TUBE
SIZE AUGER 6¼" / 8" ROTARY (water)
N — No. blows to drive "spoon "with lb. pin wt. falling "per blow.
C — No. blows to drive "casing "with lb. weight falling "per blow.

SOIL CLASSIFICATIONS BY:
IF OTHER SPECIAL EQUIPMENT HAS BEEN EMPLOYED PLEASE NOTE:

FILL OUT BACK OF LOG AND SIGN YOUR NAME

26-03-554 ☐

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3184
Application No. _____
County Bergen

WELL RECORD

1. OWNER Dept of Public Works ADDRESS Columbia Ave
Owner's Well No. Test Well No 1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lodi N.J.
3. DATE COMPLETED August 23 1965 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 16 Inches Bottom 10 Inches 16 TOTAL DEPTH 510 20 Feet
5. CASING: Type steel Diameter 10 Inches Length 40 Feet
6. SCREEN: Type no Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Aug 23 1965 Yield 100 Gallons per minute
Static water level before pumping 15 Feet below surface
Pumping level 197 feet below surface after 24 hours pumping
Drawdown 182 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Turbine How measured Orific
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name Owner to supply
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ___ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Public Supply AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes x No. ___
Taste no Odor no Color clear Temp. 56 °F
12. LOG 15 clay 20 gravel bal red rock Are samples available? yes
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand D-777 Date Aug 23 1965

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2614040-3
APPLICATION NO. _____
COUNTY BERGEN
COORD. 26.03.554

WELL RECORD

1. OWNER MRS. Evelyn Grammatico ADDRESS 26 Grove, Maywood, NJ
   Owner's Well No. MW15D SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION LOT 54 Block 17
3. DATE COMPLETED 11/27/88 DRILLER Empire Soils Investigations, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 47.5 _____ Feet
5. CASING: Type STAINLESS STEEL Diameter 2 Inches Length 47.5 Feet
6. SCREEN: Type NONE Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY JEFF JAWORSKI #1315 Date 2/22/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26, 03, 5, 5
PERMIT NO. 26-11488
APPLICATION NO. _____
COUNTY Bergen

WELL RECORD

1. OWNER Borough of Lodi ADDRESS 1 Memorial Dr. Lodi N.J.
Owner's Well No. B-2 SURFACE ELEVATION N/A (Above mean sea level) Feet
2. LOCATION Memorial Drive Fire House Main ST & Graham Ave. Lodi, N.J.
3. DATE COMPLETED 9-11-87 DRILLER Jersey Boring & Drilling Co., Inc.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 25.0 Feet
5. CASING: Type N/A Diameter N/A Inches Length N/A Feet
6. SCREEN: Type N/A Size of Opening N/A Diameter N/A Inches Length N/A Feet
Range in Depth { Top N/A Feet / Bottom N/A Feet
Geologic Formation Brown Sand with silt and Gravel
Tail Piece: Diameter N/A Inches Length N/A Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at N/A Feet above surface
Water rises to N/A Feet above surface
8. RECORD OF TEST: Date N/A Yield N/A Gallons per minute
Static water level before pumping N/A Feet below surface
Pumping level N/A feet below surface after N/A hours pumping
Drawdown N/A Feet Specific Capacity N/A Gals. per min. per ft. of drawdown
How pumped N/A How measured N/A
Observed effect on nearby wells N/A
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name N/A
Capacity N/A G.P.M. How Driven N/A H.P. N/A R.P.M. N/A
Depth of Pump in well N/A Feet Depth of Footpiece in well N/A Feet
Depth of Air Line in well N/A Feet Type of Meter on Pump N/A Size N/A Inches
10. USED FOR Test Boring AMOUNT { Average N/A Gallons Daily / Maximum N/A Gallons Daily
11. QUALITY OF WATER N/A Sample: Yes ____ No X
Taste N/A Odor N/A Color N/A Temp. N/A °F.
12. LOG See Geologic Formation Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Jersey Boring & Drilling Co., Inc.
14. DATA OBTAINED BY Jersey Boring & Drilling Co., Inc. Date 9-23-87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated analysis of the water, sketch map, sketch of

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26, 03, 5, 5
PERMIT NO. 26-1142
APPLICATION NO. _____
COUNTY Bergen

WELL RECORD

1. OWNER Borough of Lodi ADDRESS 1 Memorial Dr. Lodi N.J.
Owner's Well No. B-3 SURFACE ELEVATION N/A (Above mean sea level) Feet
2. LOCATION Memorial Drive Fire House Main ST & Grahamba, Lodi, N.J.
3. DATE COMPLETED 9-11-87 DRILLER Jersey Boring & Drilling Co., Inc.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 25.5 Feet
5. CASING: Type N/A Diameter N/A Inches Length N/A Feet
6. SCREEN: Type N/A Size of Opening N/A Diameter N/A Inches Length N/A Feet
Range in Depth { Top N/A Feet; Bottom N/A Feet
Geologic Formation Brown Sand with silt and Gravel
Tail Piece: Diameter N/A Inches Length N/A Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at N/A Feet above surface
Water rises to N/A Feet above surface
8. RECORD OF TEST: Date N/A Yield N/A Gallons per minute
Static water level before pumping N/A Feet below surface
Pumping level N/A feet below surface after N/A hours pumping
Drawdown N/A Feet Specific Capacity N/A Gals. per min. per ft. of drawdown
How pumped N/A How measured N/A
Observed effect on nearby wells N/A
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name N/A
Capacity N/A G.P.M. How Driven N/A H.P. N/A R.P.M. N/A
Depth of Pump in well N/A Feet Depth of Footpiece in well N/A Feet
Depth of Air Line in well N/A Feet Type of Meter on Pump N/A Size N/A Inches
10. USED FOR Test Boring AMOUNT { Average N/A Gallons Daily; Maximum N/A Gallons Daily
11. QUALITY OF WATER N/A Sample: Yes ____ No X
Taste N/A Odor N/A Color N/A Temp. N/A °F.
12. LOG See Geologic Formation
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.) Are samples available? No
13. SOURCE OF DATA Jersey Boring & Drilling Co., Inc.
14. DATA OBTAINED BY Jersey Boring & Drilling Co., Inc. Date 9-23-87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch ma...

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62383

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner AMOCO OIL COMPANY
Address 300 INTERPACE PKWY
City PARSIPPANY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
Address 80 ESSEX STREET @ RIVERVIEW

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 9/20/01
DATE WELL COMPLETED 9/20/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 sch
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 9 / 28 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

D-781

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

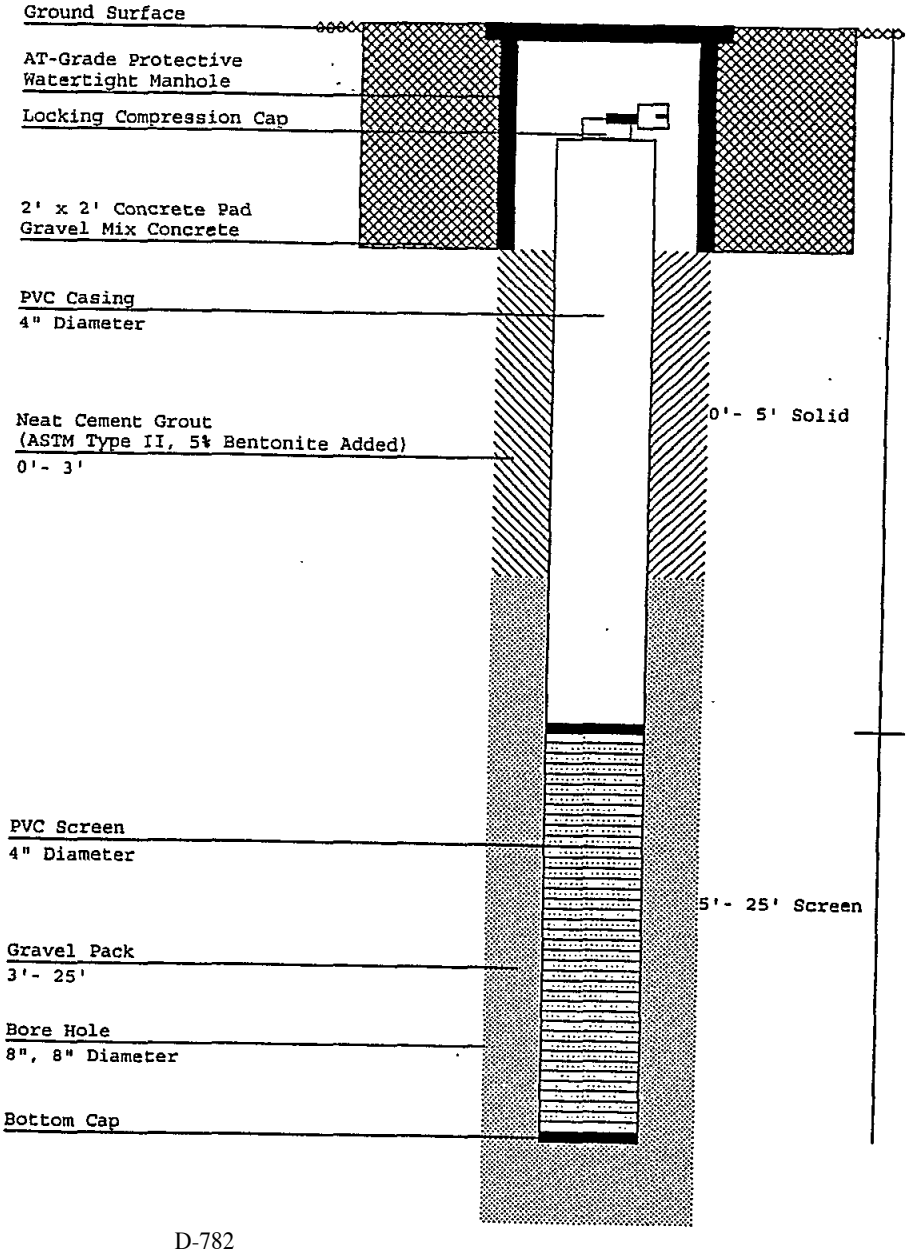
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling
email: info@summitdrilling.

WELL LOG

WELL: MW7 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62384
COORD #2: PERMIT #2:
SITE: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 XSTREET:
USE: Monitor

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC	DRILLING METHOD: Air Rotary
DIAMETER: 4"	DIAMETER:	SCREEN TYPE 2:	SAMPLING METHOD:
LENGTH: 5'	LENGTH:	DIAMETER: 4"	HOLE DIA: 8", 8"
		LENGTH 1: 20'	TOTAL DEPTH: 25'
SET WELL: 25'	GAL PER MIN: 1/2	LENGTH 2:	
GRAVEL PK SZ: Morie #2	STAT H2O LVL: 10'	SLOT SIZE: .020	
DRILLER: Todd Naugle	DEVELOPMENT METHOD: pump	CASING SEAL: Portland	
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1/2	OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 12'		Sand & silt some gravel.
12'- 25'		Weathered sandstone.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 56953

Atlas Sheet Coordinates 26 03 536

OWNER IDENTIFICATION - Owner GRACIE CLEANERS
Address 42 ESSEX ST
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 2 Block No. 168
Address 42 ESSEX ST

DATE WELL STARTED 4 / 24 / 00
DATE WELL COMPLETED 4 / 24 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 0150941

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Emcon Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: [x] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 1 ft.

[x] steel protective casing installed? [x] Yes [ ] No

Static water level after drilling 30 ft.

Water level was measured using M-Scope

Well was developed for 1 hours at 5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+1'	19'	6"	steel	19 lb.
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	19'	40'	6"	open hole	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	19'		Neat Cement Bentonite	64 lbs. 36 lbs.

Grouting Method pump & tremie
Drilling Method air rotary

Method of development sub pump

Was permanent pumping equipment installed? [ ] Yes [x] No

Pump capacity 0 gpm

Pump type: none

Drilling Fluid none Type of Rig T3W

Health and Safety Plan submitted? [x] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SBI ENVIRONMENTAL INC.

Well Driller (Print) William Ellefsen

Driller's Signature

Registration No. 1173 Date 5 / 11 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 1' grass and top soil
1' - 8' red brown medium clayey sand and gravel
8' - 40' red shale

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-426
Toll Free: (800) 242-664
FAX: (732) 356-
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW3 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62112
COORD #2: PERMIT #2:
SITE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
OWNER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

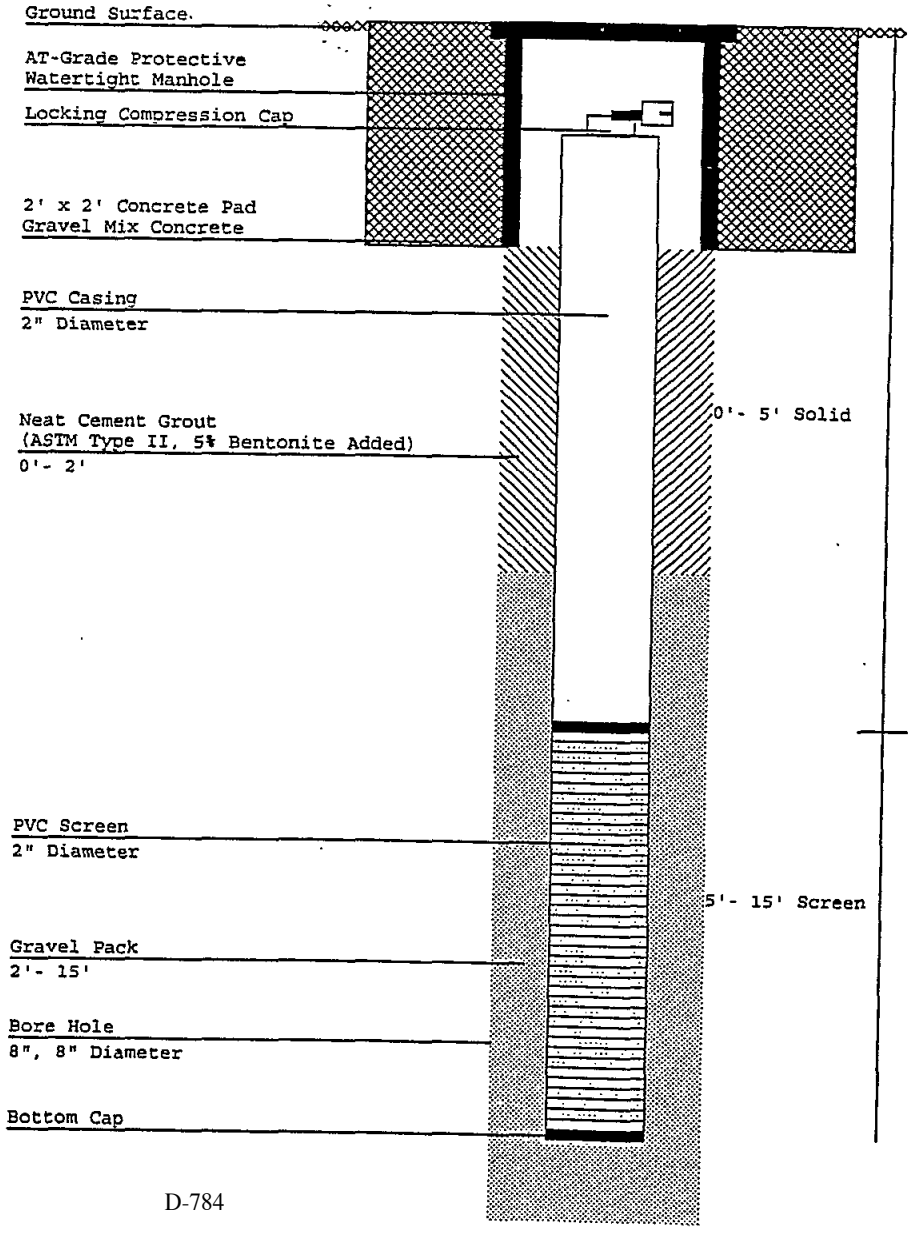
INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1: PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:	SAMPLING METHOD:
LENGTH:	5'	LENGTH:	DIAMETER: 2"	HOLE DIA: 8", 8"
			LENGTH 1: 10'	TOTAL DEPTH: 15'
SET WELL:	15'	GAL PER MIN: 1/2	LENGTH 2:	
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 8'	SLOT SIZE: .020	
DRILLER:	John Vogt	DEVELOPMENT METHOD: pump	CASING SEAL: Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1/2	OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO

BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 15' Red sand silt some gravel.



DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62384

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner AMOCO OIL COMPANY
Address 300 INTERPACE PKWY
City PARSIPPANY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
Address 80 ESSEX STREET @ RIVERVIEW

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 9/ 20/ 01
DATE WELL COMPLETED 9/ 20/ 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 9 / 28 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

LATITUDE: ___° ___' ___.__" OR LONGITUDE: ___° ___' ___.__"

COPIES: White - DEP Canary - Driller D-785 Pink - Owner Goldenrod - Health Dept.

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
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FAX: (732) 356-[illegible]
http://www.summitdrilling[illegible]
email: info@summitdrilling.com

WELL LOG

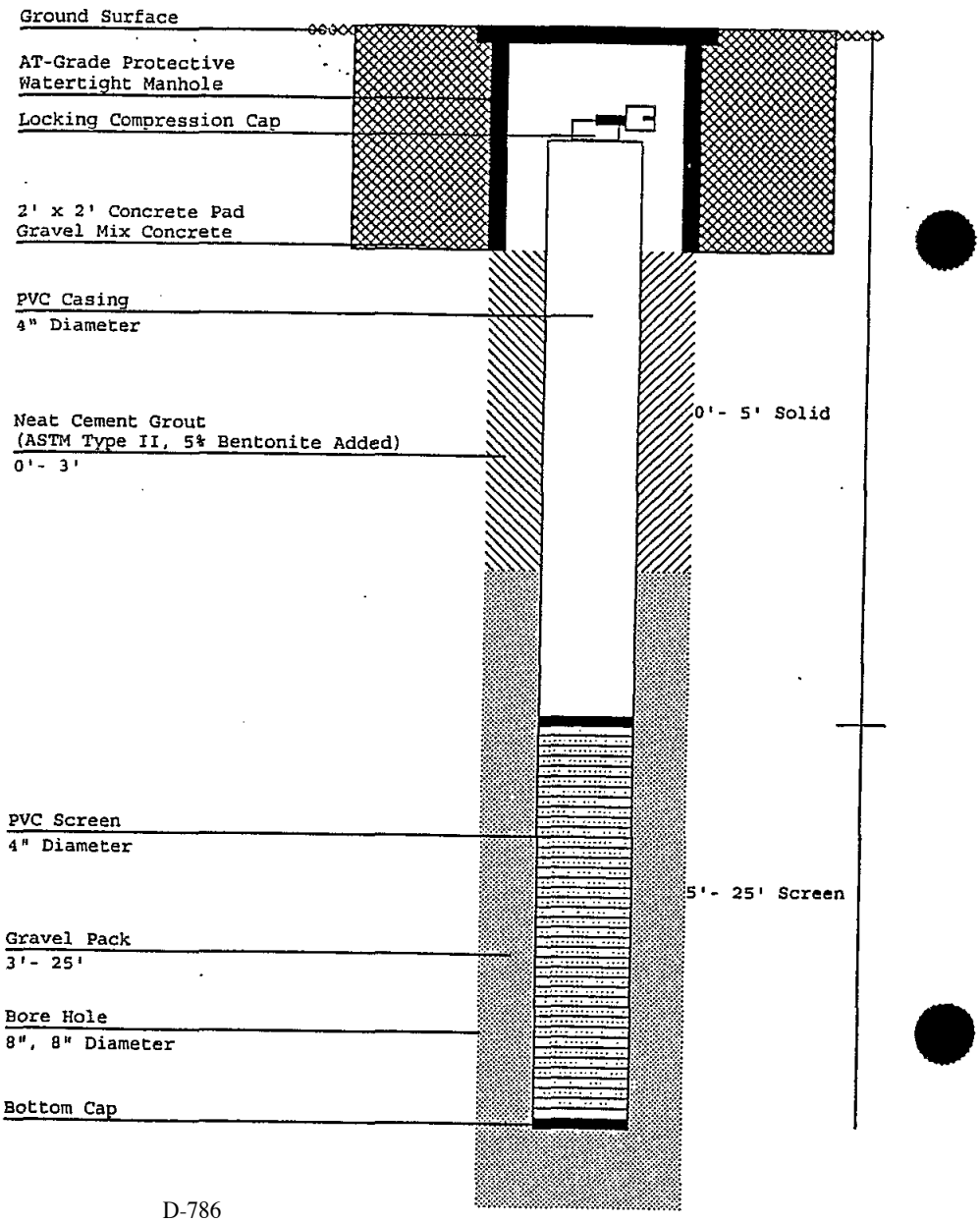
WELL: MW8 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62385
COORD #2: PERMIT #2:
COUNTY: Bergen
SITE: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 XSTREET:
OWNER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 USE: Monitor

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Air Rotary
DIAMETER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	5'	LENGTH:	DIAMETER:	4"	HOLE DIA: 8", 8"
			LENGTH 1:	20'	TOTAL DEPTH: 25'
SET WELL:	25'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 10'	SLOT SIZE:	.020	
DRILLER:	Todd Naugle	DEVELOPMENT METHOD: pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1/2	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 12' Sand & silt some gravel.
12'- 25' Weathered sandstone.



DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 .33149
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner HASCOLD REALTY
Address P.O. BOX 4069, NORTH STATION
City WINSTON-SALEM State NC Zip Code 27115

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW # 1
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~3 B~~ Block No. ~~224~~
Address 39 ROBINSON Rd.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/19/93
Regulatory Program Requiring Well UST Case I.D. # 027446
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN CO. INC. Tele. # 908-399-5858

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	1'	4"	SCH. .40 P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	1'	10'	4"	.20 SCH. .40 P.V.C.
Tail Piece				
Gravel Pack	6"	10'		#2 MORIE
Annular Seal/Grout	0'	6"		2'x2' PAD
Method of Grouting	GRAVITY			

Static water level after drilling 2 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1/2 hours at 5 gpm
Method of development SUB. PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A. HS/HT
Drilling Fluid — Type of Rig SIMCO 2800
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1486
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 1' (6" ASPHALT, 6" LG. GRAVELS (G.P.)
1' - 3' - MED. SANDS W/- LITTLE SILT
3 - 10' - RED/BRN. MED./SANDS W/ SOME SILTS AND LITTLE CLAY
LG. COBBLES (GRANDSTONE) @ 10'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Laura Date 4-20-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0716

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 33150
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner HASCOLD REALTY
Address P.O. BOX 4069, NORTH STATION
City WINSTON-SALEM State NC Zip Code 27115

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW # 2
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~3-B~~ Block No. ~~224~~
Address 39 ROBINSON RD. LODI N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 4/19/93
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~827446~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN Co. Tele. # 908-390-5858

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	2'	4"	SCH. 40 P.V.C.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	.020 SCH. 40 P.V.C.
Tail Piece				
Gravel Pack	1'	12'	#2	MORIE
Annular Seal/Grout	0'	1'	PORT. BENT.	2'X2' PAD
Method of Grouting	GRAVITY			

Static water level after drilling 3 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1/2 hours at 5 gpm
Method of development SUB. PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method H.S.A.
Drilling Fluid — Type of Rig SIMCO 2800 HS/HT
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1486
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8' - MED. SANDS w/SOME SILT

8-12' - RED/BRN. CLAYEY SILT AND MED. SANDS

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Laura Date 4-20-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23408
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner ~~COLDELITE CORP OF AMERICA~~
Address ROBINSON ROAD AND RT 17 SOUTH
City LODI State NJ Zip Code 07644

WELL LOCATION - *If not the same as owner please give address* Owner's Well No.
County " Municipality " LODI BORO Lot No. 3-B Block No. 224
Address "

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/3/91
Regulatory Program Requiring Well ~~ERRA~~ Case I.D. # ~~90567~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN Co Tele. # 201-390-5858

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 0 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	2'	4"	P.V.C. SCH. 40
Outer Casing (Not Protective Casing)	—	—		
Screen (Note slot size)	2'	10'	4"	" "
Tail Piece	—	—		
(120) Gravel Pack	1'	10'		#2
Annular Seal/Grout	0'	1'		6" BENT. PELL
Method of Grouting				

Static water level after drilling .5 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1 hours at 10 gpm
Method of development SUBMERSIBLE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGER
Drilling Fluid — Type of Rig SIMCO 2800 HS
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51486
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-10' - MED. SANDS - W/ LITTLE SILT - (RED/BRN.)

WELL SEALED ... 5/10/91 ...

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mark Laura Date 1-30-91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1826

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24655
Atlas Sheet Coordinates 26 : 03 : 642

OWNER IDENTIFICATION - Owner ~~ILY PROPERTIES~~
Address ROUTE 17
City SOUTH HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W.4
County Bergen Municipality S. HACKENSACK T Lot No. 5,6,1A Block No. 194B,27
Address

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well MONITORING UST Date well completed 6 / 5 / 91
Case I.D. # ~~90-10-01-1004~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	grade	2'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	same 20slot
Tail Piece				
Gravel Pack	1'	12'	6"	#2 Morie
Annular Seal/Grout	grade	1'	6"	Benseal
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 1 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3'	Sand, F-C, brown
3-5'	Clay, black w/peat
5-7'	Sand, red-brown w/silt
7-12'	Sand, F-C, red weathered sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/5/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22412
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB-45
County Bergen Municipality LODI BORO Lot No. NEW Block No. NEW
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11/2/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

Total depth drilled 35' ft.
Well finished to 35' ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5'	4"	STEEL CASING (Removed)
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	[redacted]			Pressure Grout

Static water level after drilling DRY ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig Mobil B-61
Name of Driller R.V. Gregory
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1296
Name of Drilling Company WARREN GEORGE INC.

[redacted] (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-2' 0'
FILL- SILTY SAND + GRAVEL WOOD
2'-12.5'
CEMENT
12.5'-28'
RD. BR. CLAYEY SAND & GRAVEL
28'-30'
[redacted]
30'-35'

4" DIA.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature R.V. Gregory Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

perrett wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT — Consolidated Edison Company
LOCATION — Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED — 7/2/90 DATE COMPLETED — 7/2/90

HOLE NO. MW-5U
~~SURF. EL.~~ 26-20161 / 26:03:582
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 2.5'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
WL ▼ 5.0						Drilled to 9.0' without sampling	
10.0						Bottom of Boring	9.0'
						Note: Installed 2" stainless steel 10 slot screen 9.0' to 4.0', 2" stainless steel riser to surface with locking standpipe cover.	

WELREC 085 1756

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41779
Atlas Sheet Coordinates 26 : 03 : 561

OWNER IDENTIFICATION - Owner SAFECO INSURANCE COMPANY
Address PO BOX A1551, JULIETT ROAD
City STONE MOUNTAIN State GA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 6.B Block No. 97
Address ~~145 UNION STREET~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/28/95
Regulatory Program Requiring Well UST Case I.D. # 0305769
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joseph Zayas Sr. Tele. # 908-218-0809

WELL CONSTRUCTION

Total depth drilled 15.3 ft.
Well finished to 15.3 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
Well finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	-3"	5.3	4	P.V.C Sch 40
Outer Casing (Not Protective Casing)	NONE		NONE	
Screen (Note slot size)	5.3	15.3	4	P.V.C Sch 40 .020
Tail Piece	NONE		NONE	
Gravel Pack	3.3	15.3	#2 Well Gravel	
Annular Seal/Grout	0	3.3	10x4	Neat Cement
Method of Grouting	Gravity Flow			

Static water level after drilling 11.4 ft.
Water level was measured using M Scope
Well was developed for 1 hours at .5 gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig MOBIL-B80
Name of Driller Arthur Ontanno
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12441
Name of Drilling Company MILLTOWN DRILLING & EXCAVATION

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Black Top
6"-15'3 Gravel Soft Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Arthur Ontanno Date 9-18-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

WELL SEALED 6/20/90

MONITORING WELL RECORD

Well Permit No. 26 .20946
Atlas Sheet Coordinates 26 : 03 : 561

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP.
Address 86 DOREMUS AVENUE
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SB-2
County Municipality GARFIELD CITY Lot No. 5 Block No. 2160
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 6 / 20 / 90
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GeoEngineering, Inc. Tele. # 201/361-3600

WELL CONSTRUCTION

Total depth drilled 19.5 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade N/A ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☐ No N/A

N/A	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at --- gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☐ No ~~BX~~ N/A
Pump capacity N/a gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid N/A Type of Rig Mobile B-57
Name of Driller Martin A. Pepper
Health and Safety Plan submitted? ☐ Yes ☐ No N/A
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1405
Name of Drilling Company B & B DRILLING, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

DEPTH	FORMATION
0 - 3"	Blacktop
3" - 6"	Stone & cynders
6" - 2'	Br. to black F/C sand, little silt, tr. gravel
2' - 4'	SAB
4' - 6'	Br. to gray F/C sand, some silt, some clay, tr. silt
6' - 8'	Br. sand F/C little silt, tr. F/C gravel
8' - 10'	Lt. Br. silt, Tr. sand C
11.5'-15.5'	Br. to gr. F/C sand, little silt, F/C gravel, tr. pebbles.
15.5'-19.5'	Br. to rd. F/C sand, F/C gravel, little silt, little pebbles.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Mart A Pepper Date July 10, 1990

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41780
Atlas Sheet Coordinates 26: 03: 561

OWNER IDENTIFICATION - Owner SAFECO INSURANCE COMPANY
Address PO BOX A1551, JULIETT ROAD
City STONE MOUNTAIN State GA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County BERGEN Municipality LODI BORO Lot No. 6.B Block No. 97
Address 145 UNION STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING UST Date well completed 8/28/95
Regulatory Program Requiring Well 0305769 Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joseph Zayatz Tele. # 908-218-0809

WELL CONSTRUCTION

Total depth drilled 14.11" ft.
Well finished to 14.11" ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	-3"	4.11"	4	Sch 40 P.V.C
Outer Casing (Not Protective Casing)	NONE		NONE	
Screen (Note slot size)	4.11"	14.11"	4	Sch 40 P.V.C .020
Tail Piece	NONE		NONE	
Gravel Pack	2.11"	14.11"	#2	WELL GRAVEL
Annular Seal/Grout	0	2.11"	10x4	NEAT Cement
Method of Grouting	Gravity Float			

Static water level after drilling 8.5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at .5 gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Mobil B80
Name of Driller Anthon Antonio
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1241
Name of Drilling Company MILLTOWN DRILLING & EXCAVATION

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0"-6" Gravel
6"-14.11" Gravel Soft Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature Anthon Antonio Date 9-18-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41781
Atlas Sheet Coordinates 26 : 03 : 561

OWNER IDENTIFICATION - Owner SAFECO INSURANCE COMPANY
Address PO BOX A1551, JULIETT ROAD
City STONE MOUNTAIN State GA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County BERGEN Municipality LODI BORO Lot No. 6.B Block No. 97
Address ~~145 UNION STREET~~

TYPE OF WELL (as per Well Permit Categories) UST MONITORING Date well completed 8/28/95
Regulatory Program Requiring Well ~~03205769~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joseph Zayaki Tele. # 908-218-0809

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	-3'	5	4	Sch40 P.V.C
Outer Casing (Not Protective Casing)	NONE		NONE	
Screen (Note slot size)	5	15	4	Sch40 P.V.C .020
Tail Piece	NONE		NONE	
Gravel Pack	3	15	~~#~~ 2	WELL GRAVEL
Annular Seal/Grout	0	3	10x4	NEAT CEMENT
Method of Grouting	GRAVITY FLOAT			

Static water level after drilling 11'-2" ft.
Water level was measured using MSCOPE
Well was developed for 1 hours at .5 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig MOBIL B-80
Name of Driller Anthony Untamo
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1241
Name of Drilling Company MILLTOWN DRILLING & EXCAVATION

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-6' GRAVEL
6'-15' GRAVEL SOFT SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Anthony Untamo Date 9-18-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41782
Atlas Sheet Coordinates 26 : 03 : 561

OWNER IDENTIFICATION - Owner SAFECO INSURANCE COMPANY
Address PO BOX A1551, JULIETT ROAD
City STONE MOUNTAIN State GA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County BERGEN Municipality LODI BORO Lot No. 6.B Block No. 97
Address 145 UNION STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING UST Date well completed 8-28-95
Regulatory Program Requiring Well Case I.D. # 03205769
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joseph Lajani Tele. # 908-218-0809

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	-3"	6	4	Sch 40 P.V.C
Outer Casing (Not Protective Casing)	NONE		NONE	
Screen (Note slot size)	6	16	4	Sch 40 P.V.C .020
Tail Piece	NONE		NONE	
Gravel Pack	4	16	# 2	Well Gravel
Annular Seal/Grout	0	4	10x4	Neat Cement
Method of Grouting	Gravity Float			

Static water level after drilling 3'-10" ft.
Water level was measured using M Scope
Well was developed for 1 hours at .5 gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig MOBIL B80
Name of Driller Arthur Ontanno
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 241
Name of Drilling Company MILLTOWN DRILLING & EXCAVATION

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0"-6" Gravel
6"-16' Gravel Salt Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Arthur Ontanno Date 9-18-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41783
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 561

OWNER IDENTIFICATION - Owner SAFECO INSURANCE COMPANY
Address PO BOX A1551, JULIETT ROAD
City STONE MOUNTAIN State GA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County BERGEN Municipality LODI BORO Lot No. ~~6.B~~ 97 Block No.
Address 145 UNION STREET

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8-28-95
Regulatory Program Requiring Well UST Case I.D. # 03057B9

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Joseph Cajaki Tele. # 908-218-0809

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	-3"	4	4	Sch 40 P.V.C
Outer Casing (Not Protective Casing)	NONE		NONE	
Screen (Note slot size)	4	14	4	Sch 40 P.V.C .020
Tail Piece	NONE		NONE	
Gravel Pack	2	14	#2	WELL GRAVEL
Annular Seal/Grout	0	2	10x4	NEAT CEMENT
Method of Grouting	GRAVITY POUR			

Static water level after drilling 5'10" ft
Water level was measured using M. SCOPE
Well was developed for 1 hours at .5 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig MOBIL B-80
Name of Driller ANTHONY ONTANNO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1041
Name of Drilling Company MILLTOWN DRILLING & EXCAVATION

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0"-6' GRAVEL
6"-14' GRAVEL SOFT SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 9-18-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22413
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB.46
County Bergen Municipality LODI BORO Lot No. ROW Block No. ROW
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11/1/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

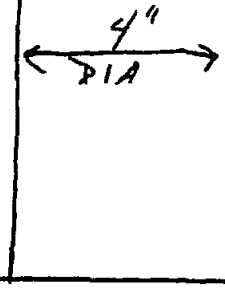
WELL CONSTRUCTION
Total depth drilled 39 ft.
Well finished to 39' ft.
Borehole diameter:
Top 7" in.
Bottom 4" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	39'	4"	STEEL CASING
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	Pressure Grout Portland			

Static water level after drilling ___ ft.
Water level was measured using ___
Well was developed for ___ hours at ___ gpm
Method of development ___
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method Auger
Drilling Fluid ___ Type of Rig Mobil B-61
Name of Driller R.V. Gregory
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1296
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-9' Fill, Silty SAND, Gravel
9-18' Brown SAND & GRAVEL
18'-32' RD.-BR. clayey SAND+GRAVEL some COBBLES + BOULDERS
32'-34' Roller Bit into Rock
34-39' 39' Core Rock



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature R.V. Gregory Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1824

DWR-138.M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22415
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB-47
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~NEW~~ Block No. ~~NEW~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~ Date well completed 11/27/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

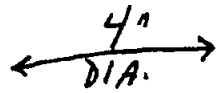
Total depth drilled 40' ft.
Well finished to 40' ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ ~~No~~

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5'	4"	STEEL Casing (Removed)
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	Tremie			

Static water level after drilling 5' ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Mobil B-61
Name of Driller Joe Gorman
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 5-0139
Name of Drilling Company WARREN GEORGE INC.

[redacted] (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
0'-13' GRAY SAND & GRAVEL some SILT
13'-19' RD. SILTY SAND
19'-34' RED TILL
34'-40' ROCK
40'



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Joe Gorman Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252 N	HOLE NUMBER: E-2

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO.
Lodi	Bergen	New Jersey	26 : 03 : 582	26 46534

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
1-10-97	1-13-97	Scott Alberalla	J 1320	8.25	17 Ft.

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
7.8	80.01	Hollow Stem Auger	Split Spoon	6.5 Feet

PROTECTIVE CASING	NOTES	SHEET
3' Stickup		1 of 1

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				1.0	12" Concrete	
1-3	1	2/1/2/2	3		Moist to wet fine to coarse SAND & GRAVEL	
3-5	2	4/1/2/2	3			
				7.0		
8-10	3	4/6/7/5	13		Wet grey/black fine to coarse SAND, some Gravel	
				10.0		
10-12	4	5/5/7/5	12		Wet grey/brown Clayey SILT	
				12.5	Boring Complete @ 12.5 Feet	

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26. 46534

Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES, INC.
Address 299 MARKET STREET
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-2
County BERGEN Municipality LODI BORO Lot No. 7,8 Block No. 80.01
Address 199 MAIN STREET

DATE WELL STARTED 1/10/97
DATE WELL COMPETED 1/13/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457/0500

WELL CONSTRUCTION

Total depth drilled 12.5 ft.
Well finished to 12.5 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAIRING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or ~~Screen~~ (No. Used 20)	4	12.5	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3	12.5		#2 SAND	#2
Gravel Pack	2	3		#00 SAND	#.00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations. See Attached.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. T1320 Date 1/21/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46535

Atlas Sheet Coordinates 26 Ø3 582

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES, INC.
Address 299 MARKET STREET
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-8
County BERGEN Municipality LODI BORO Lot No. 7,8 Block No. 80.01
Address 199 MAIN STREET

DATE WELL STARTED 1/13/97
DATE WELL COMPETED 1/13/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908-457-0500

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid MUD Type of Rig FAILING

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC.	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) (No. Used 20)	4	12	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3	12		SAND	# 2
Gravel Pack	2	3		SAND	# 00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla (for)

Registration No. 13320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-2
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46534
START DATE: 1-10-97	COMPLETION DATE: 1-13-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25
LOT: 7.8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	TOTAL DEPTH: 12.5 Ft.
PROTECTIVE CASING: 3' Stickup	NOTES:			DEPTH OF GROUNDWATER: 6.5 Feet

Soil Boring Cross-Reference *E-2*
Town and City *Lodi*
County and State *Bergen, New Jersey*

Installation Date (s) *1-13-97*

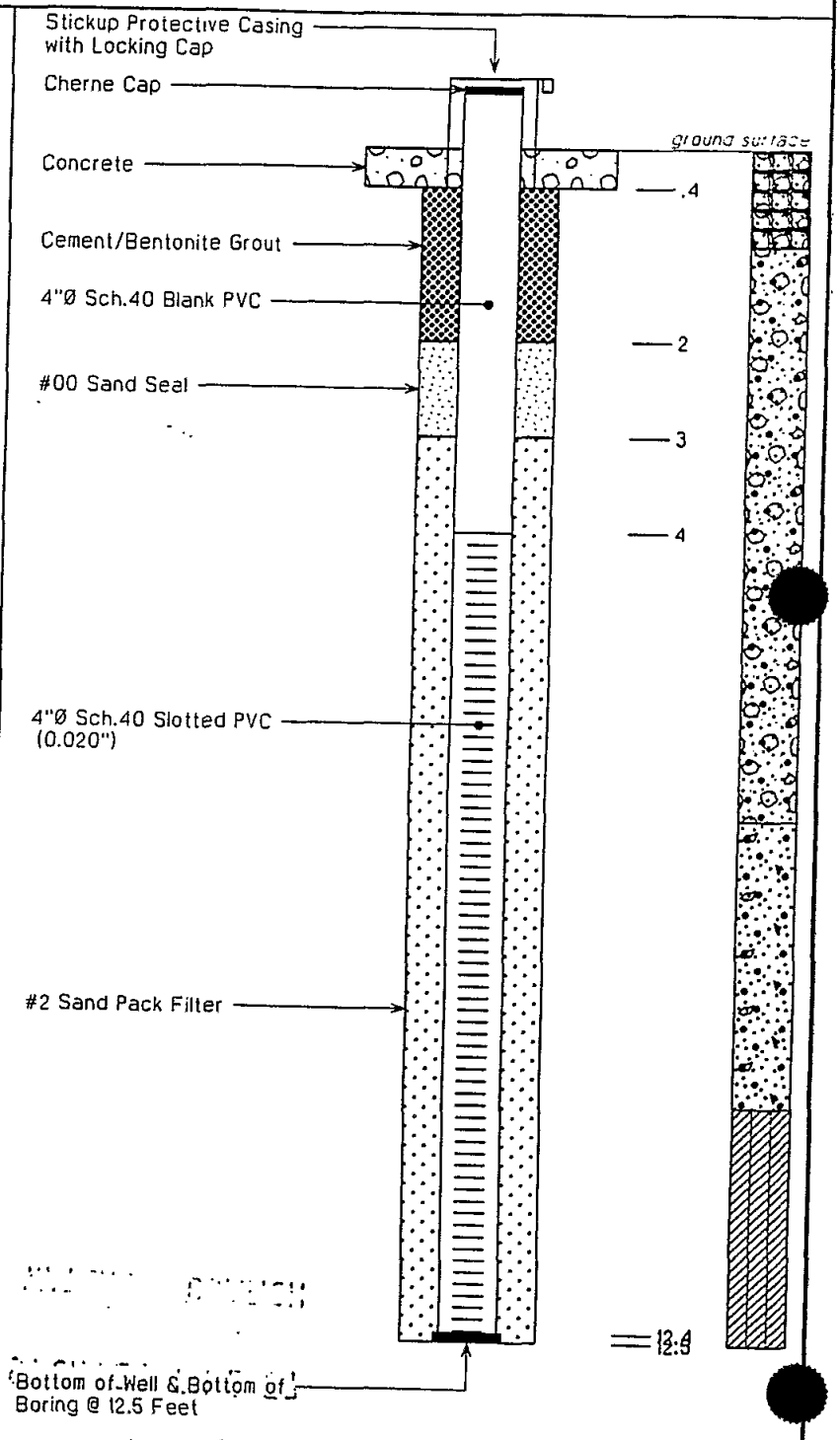
Drilling Method *Hollow Stem Auger*
Driller *Scott Alberalla*
Drilling Fluid *None*

Static water level after drilling *6.5 ft.*
Well developed for _____ hours at _____ gpm
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*
Date Prepared *1/21/97*



ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-8
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46535
START DATE: 1-13-97	COMPLETION DATE: 1-13-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 12 Ft.
LOT: 7.8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 6 Feet
PROTECTIVE CASING: 3' Stickup	NOTES:			SHEET: 1 of 1

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				1.0	12" Concrete	
1-3	1	1/2/3/4	5		Moist brown SILT, little gravel, trace of clay	
				3.0		
3-5	2	8/22 22/28	44		Moist to wet grey/brown medium to coarse SAND, some Gravel	
				10.0		
10-12	3	8/7/8/8	15		Wet brown SILT & CLAY	
				12.0	Boring Complete @ 12 Feet	

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-8
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46535
START DATE: 1-13-97	COMPLETION DATE: 1-13-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 12 Ft.
LOT: 7.8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 6 Feet
PROTECTIVE CASING: 3' Stickup	NOTES:			

Soil Boring Cross-Reference *E-8*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-13-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alberalla*

Drilling Fluid *None*

Static water level after drilling *6 ft.*

Well developed for _____ hours at _____ gpm

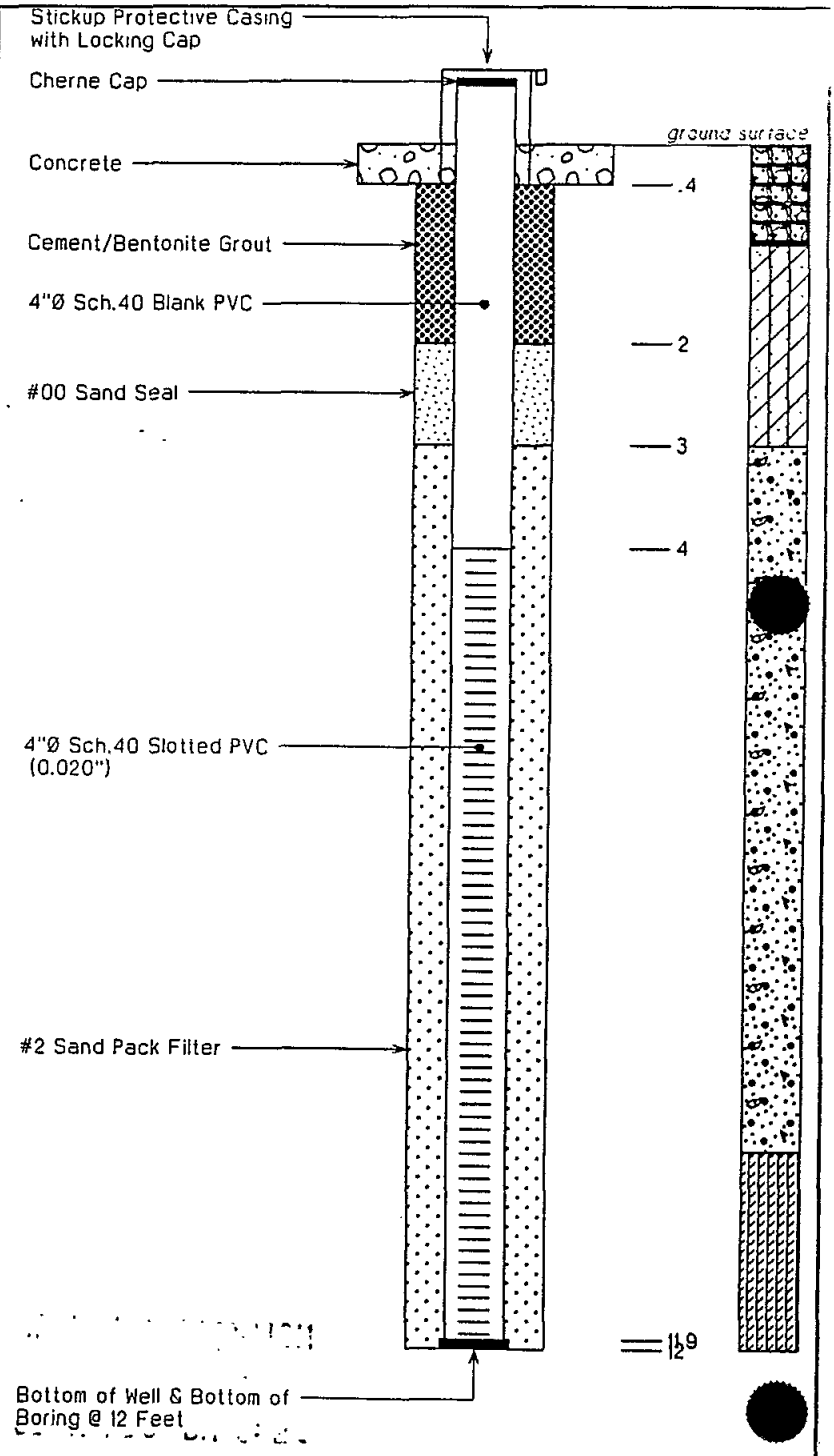
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-9
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46536
START DATE: 1-9-97	COMPLETION DATE: 1-9-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 12.5 Ft.
LOT: 7,8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5.5 Feet
PROTECTIVE CASING: 2.5' Stickup	NOTES:			SHEET: 1 of 1

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				.3	4" Asphalt + Gravel Subbase	
1-3	1	7/9/9/10	18	1.0		
3-5	2	14/13 10/13	23			
				5	Moist to wet fine to medium SAND & GRAVEL, little clay	▼
10-12	3	4/50/.2	SPOON REFUSAL	10		Hit refusal @ 10' on first attempt (possible concrete). Second attempt augered to 12.5' and installed well
				12.0	Boring Complete @ 12 Feet	
				15		
				20		
				25		
				30		
				35		

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46536

Atlas Sheet Coordinates 26 : 03 : 58

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES, INC.
Address 299 MARKET STREET
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-9
County BERGEN Municipality LODI BORO Lot No. 7,8 Block No. 80.01
Address 199 MAIN STREET

DATE WELL STARTED 1/9/97
DATE WELL COMPETED 1/9/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EMSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 12.5 ft.
Well finished to 12.5 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5.5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or ~~Screen~~ (No. Used 20)	4	12.5	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3.5	12.5		SAND	#2
Gravel Pack	2.5	3.5		SAND	#00
Grout				Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAILING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. T1320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46537

Atlas Sheet Coordinates 26 : 03 : 58

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES, INC.
Address 299 MARKET STREET
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-10
County BERGEN Municipality LODI BORO Lot No. 7,8 Block No. 87.01
Address 199 MAIN STREET

DATE WELL STARTED 1/13/97
DATE WELL COMPETED 1/14/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 8 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 20)	4	14	4	PVC.	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3	14		SAND	#2
Gravel Pack	2	3		SAND	#00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method TREMIE
Drilling Method Hollow Stem Auger

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAINING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. J1320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations. See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-9
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46536
START DATE: 1-9-97	COMPLETION DATE: 1-9-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 12.5 Ft
LOT: 7,8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5.5 Feet
PROTECTIVE CASING: 2.5' Stickup	NOTES:			

Soil Boring Cross-Reference E-9
Town and City Lodi
County and State Bergen, New Jersey

Installation Date (s) 1-9-97

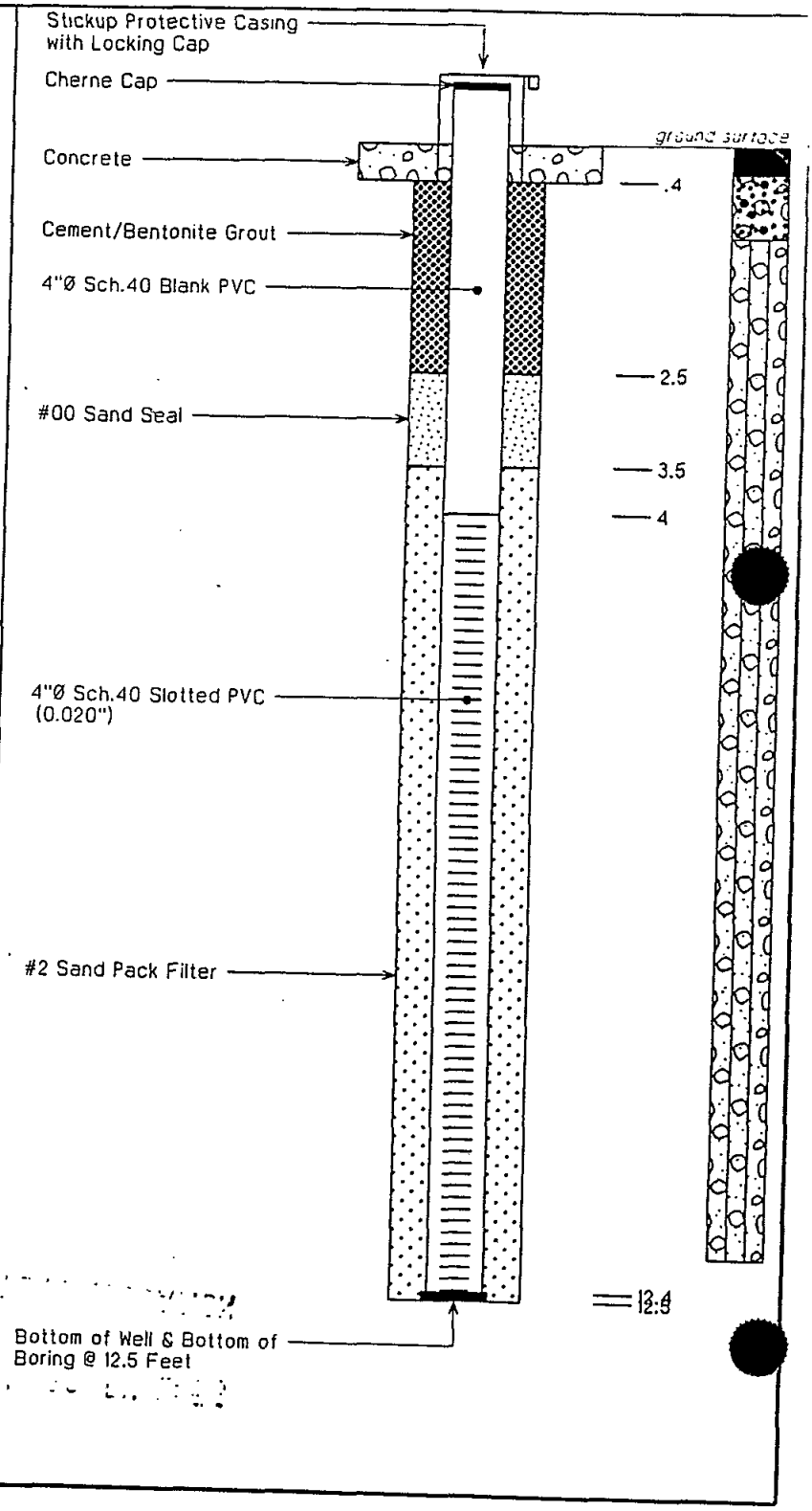
Drilling Method Hollow Stem Auger
Driller Scott Alberalla
Drilling Fluid None

Static water level after drilling 5.5 ft.
Well developed for _____ hours at _____ gpm
Method of development By ENSR

Well Purpose Monitoring

Remarks

Prepared By Scott
Date Prepared 1/21/97



ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-10
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46537
START DATE: 1-13-97	COMPLETION DATE: 1-14-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 14 Ft.
LOT: 7,8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 8 Feet
PROTECTIVE CASING: 3' Stickup	NOTES:			SHEET: 1 of 1

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				1.0	12" Concrete	
1-3	1	3/3/8/29	11		Moist brown fine SAND & GRAVEL	
				3.0		
3-5	2	6/9 22/14	31		Moist to wet grey/red fine to coarse SAND & GRAVEL	
				10.0		
10-12	3	6/13 15/20	28		Wet black/brown fine to medium SAND, GRAVEL & SILT, trace clay	
12-14	4	8/9/8/7	17	13.0	Moist grey/brown SILT, some Clay	
				14.0	Boring Complete @ 14 Feet	

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADv-252.N	HOLE NUMBER: E-10
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46537
START DATE: 1-13-97	COMPLETION DATE: 1-14-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25
TOTAL DEPTH: 14 Ft.				
LOT: 7,8	BLOCK: 80.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 8 Feet
PROTECTIVE CASING: 3' Stickup	NOTES:			

Soil Boring Cross-Reference *E-10*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-14-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alberalla*

Drilling Fluid *None*

Static water level after drilling *8 ft.*

Well developed for _____ hours at _____ gpm

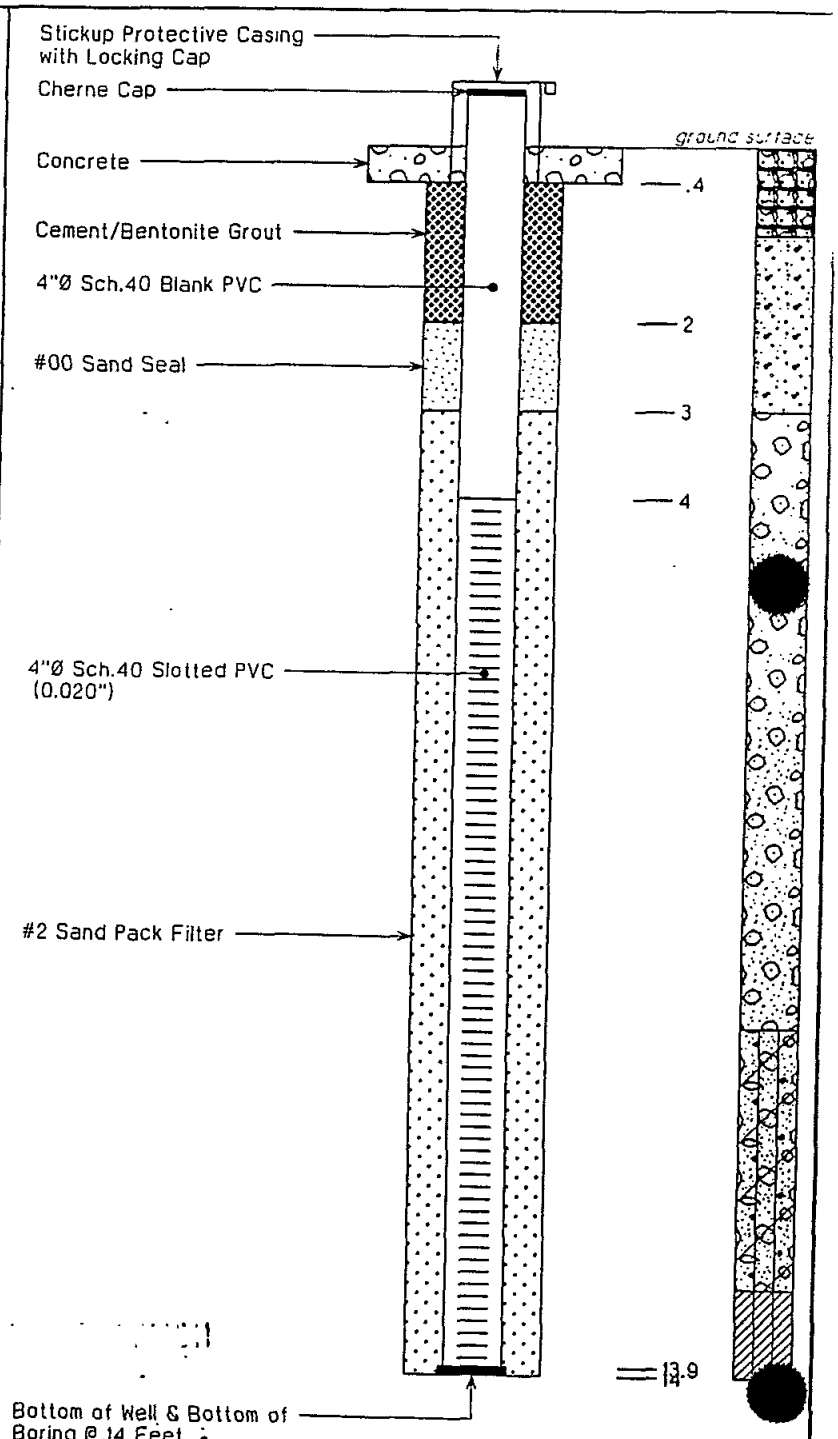
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 47786

Atlas Sheet Coordinates 26 : 02 : 58

OWNER IDENTIFICATION - Owner NJ DEPT. OF TRANSPORTATIO
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ARNOT ST.

DATE WELL STARTED 1/27/87
DATE WELL COMPETED 1/29/87

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) K.Lam Ass. Tele. #

WELL CONSTRUCTION

Total depth drilled 16' ft.
Well finished to 16 ft.

Borehole diameter:
Top 11 in.
Bottom 11 in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed?
☐ Yes ☐ No

Static water level after drilling 12 ft.

Water level was measured using probe

Well was developed for 1 hours
at 2 gpm

Method of development 2" Wat pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Hurricane

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	-4"	-6'	4"	PVC T+FJ	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	-6'	-16'	4"	PVC T+FJ .010	Sch 40
Blank Casings (No. Used)			~~3"~~	~~PVC~~	~~Sch 40~~
Tail Piece			4"	PVC POB	Sch 40
Gravel Pack	-4'	-16'	ANA	#1 Morie	500 lb.
Grout	-0	-4	Conn	Neat Cement Bentonite	94 lbs. ___ lbs.

Grouting Method GP
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-4' br m/F Sand + Fill mat. (brick, Rubbly)
4-9' bl to gr F/m Sand, tr Silt, and fill mat.
9-16 gr F/m sand and silt w/c gravel + cobbles

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ENVIRONMENTAL PROBING INVEST.

Well Driller (Print) Martin A. Pepe

Driller's Signature Martin A. Pepe

Registration No. ID 1405 Date 1/30/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 47779

Atlas Sheet Coordinates 26 : 63 :

OWNER IDENTIFICATION - Owner NJ DEPT OF TRANSPORTATIO
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 1
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ARNOT ST.

DATE WELL STARTED 1/28/98
DATE WELL COMPETED 1/28/98

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Killam Tele. # —

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 19 ft.

Borehole diameter:
Top 11 in.
Bottom 11 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 10.5 ft.

Water level was measured using Tape

Well was developed for 1 hours at 3 gpm

Method of development centrifugal pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	9	4	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	9	19	4	PVC	40
Blank Casings (No. Used)					
Tail Piece	19	19	4	PVC	40
Gravel Pack	7	19	11	#1 Morie	450
Grout	0	7	11	Neat Cement Bentonite	282 lbs. — lbs.

Grouting Method Tremmie
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-1 Topsoil
1-7 Sand + gravel some cobbles
7-15 gravel + sand
15-19 Sand + silt some gravel
∆ water 10.5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ENVIRONMENTAL PROBING INVEST.
Well Driller (Print) BRETT S Amspacher
Driller's Signature
Registration No. 51589 Date 3/18/98

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138A
./88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613567-1
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-12 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/17/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 14' Feet
5. CASING: Type PVC Diameter 4 Inches Length 4' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 4' Feet / Bottom 14' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DIVR-138A

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26 13566-3
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corp. ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-11 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/2/88 DRILLER J.E. Fritts & Assoc., Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 30' Feet
5. CASING: Type PVC Diameter 4 Inches Length 20' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 20' Feet / Bottom 30' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135698
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corp. ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-14 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 7 Block# 161A Lodi
3. DATE COMPLETED 8/12/88 DRILLER J.E. Fritts & Assoc., Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 12' Feet
5. CASING: Type PVC Diameter 4 Inches Length 2' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 2' Feet; Bottom 12' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613568-0
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-13 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/11/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 30' Feet
5. CASING: Type PVC Diameter 4 Inches Length 25' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 25' Feet / Bottom 30' Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613501-0
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Orggnics ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10 Block# 81A Lodi
3. DATE COMPLETED 8/5/88 DRILLER J.E. Fritts & Assoc. Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 20' Feet
5. CASING: Type PVC Diameter 4 Inches Length 15' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 15' Feet / Bottom 20' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ *Feet above surface*
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet *Specific Capacity* _____ *Gals. per min. per ft. of drawdown*
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None *Mfrs. Name* _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135700-1
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-15 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 7, Block# 161A Lodi
3. DATE COMPLETED 8/3/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 22' Feet
5. CASING: Type PVC Diameter 4 Inches Length 17' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 17' Feet / Bottom 22' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135736
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. mw-3 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/16/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 28' Feet
5. CASING: Type PVC Diameter 4 Inches Length 23' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 23' Feet / Bottom 28' Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613572-8
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/17/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 8' Feet
5. CASING: Type PVC Diameter 4 Inches Length 3' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 3' Feet / Bottom 8' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
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14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

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DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135752
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. mw-5 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 25' Feet
5. CASING: Type PVC Diameter 4 Inches Length 20' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 20' Feet / Bottom 25' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613574-4
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. mw-4 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/10/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 7' Feet
5. CASING: Type PVC Diameter 4 Inches Length 2' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 2' Feet / Bottom 7' Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135079
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main Street, Lodi, NJ 07644
   Owner's Well No. mw-7 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/4/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 29'6" Feet
5. CASING: Type PVC Diameter 4 Inches Length 24'6" Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 24'6" Feet / Bottom 29'6" Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135767
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-6 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/12/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 15' Feet
5. CASING: Type PVC Diameter 4 Inches Length 5' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 5' Feet; Bottom 15' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613579-5
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. mw-9 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/10/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 27' Feet
5. CASING: Type PVC Diameter 4 Inches Length 22' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 22' Feet; Bottom 27' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613508-5
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. mw-8 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/11/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 14' Feet
5. CASING: Type PVC Diameter 4 Inches Length 4' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 4' Feet; Bottom 14' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
'88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26 13599-0
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-16 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/10/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 10' Feet
5. CASING: Type PVC Diameter 4 Inches Length 5' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 5' Feet / Bottom 10' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26135809
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-16 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED 8/11/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 14' Feet
5. CASING: Type PVC Diameter 4 Inches Length 4' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 10' Feet
   Range in Depth { Top 4' Feet / Bottom 14' Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/83

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613601-5
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-18 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A, Lodi
3. DATE COMPLETED 8/10/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 8' Feet
5. CASING: Type PVC Diameter 4 Inches Length 3' Feet
6. SCREEN: Type PVC Size of Opening .010 Diameter 4 Inches Length 5' Feet
   Range in Depth { Top 3' Feet; Bottom 8' Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2613600-7
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.83

WELL RECORD

1. OWNER Fine Organics Corporation ADDRESS 205 Main St., Lodi, NJ. 07644
   Owner's Well No. MW-17 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot# 10, Block# 81A Lodi
3. DATE COMPLETED CANCELLED DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date Aug. 23, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

FORM 87

26-03-591 [o]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-318
Application No. _____
County Bergen

WELL RECORD

1. OWNER Borough of Lodi ADDRESS Cora Bella Ave
Owner's Well No. Test Well No 3 SURFACE ELEVATION 100 Feet (Above mean sea level)
2. LOCATION Lodi Bergen Co N.J.
3. DATE COMPLETED Jan 10 1966 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 10 Inches Bottom 10 Inches TOTAL DEPTH 470 Feet
5. CASING: Type Steel Diameter 12x10 Inches Length 28 48 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
Range in Depth { Top ___ Feet / Bottom ___ Feet Geologic Formation ___
Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
Water rises to ___ Feet above surface
8. RECORD OF TEST: Date Jan 10 1966 Yield 285 Gallons per minute
Static water level before pumping 48 Feet below surface
Pumping level 185 feet below surface after 40 hours pumping
Drawdown 137 Feet Specific Capacity 285 Gals. per min. per ft. of drawdown
How Pumped Turbine How measured Orific
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Turbine Mfrs. Name Owner to supply
Capacity ___ G.P.M. How Driven ___ H.P. ___ R.P.M. ___
Depth of Pump in well ___ Feet Depth of Footpiece in well ___ Feet
Depth of Air Line in well ___ Feet Type of Meter on Pump ___ Size ___ Inches
10. USED FOR Public Supply AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily
11. QUALITY OF WATER ___ Sample: Yes x No. ___
Taste no Odor no Color clear Temp. 56 °F
12. LOG 28 hard pan bal red rock and shale Are samples available? yes
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date Mar 14 1966

D-833

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated Analysis of the water ...)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13324
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 3'6" Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG F/Br. Sandy Silt,t/Gravel Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13326
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-3 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 2' 8" Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG M/C Br. Sand & Gravel, some Silt Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13325
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 3' Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG Br. Gravely FILL, f/m Sand & Silt Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13328
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-5 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 31' Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG F/Br. Sand w/Silt, trace Gravel Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13327
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-4 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 3'6" Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG F/Br. Sandy-Clayey Silt Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13330
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-7 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 3' Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG F/M Br. Sand & Gravel FILL Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-13329
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.91

WELL RECORD

1. OWNER USX Agri-Chemicals ADDRESS Atlanta, Georgia
   Owner's Well No. B-6 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION _____
3. DATE COMPLETED 6/9/88 DRILLER J. E. Fritts & Associates, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 3' Feet
5. CASING: Type None Diameter - Inches Length - Feet
6. SCREEN: Type None Size of Opening - Diameter - Inches Length - Feet
   Range in Depth { Top - Feet / Bottom - Feet } Geologic Formation _____
   Tail Piece: Diameter - Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type None Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Test Borings AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG F/M Br. Sand & Stone FILL Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY J. E. Fritts & Associates, Inc. Date June 22, 1988

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

only used 2 permits

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30581
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP
Address PO BOX 1099
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County Bergen Municipality LODI BORO Lot No. 5 Block No. 102
Address Main & Union

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/26/92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12½ ft.
Well finished to 12½ ft.
Borehole diameter:
Top 8 in.
Bottom in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)	2'	12½	4"	20 SLOT
Screen (Note slot size)				
Tail Piece				
Gravel Pack	1'	12½		#2
Annular Seal/Grout				
Method of Grouting	Gemmite			

Static water level after drilling 8 ft.
Water level was measured using Tape
Well was developed for N/A hours at gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method AIR
Drilling Fluid Type of Rig B-80
Name of Driller Michael Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGY

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8' Red Clay + Cobles
8'-12½' med To Coarse Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael E Beck Date 9-21-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26807
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner SEP ~~GETTY~~ PETROLEUM CORP.
Address PO BOX 1099
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality LODI BORO Lot No. N/A Block No. N/A
Address Main & Union

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/14/91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyree Tele. # 609/461-590

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	6"	4'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4'	14'	4"	20 SLOT
Tail Piece				
Gravel Pack	18"	14'		#4
Annular Seal/Grout	0	18"		Bentonite
Method of Grouting	Tremie			

Static water level after drilling N/A ft.
Water level was measured using
Well was developed for 0 hours at gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Method AIR ROTOR
Drilling Fluid Type of Rig B-80
Name of Driller Mike Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 14' SAND & SILT
WHITE SAND
COARSE TO MED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael E Beck Date 10/16/91

D-842

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
12/91

for permit # 26-23554
existing 6" well converted to 2" well

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 32202
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner SIDNEY BARLOW
Address 85 ARNOT STREET
City LODI State N.J. Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7D
County BERGEN Municipality _____ Lot No. 109 Block No. 67
Address 85 ARNOT STREET LODI N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/12/93
Regulatory Program Requiring Well _____ Case I.D. # _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 70 ft.
Well finished to 70 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	65'	2"	PVC
Outer Casing (Not Protective Casing)	0	60'	6"	STEEL
Screen (Note slot size)	65'	70'	2"	PVC .020
Tail Piece	N/A			
Gravel Pack	63'	70'		MORIE #1 + #2
Annular Seal/Grout	0'	63'		B. PELLETS / PORTLAND
Method of Grouting	TREMIE			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at _____ gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method N/A
Drilling Fluid N/A Type of Rig B-57
Name of Driller JOHN VOGT
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1544
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED LOG

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Vogt Date 1-13-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30582
Atlas Sheet Coordinates 28 : 05 : 557

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP.
Address PO BOX 1099
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County Bergen Municipality LODI BORO Lot No. 5 Block No. 102
Address Main & Union

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5/26/92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12½ ft.
Well finished to 12½ ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12½'	4"	20 SLOT
Tail Piece				
Gravel Pack	1'	12½'		#2
Annular Seal/Grout				
Method of Grouting	Bentonite			

Static water level after drilling 8 ft.
Water level was measured using TAPE
Well was developed for hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method AIR
Drilling Fluid Type of Rig B-80
Name of Driller Michael Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGY

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-9' red clay + cobbles
9'-12½' med to coarse sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Beck Date 9-21-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELL RECORD

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Permit No. 26-1/53-6
Application No.

Summit Drilling Company, Inc.

COPY

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-5648 (201) 725-4266 FAX (201) 356-1099

OWNER George Pappageorge, Mark-Tex Corp. ADDRESS 161 Goffle Rd., Hawthorne, NJ

Owner's Well No. MW-4 SURFACE ELEVATION

2. LOCATION Mark-Tex Corp., 85 Arnot St., Lodi, NJ

3. DATE COMPLETED 10/26/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer, Jr. Lic. #1212

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25 feet

5. CASING: Type PVC Diameter 2 inches Length 9.5 feet

6. SCREEN: Type PVC Size of Open[illegible] Diameter 2 inches Length 15 feet

Range in Depth: Top feet
Bottom feet Geologic Formation
Tail Piece: Diameter N/A inches Length feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at feet above surface

Water rises to feet above surface

8. RECORD OF TEST: Date N/A Yield Gallons per minute

Static water level before pumping 15 feet below surface

Pumping level feet below surface after hours pumping

Drawdown feet Specific Capacity Gallons per minute per foot of drawdown

How pumped How measured

Observed effect on nearby wells

9. PERMANENT PUMPING EQUIPMENT:

Type N/A Mfrs. Name

Capacity G.P.M. How Driven H.P. R.P.M.

Depth of Pump in well feet Depth of Footpiece in well feet

Depth of Air Line in well feet Type of Meter on Pump Size inches

10. USED FOR Monitor well AMOUNT: Average Gallons Daily
Maximum Gallons Daily

11. QUALITY OF WATER Sample: Yes No

Taste Odor Color Temp. degrees F.

12. LOG Attached Are samples available?

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Donald Grahamer, Jr. Lic. # 12[illegible] Date 10/26/89

WELL RECORD

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Permit No. 28-177594
Application No. _____

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1808

COPY

1. OWNER George Pappageorge, Mark-Tex Corp. ADDRESS 167 Coolidge Ave., Englewood, NJ

   Owner's Well No. MW-5 SURFACE ELEVATION _____

2. LOCATION Mark-Tex Corp., 85 Arnot St., Lodi, NJ

3. DATE COMPLETED 10/25/89 DRILLER Summit Drilling Co., Inc., Donald Grahamer, Jr. Lic. #1212

4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 25 feet

5. CASING: Type PVC Diameter _____ inches Length 12 feet

6. SCREEN: Type PVC Size of Opening _____ Diameter 2 inches Length 15 feet

   Range in Depth: Top _____ feet
   Bottom _____ feet Geologic Formation _____

   Tail Piece: Diameter N/A inches Length _____ feet

7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ feet above surface

   Water rises to _____ feet above surface

8. RECORD OF TEST: Date N/A Yield _____ Gallons per minute

   Static water level before pumping 15 feet below surface

   Pumping level _____ feet below surface after _____ hours pumping

   Drawdown _____ feet Specific Capacity _____ Gallons per minute per foot of drawdown

   How pumped _____ How measured _____

   Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

   Type N/A Mfrs. Name _____

   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

   Depth of Pump in well _____ feet Depth of Footpiece in well _____ feet

   Depth of Air Line in well _____ feet Type of Meter on Pump _____ Size _____ inches

10. USED FOR Monitor well AMOUNT: Average _____ Gallons Daily
    Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes _____ No _____

    Taste _____ Odor _____ Color _____ Temp. _____ degrees F.

12. LOG Attached Are samples available? _____

13. SOURCE OF DATA Summit Drilling Co., Inc.

14. DATA OBTAINED BY Donald Grahamer, Jr. Lic. #1212 Date 10/25/89

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 36 - 25705
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp
Address ~~Lodi GSA~~ P.O. Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-2
County Bergen Municipality Lodi Lot No. 5 Block No. 102
Address Main St & Union St

TYPE OF WELL (as per Well Permit Categories) 1/A for MW Date well completed 6/30/91
Regulatory Program Requiring Well _____ Case I.D. # _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing			4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	0	10		20 Slot PVC
Tail Piece				
Gravel Pack	~~0~~	~~10~~		Pea Gravel
Annular Seal/Grout				N/A
Method of Grouting				

Static water level after drilling NA ft.
Water level was measured using NA
Well was developed for NA hours at _____ gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig CME 55
Name of Driller Michael E Rock
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company Tyree

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Tank Field Bedstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael E Rock Date 6/30/91

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

E
LAS

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 25707
Atlas Sheet Coordinates 24 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp
Address ~~Lodi, N.J.~~ P.O. Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. YN-1
County Bergen Municipality Lodi Lot No. 5 Block No. 102
Address Main St & Union St

TYPE OF WELL (as per Well Permit Categories) Water MW Date well completed 6/20/91
Regulatory Program Requiring Well _____ Case I.D. # _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing			4"	PVC
Outer Casing (Not Protective Casing)			~~4"~~	~~PVC~~
Screen (Note slot size)	0	10'	↓	20 SLOT PVC
Tail Piece				
Gravel Pack	~~Ace~~	~~Stone~~ 10'		Pea Gravel
Annular Seal/Grout				N/A
Method of Grouting				

Static water level after drilling NA ft.
Water level was measured using NA
Well was developed for NA hours at _____ gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig CME 55
Name of Driller Michael F Beck
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 14211
Name of Drilling Company Tyree

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

TANK Field Backstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/30/91

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

~~26 25 706~~
~~26 25 707~~
~~26 25 708~~
~~26 25 709~~
26 25 710

MONITORING WELL RECORD

Well Permit No. 26 - 25710
Atlas Sheet Coordinates 24 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp
Address ~~Lodi Board~~ Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-4
County Bergen Municipality Lodi Lot No. 5 Block No. 102
Address Main St & Union St

TYPE OF WELL (as per Well Permit Categories) UNCR MW Date well completed 6/30/91
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing			4"	PVC
Outer Casing (Not Protective Casing)			/	
Screen (Note slot size)	0'	10'	V	20 SLOT PVC
Tail Piece				
Gravel Pack	~~0'~~	~~10'~~		Pea Gravel
Annular Seal/Grout				N/A
Method of Grouting				

Static water level after drilling 0 ft.
Water level was measured using N/A
Well was developed for N/A hours at _____ gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig CME 55
Name of Driller Michael Park
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company Tyree

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Wells drilled in Tajik Field All Pea Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Clark Date 6/30/91

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 25709
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp
Address ~~Lodi Dept~~ P.O. Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. VW-3
County Bergen Municipality Lodi Lot No. 5 Block No. 102
Address Main St & Union St

TYPE OF WELL (as per Well Permit Categories) Water MW Date well completed 6/30/91
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing			4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	0	10'	4"	20 SLOT PVC
Tail Piece				
Gravel Pack	0	10'		Pea Stone
Annular Seal/Grout				N/A
Method of Grouting				

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at _____ gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig CME 55
Name of Driller Michael E Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 14211
Name of Drilling Company Tyree

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Set in Tank Field
Pea Stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Beck Date 6/30/91

COPIES: White - DEP Canary - Driller D-850 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 34821
Atlas Sheet Coordinates 26 03 567

OWNER IDENTIFICATION - Owner FORTUNATO, ROBERT
Address 175 N. MAIN STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-37
County BERGEN Municipality LODI BORO Lot No. 4 Block No. 81.01
Address MAIN ST. & CHURCH ST.

TYPE OF WELL (as per Well Permit Categories) TEST BORINGS Date well completed 10/4/93
Regulatory Program Requiring Well MONITORING Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GESTON Tele. # 215-430-7500

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to — ft.
Borehole diameter:
Top 8 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	BACKFILLED WITH CUTTINGS PER DIRECTION FROM ARMY CORPS OF ENG.			

Static water level after drilling 10 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type:
Drilling Method AUGERS
Drilling Fluid — Type of Rig MOBILE B53
Name of Driller S. BURNS
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1593
Name of Drilling Company TESTWELL CRAIG

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MISC. FILL : 0-10'
M.F SAND 10-27'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature S. Burns Date 1-5-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34823
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner FORTUNATO, ROBERT
Address 175 N. MAIN STREET
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR 3E
County BERGEN Municipality LODI BORO Lot No. 4 Block No. 81.01
Address

TYPE OF WELL (as per Well Permit Categories) TEST BORING / MONITORING Date well completed 10/4/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WESTON Tele. # 215.430.7550

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to — ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	BACKFILLED WITH CUTTINGS PER DIRECTION FROM ARMY CORPS OF ENG.			

Static water level after drilling 10' ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGERS
Drilling Fluid — Type of Rig MOBILE B53
Name of Driller S. BURNS
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1593
Name of Drilling Company TESTWELL CRAIG

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MISC. FILL : 0-10'
CM SAND & F. GRAVEL : 10-27'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature S. Burns Date 10.5.93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34825
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner LODI PHILLIPSBURGH APTS
Address P.O. BOX 737
City WAYNE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-40
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 71.01
Address SADDLE RIVER S. OF PARK PLACE

TYPE OF WELL (as per Well Permit Categories) TEST BORING MONITORING Date well completed 10/6/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WESTON Tele. # 215-430-7550

WELL CONSTRUCTION

Total depth drilled 32 ft.
Well finished to — ft.
Borehole diameter:
Top 9 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
Finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	BACKFILLED WITH CUTTINGS PER DIRECTION FROM ARMY CORP. OF ENG			

Static water level after drilling 16 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGERS
Drilling Fluid — Type of Rig MARL E B-53
Name of Driller S. BURNS
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1593
Name of Drilling Company TESTWELL CRAIG

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MISC. FILL	0 - 10'
MF SAND, SM. SILT/CLAY	10 - 20
CLAYEY SILT	20 - 25
C. GRAVEL & SANDSTONE	25 - 32

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature S. Burns Date 1-5-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34904
Atlas Sheet Coordinates 26 : 03 : 587

OWNER IDENTIFICATION - Owner LODI PHILLIPSBURG APTS
Address P.O. BOX 737
City WAYNE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-40A
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 71.01
Address LODI CIRCLE APTS

TYPE OF WELL (as per Well Permit Categories) TEST BORING / MONITORING Date well completed 10/6/93
Regulatory Program Requiring Well Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WESTON Tele. # 215-430-7550

WELL CONSTRUCTION

Total depth drilled 31.9 ft.
Well finished to — ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	BACKFILLED WITH CUTTINGS PER DIRECTION FROM ARMY CORPS OF ENG.			

Static water level after drilling 20' ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGERS
Drilling Fluid — Type of Rig MOBILE B53
Name of Driller S. BURNS
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 593
Name of Drilling Company TESTWELL CRAIG

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MISC FILL: 0-15'
F SAND & CF GRAVEL 15-31.9

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature S. Burns Date 1.5-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 38966
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp
Address PO BOX 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-2
County Bergen Municipality Lodi Boro Lot No. 5 Block No. 102
Address main+union St., Lodi, NJ

TYPE OF WELL (as per Well Permit Categories) Recovery Date well completed 3/15/95
Regulatory Program Requiring Well UST Case I.D. # 93-03-11-1343-4
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyree-Allen Polmann Tele. # 609-239-0033

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 195 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2.5	8	sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2.5	19.5	8	sch 40 .020 slot PVC
Tail Piece	—	—	—	—
Gravel Pack	1.5	21	12	#2 morie sand
Annular Seal/Grout	1.0 / 0	1.5 / 1.0	12	Bentonite slurry / cement bent grout
Method of Grouting	gravity placement			

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 2.5 hours at 10 gpm
Method of development submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Air Rotary
Drilling Fluid none Type of Rig T-650W
Name of Driller Thomas Brown/Michael Beck
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1421/1311
Name of Drilling Company Tyree Environmental Technologies

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' Asphalt
4-17' - Fired sand+ gravel
17-21' - m/c sand+gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 3-28-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 38965
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp.
Address PO Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW 1
County Bergen Municipality Lodi Boro Lot No. 5 Block No. 102
Address Main & Union Ave., Lodi NJ

TYPE OF WELL (as per Well Permit Categories) Recovery Date well completed 3/15/95
Regulatory Program Requiring Well UST Case I.D. # 93-03-11-1343 4
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyree - Allen Polmont Tele. # 609-239-0033

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 19 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2	8	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	2	19	8	SCH 40 .020 slot PVC
Tail Piece	—	—	—	—
Gravel Pack	1.5	20	12	#2 morie sand
Annular Seal/Grout	.5 / 0	1.5 / .5	12	Bentonite slurry / cement Bentonite grout
Method of Grouting	gravity placement			

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 2.5 hours at 10 gpm
Method of development submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Air Rotary
Drilling Fluid none Type of Rig T-650W
Name of Driller Thomas Brown / Michael Beck
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1421/1311
Name of Drilling Company Tyree Environmental Technologies

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4" Asphalt
4"-16 F/ Red sand + gravel
16-20 m/c sand + gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature X [signature] Date 3-28-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

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MONITORING WELL RECORD

Well Permit No. 26 - 40255
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner MARK-TEX CORP.
Address 85 ARNOT ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 14
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 18.26 Block No. 67
Address 85 Arnot St

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 4/26/95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 87647
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) K. Ham Tele. #

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	.5	7	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	7	17	2	Sch 40 PVC .020
Tail Piece				
Gravel Pack	5	17		Morie #1
Annular Seal/Grout	0	5		Portland
Method of Grouting	Tremie			

Static water level after drilling 8 ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 1/4 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig B-80
Name of Driller Don Graham-en Jr
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. M-1212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Graham Jr Date 5-2-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 38967
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner Getty Petroleum Corp.
Address PO Box 1099
City Newark State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW3
County Bergen Municipality Lodi Boro Lot No. 5 Block No. 102
Address main + union St. Lodi, NJ

TYPE OF WELL (as per Well Permit Categories) recovery Date well completed 3/15/95
Regulatory Program Requiring Well UST Case I.D. # 93-03-11-1343-4
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyree - Allen Polmann Tele. # 609-239-0033

WELL CONSTRUCTION

Total depth drilled 22 ft.
Well finished to 21.5 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	1.5	8	sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1.5	21.5	8	sch 40 .020 slot PVC
Tail Piece	—	—	—	—
Gravel Pack	1	22	12	#2 morie sand
Annular Seal/Grout	.5 / 0	1.0 / .5	12	Bentonite slurry / Cement Bent Grout
Method of Grouting	gravity placement			

Static water level after drilling 7 ft.
Water level was measured using tape
Well was developed for 2.5 hours at 10 gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Air Rotary
Drilling Fluid none Type of Rig T-650W
Name of Driller Thomas Brown / Michael Beck
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 14211311
Name of Drilling Company Tyree Environmental Technologies

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4" - Asphalt
4" - 22' - Red brown f/m sand s/gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 3-28-95

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

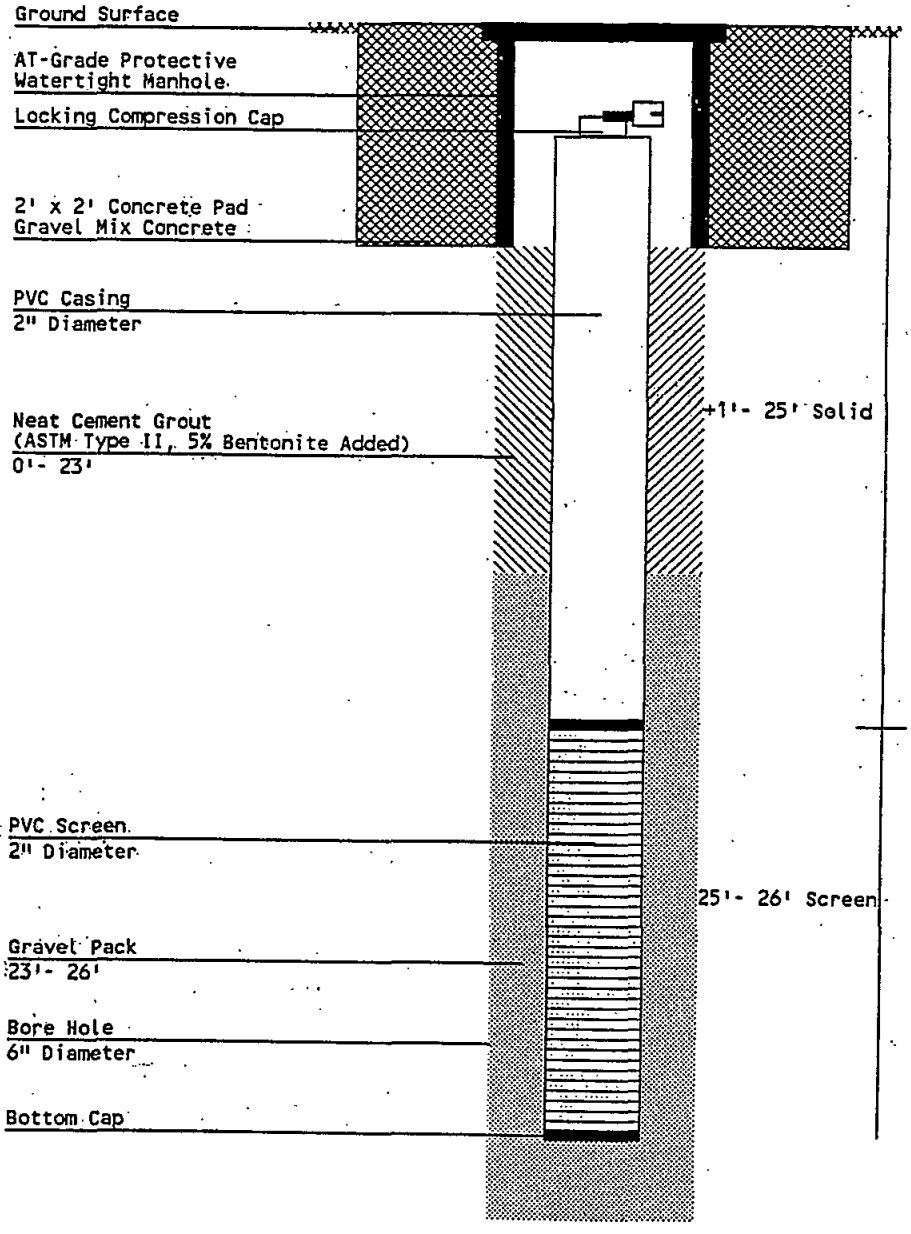
LL: MW15 DATE DRILLED: 4/26/1995 COORD #1: 26.03.557 PERMIT #1: 26-40331
COORD #2: PERMIT #2:
TE: Mark-Tex Corporation, 85 Arnot Street, , Lodi, NJ 07644-0000 COUNTY: Bergen
NER: Barlow, Sidney, 85 Arnot Street, , Lodi, NJ 07644-0000 XSTREET: Corabelle Avenue
USE: Monitoring

NER CASING:	PVC	OUTER CASING:		SCREEN TYPE 1: PVC	DRILLING METHOD: Air Rotary
AMETER:	2"	DIAMETER:		SCREEN TYPE 2:	SAMPLING METHOD: Cuttings
NGTH:	26'	LENGTH:		DIAMETER: 2"	HOLE DIAMETER: 6"
				LENGTH 1: 1'	TOTAL DEPTH: 26'
T WELL:	26'	GAL PER MIN: SLOW RECHG		LENGTH 2:	
AVEL PK SZ:	Morie #1	STAT H2O LVL: 22'		SLOT SIZE: .020	
ILLER:	Don Grahamer, Jr.	DEVELOPMENT METHOD: Pump		CASING SEAL: Portland	
RFACE COMPLETION:	S	DEVELOPMENT TIME: 1 Hour		OPEN HOLE:	

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

MARKS / SOILS IDENTIFICATION

- 1' Top soil.
- 12' Red-brown c/f sand some c/f gravel.
!' - 26' Red-brown m/f sand some c/f gravel little silt trace cobbles.
drock at 26'.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

55

MONITORING WELL RECORD

Well Permit No. 26 - 40331
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 557

OWNER IDENTIFICATION - Owner MARK-TEX CORP.
Address 85 ARNOT ST.
City LODI State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-15
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 1.09 Block No. 67
Address 85 Arnot

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 4.26.95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 87647
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Killam Tele. #

WELL CONSTRUCTION

Total depth drilled 26 ft.
Well finished to 26 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+1	25	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	25	26	2	Sch 40 PVC .020
Tail Piece				
Gravel Pack	23	26		Morie #1
Annular Seal/Grout	0	23		Portland
Method of Grouting	Tremie			

Static water level after drilling 23 ft.
Water level was measured using Tape
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Don Terhune Jr
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No 11-1212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Terhune Jr Date 5-2-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

E CL

Well Permit No. 26 - 40333
Atlas Sheet Coordinates 26 : 03 : 557

WNER IDENTIFICATION - Owner MARK-TEX CORP.
ddress 85 ARNOT ST.
ity LODI State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 17
ounty BERGEN Municipality LODI BORO Lot No. 1.09 Block No. 67
ddress 85 Arnot

'PE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/26/95
egulatory Program Requiring Well ISRA SITE Case I.D. # 87647
ONSULTING FIRM/FIELD SUPERVISOR (if applicable) K. Ham Tele. #

ELL CONSTRUCTION

otal depth drilled 25.5 ft.
ell finished to 25.5 ft.
rehole diameter:
Top 6 in.
ottom 6 in.
ell was finished: ☑ above grade ☐ flush mounted
in above grade, casing
ight (stick up) above land
face 1 ft.
s steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+1	24.5	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	24.5	25.5	2	Sch 40 PVC .020
Tail Piece				
Gravel Pack	22.5	25.5		Morie #1
Annular Seal/Grout	0	22.5		Portland
Method of Grouting	Tremie			

atic water level after drilling 22 ft.
ater level was measured using Tape
ll was developed for 1 hours at Slow gpm
thod of development Pump
s permanent pumping equipment installed? ☐ Yes ☒ No
mp capacity gpm
mp type:
ling Method Air Rotary
ling Fluid Type of Rig B-80
me of Driller Don Terhune Jr
alth and Safety Plan submitted? ☑ Yes ☐ No
el of Protection used on site (circle one) None (D) C B A
. License No. M-1212
me of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

rtify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable
te and regulations.

Driller's Signature Don Terhune Jr Date 5-2-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 40332
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner ~~MARK TEX CORP.~~
Address 85 ARNOT ST
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address.
County BERGEN Municipality LODI BORO Owner's Well No. MW-16
Address 85 Arnot Lot No. ~~1.09~~ Block No. ~~67~~

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well MONITORING Date well completed 4/26/95
ISRA SITE Case I.D. # ~~87647~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Killam Tele. #

WELL CONSTRUCTION

Total depth drilled 24.5 ft.
Well finished to 24.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+1	23.5	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	23.5	24.5	2	Sch 40 PVC .02
Tail Piece				
Gravel Pack	21.5	24.5		Morie #1
Annular Seal/Grout	0	21.5		Portland
Method of Grouting	Tremie			

Static water level after drilling 22 ft.
Water level was measured using Tape
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Don Gruberger Jr
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11-1212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Don Gruberger Jr. Date 5-2-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21216 - 26 - 03 - 558
Atlas Sheet Coordinates ____ : ____ : ____

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. O-2
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 8 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING WELL Date well completed 8/23/90
Regulatory Program Requiring Well AT OBS Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 3/4 ft.
Well finished to 14 3/4 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	14 3/4	4"	SCH. 40 STEEL
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	4 3/4	14 3/4	4"	.010 STAINLESS STEEL
Tail Piece	—	N/A	—	—
Gravel Pack	3 3/4	14 3/4		#2 SAND
Annular Seal/Grout	0	1 3/4		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ____ Type of Rig SPEEDSTAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) (C) B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

5 5

MONITORING WELL RECORD

Well Permit No. 26 - 40334
Atlas Sheet Coordinates 26 : 03 : 557

OWNER IDENTIFICATION - Owner MARK TEX CORP.
Address 85 ARNOT ST.
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-18
County BERGEN Municipality LODI BORO Lot No. 1.09 Block No. 67
Address 85 Arnot

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/27/95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 87647
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) K. Hann Tele. #

WELL CONSTRUCTION
Total depth drilled 24.5 ft.
Well finished to 24.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+1	23.5	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	23.5	24.5	2	Sch 40 PVC .020
Tail Piece				
Gravel Pack	21.5	24.5		Morie #1
Annular Seal/Grout	0	21.5		Portland
Method of Grouting	Tremie			

Static water level after drilling 22 ft.
Water level was measured using Tape
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig B-80
Name of Driller Don Cochrane Jr
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M-1212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Cochrane Jr Date 5-2-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Coord # 26:03:558

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organic Corp.

LOCATION 205 Main St. Lodi, NJ

BORING O-2

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/23/90

PERMIT NUMBER 26-21216 WATER TABLE 6'

DATE COMPLETED 8/23/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 10' 4" S.S. IN. DIA. FROM 4 3/4 TO 14 3/4 FT. DEPTH

RISER 4 3/4' 4" S.S IN. DIA. FROM 0 TO 4 3/4 FT. DEPTH

GRAVEL FILTER

BENTONITE SEAL

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Brown Silty Sand and Gravel - Poorly sorted - Rounded					
2	6	Reddish Brown Silty Sand And Gravel Poorly Sorted - Rounded					
6	8	Brown Silty Sand and Gravel - Poorly Sorted - Rounded - Dark Grey Silty Clay - Wet					
	13.5	Hard Object					
	14.75	Grey Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

26 21217
Well Permit No. 26 03 558
Atlas Sheet Coordinates ____ : ____ : ____

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address ~~205 MAIN STREET~~ LODI NJ
City ____ State ____ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. O-1
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. # ____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	4	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	4	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	3	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) (C) B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company ____

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Could # 20:05:55b

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING O-1
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head HELPER Pete Classen INSPECTOR
PERMIT NUMBER 26-21217 WATER TABLE 6'
COMMENTS

PROJECT NO. 1342
DATE STARTED 8/23/90
DATE COMPLETED 8/23/90

MONITORING WELL CONSTRUCTION
SCREEN 10' 4" S.S IN. DIA. FROM 4' TO 14' FT. DEPTH
RISER 3' 4" S.S. IN. DIA. FROM 1' TO 4' FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
GRAVEL FILTER
BENTONITE SEAL
SURFACE SEAL
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Brown Silty Sand and Gravel, Poorly Sorted, Rounded					
2	4	Reddish Brown, Silty Sand and Gravel Poorly Sorted, Rounded					
4	8	Brown Silty Sand and Gravel, Poorly Sorted, Rounded					
8	11	Dark Grey Silty Clay, Wet					
11	14	Grey Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 21218
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State ~~NJ~~ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-5
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/24/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 11 1/2 ft.
Well finished to 11 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ~~—~~ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	4/2	6 1/2	4"	Sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	6 1/2	11 1/2	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	5 1/2	11 1/2		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ~~—~~ gpm
Pump type: ~~—~~
Drilling Method Hollow Stem Auger
Drilling Fluid ~~—~~ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-5
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
DRILLER Rich Head HELPER Pete Classen INSPECTOR
DATE STARTED 7/24/90
PERMIT NUMBER 26-21218
WATER TABLE 6'
DATE COMPLETED 7/24/90
COMMENTS

MONITORING WELL CONSTRUCTION
SCREEN 5' 4" S.S. IN. DIA. FROM 6.5 TO 11.5 FT. DEPTH
GRAVEL FILTER 4 Bags
RISER 6' 4" S.S. IN. DIA. FROM .5 TO 6.5 FT. DEPTH
BENTONITE SEAL 1 Pail
FLUSH BOX Emco Wheaton Curb Box STICK-UP
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW/.6"	WELL EQUIPMENT INSTALLED
	0	Surface -Asphalt					
0	6	Red Sand - Some Stone					
6	7	Brown Sand Fine - Some Small/Medium Stones					
7	11.5	Coarse Fine Brown Sand - Medium/Small Stones - Wet - Odor					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21219
Atlas Sheet Coordinates 25 : 03 : 558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-15
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/24/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 1/2 ft.
Well finished to 14 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1/2	9 1/2	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	9 1/2	14 1/2	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	8 1/2	14 1/2		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

)3) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME

LOCATION Lodi, NJ

BORING MW-33

SHEET NO. OF

EQUIPMENT Gus Pech RIG NO. 211

ILLING METHOD Auger PROJECT NO. 1342

ILLER J.Wolford HELPER D.O'dell INSPECTOR D.Fiorentino DATE STARTED 4/21/92

RMIT NUMBER 26-29147 WATER TABLE 5' DATE COMPLETED 4/21/92

MMENTS 6" steel stand 3' above grade

MONITORING WELL CONSTRUCTION

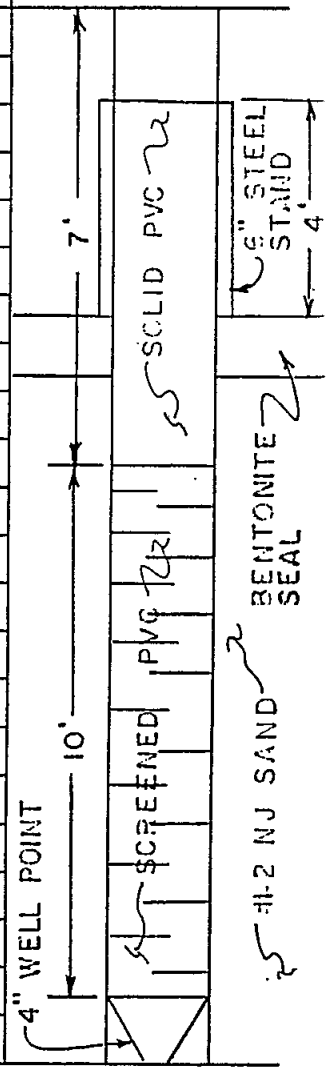
SCREEN 4 IN. DIA. FROM 14 TO 4 FT. DEPTH GRAVEL FILTER #2 NJ sand

RISER 4 IN. DIA. FROM 4 TO 3 FT. DEPTH BENTONITE SEAL 2½ below grade

FLUSH BOX STICK-UP 6" steel SURFACE SEAL cement LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"
)	4"	black top				
4"	5'	course silty sand				
5'	11'	wet course sand and med				
11'	14'	small clay layers				

WELL EQUIPMENT INSTALLED



SAMPLE IDENTIFICATION

- SLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

26 34827

Well Permit No. 26 03 558

Atlas Sheet Coordinates ____ : ____ : ____

OWNER IDENTIFICATION - Owner 269 MAIN STREET REALTY

Address ~~269 MAIN STREET~~

City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-40B

County BERGEN Municipality LODI BORO Lot No. 18 Block No. 161

Address RTE 46 & SADDLE RIVER

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ TEST BORING Date well completed 10/4/93

Regulatory Program Requiring Well ____ Case I.D. # ____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WESTON Tele. # 215-430-7550

WELL CONSTRUCTION

Total depth drilled 29.5 ft.

Well finished to — ft.

Borehole diameter:
Top 8 in.
Bottom 9 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	BACKFILLED WITH CUTTINGS PER DIRECTION FROM ARMY COE ENG.			

Static water level after drilling 5' ft.

Water level was measured using TAPE

Well was developed for — hours at — gpm

Method of development ____

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: ____

Drilling Method AUGERS

Drilling Fluid — Type of Rig MOBILE B-53

Name of Driller S. BURNS

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

N.J. License No. 1593

Name of Drilling Company TESTWELL CRAIG

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MF SAND & SILT 0-10

MF SAND, TR. SILT 10-23

ROCK 23-29

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature S. Burns Date 1-5-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation
PROJECT NAME
LOCATION Lodi, NJ

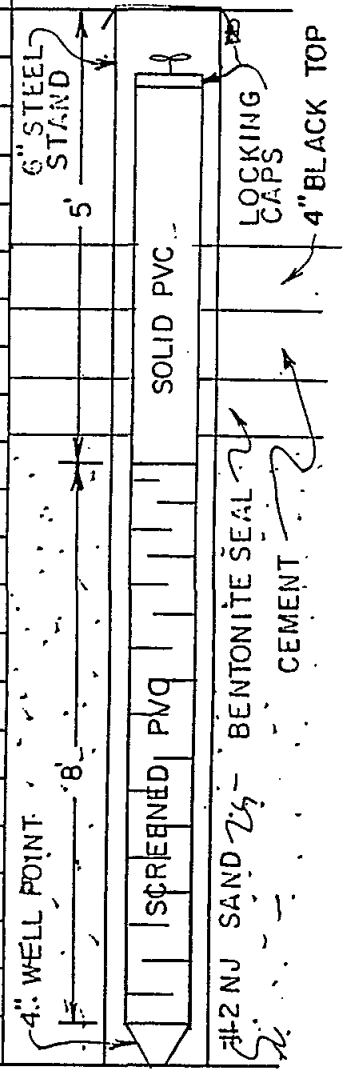
BORING MW-32
SHEET NO. OF

L QUIPMENT Gus Pech
RIG NO. 211
LING METHOD Auger
PROJECT NO. 1342
LER J.Wolford HELPER D.O'dell INSPECTOR D.Fiorentino
DATE STARTED 4/21/92
MIT NUMBER 26-29146
WATER TABLE 3½'
DATE COMPLETED 4/21/92
MENTS Riser 3' above surface with 6" steel stand up

MONITORING WELL CONSTRUCTION
SCREEN 4 IN. DIA. FROM 10 TO 2 FT. DEPTH
GRAVEL FILTER #2 NJ sand
RISER 4 IN. DIA. FROM 2 TO 3 FT. DEPTH
BENTONITE SEAL 1 & 7 below grade
FLUSH BOX
STICK-UP 6" steel stand up
SURFACE SEAL cement
LOCKING CAP 4" PVC

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"
0	4"	blacktop		1	2	
4"	7'	course silty sand wet		2	4	
7'	9'	water bearing sand		4	6	
9	10'	clay				

WELL EQUIPMENT INSTALLED



SAMPLE IDENTIFICATION
- SLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 29147
Atlas Sheet Coordinates 25 : 05 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-33
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10 A, 1 A~~ Block No. ~~81 A~~
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/21/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+3	4	4	PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	4	14	4	.020 PVC
Tail Piece		N/A		
Gravel Pack	3	14		#2 SAND
Annular Seal/Grout	0	4		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 5 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Daniel Fiorentino
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company TECHNICAL ENVI. SPECIALISTS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Daniel Fiorentino Date 5/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

)3) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

26-03-558 96-21021

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION Lodi NJ

BORING P1-1

SHEET NO. 2 OF 2

G EQUIPMENT Gus Pech RIG NO. 211

ILLING METHOD Auger

PROJECT NO. 1342

ILLER J. Wolford HELPER D.O'Dell INSPECTOR

DATE STARTED 11/6/91

RMIT NUMBER 26-27027 WATER TABLE 21'

DATE COMPLETED 11/7/91

)MMENTS

MONITORING WELL CONSTRUCTION

SCREEN 15'8" IN. DIA. FROM 30 TO 15 FT. DEPTH GRAVEL FILTER

RISER 16'8" IN. DIA. FROM 15 TO +1 FT. DEPTH BENTONITE SEAL

FLUSH BOX yes STICK-UP SURFACE SEAL LOCKING CAP 8"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
18'	21"	course silty sand					
21'	26'	small layer of water and sand					
26'	28'	silty clay					
	30'	clay					
30'	31'	sand stone					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 29146
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-32
County BERGEN Municipality LODI BORO Lot No. 11-A, 1-A Block No. 81-A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/21/92
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+3	2	4"	PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	2	10	4"	.020 PVC
Tail Piece		N/A		
Gravel Pack	1	10		#2 SAND
Annular Seal/Grout	0	2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 3 1/2 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig Gus Pech
Name of Driller Daniel Fiorentino
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company TECHNICAL ENVI. SPECIALISTS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Daniel Fiorentino Date 5/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27027
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENG
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. P1-1
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/7/91
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 31 ft.
Well finished to 31 ft.
Borehole diameter:
Top 16 in.
Bottom 16 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	15	8"	STAINLESS STEEL
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	15	30	8"	STAINLESS STEEL
Tail Piece	—	N/A	—	—
Gravel Pack	14	30		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 12 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig STEEDSTAL
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

all attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 1/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION Lodi NJ

BORING P1-1

SHEET NO. 1 OF 2

DRILLING EQUIPMENT Gus Pech RIG NO. 211

DRILLING METHOD Auger

PROJECT NO. 1342

DRILLER J.Wolford HELPER D.O'Dell INSPECTOR

DATE STARTED 11/6/91

PERMIT NUMBER

WATER TABLE 12'

DATE COMPLETED 11/7/91

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN IN. DIA. FROM TO FT. DEPTH

RISER IN. DIA. FROM TO FT. DEPTH

FLUSH BOX yes STICK-UP

GRAVEL FILTER

BENTONITE SEAL

SURFACE SEAL

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	1'	back fill					
1'	8'	red silty sand					
8'	12'	small layer of silty sand and clay					
12'	18'	red sand and clay					
		12" steel 18-0 double cared hole					
		no screen					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

RECEIVED OCT 24 1991

MONITORING WELL RECORD

Well Permit No. 26 - 27026
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENG
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW1-2
County _____ Municipality ~~LODI BORO~~ Lot No. ~~10-A,1-A~~ Block No. ~~81-A~~
Address _____

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 11/6/91
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1/2	5	4"	sch. 40 STEEL
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	5	15	4"	.010 STAINLESS STEEL
Tail Piece	—	N/A	—	—
Gravel Pack	4	15		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 10 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEEDSTAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(See attached)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 1/2/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

03) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION Lodi NJ

BORING RW1-2

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Gus Pech RIG NO. 211

DRILLING METHOD Auger

DRILLER J.Wolford HELPER D.O'Dell INSPECTOR

PROJECT NO. 1342

DATE STARTED 11/6/91

PERMIT NUMBER

WATER TABLE 10'

DATE COMPLETED 11/6/91

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN stainless steel 4IN. DIA. FROM 15 TO 5 FT. DEPTH

RISER 4IN. DIA. FROM .5 TO 5 FT. DEPTH

FLUSH BOX 12" STICK-UP

GRAVEL FILTER #2 NJ sand

BENTONITE SEAL 1'

SURFACE SEAL

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	2'	back fill					
2'	8'	red sand					
8'	12'	silty sand layer					
12'	15'	small clay layer					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -22683
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-26
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10A-1-2A~~ Block No. ~~81A-161~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 12/11/90
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 19 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
☐ shed above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1/2	17	2"	sch. 40 PVC
Outer Casing (Not Protective Casing)	1	15	6"	STEEL
Screen (Note slot size)	17	19	2"	.010 PVC
Tail Piece	—	N/A	—	
Gravel Pack	16	19		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AIR ROTARY
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING MW-26
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head HELPER Pete Classen INSPECTOR
PERMIT NUMBER 26-22683
WATER TABLE 6'
PROJECT NO. 1342
DATE STARTED
DATE COMPLETED 12/11/9~~2~~ 12/11/
COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 2' PVC 2" IN. DIA. FROM 17 TO 19 FT. DEPTH
RISER 17' PVC 2" IN. DIA. FROM .5 TO 17 FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	4	Reddish-Brown Silty Sand					
4	10	Reddish-Brown Silty Sand with Gravel.					
10	14	Same as Above - Saturated					
~~14~~	~~17~~	~~Concrete~~					
17	19	Reddish-Brown, Silty Sand					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW-23

SHEET NO. 1 OF 1

G EQUIPMENT Speed Star

RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 11/10/90

ERMIT NUMBER 26-22681

WATER TABLE 6'

DATE COMPLETED 11/10/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4" IN. DIA. FROM 5 TO 10 FT. DEPTH

RISER 4' PVC 4" IN. DIA. FROM 1 TO 5 FT. DEPTH

GRAVEL FILTER

BENTONITE SEAL 4 Bags 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
2	4	Light Brown Fill Sand					
4	6	Coarse Sand and Gravel - Grey Wet - Odor					
6	8	Same as Above - Fine Silt at 7.5 - Saturated - Sheen on Water					
8	10	Silt/Clay - Grey - Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION ~~205 Main Street Lodi,~~ NJ

BORING MW-24

SHEET No. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER John Wolford HELPER Pete Classen INSPECTOR

PERMIT NUMBER 26-22682 WATER TABLE 6'

PROJECT NO. 1342

DATE STARTED 11/10/90

DATE COMPLETED 11/10/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4" IN. DIA. FROM 5 TO 10 FT. DEPTH

RISER 4' PVC 4" IN. DIA. FROM 1 TO 5 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	~~Surface - Asphalt~~					
2	4	Grey/Brown Find Sand - Moist					
4	6	Same as Above - Black at 5.5'					
		Wet					
6	8	Fine Grey Silt - Saturated-					
		Strong Odor					
8	10	Silty Clay - Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 22681
Atlas Sheet Coordinates 26 03 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG~~
Address ~~205 MAIN STREET~~
City ~~LODI~~ State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-23
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10A-1-2A~~ Block No. ~~81A-161~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 11/10/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade
☒ flush mounted
☐ finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	5	4"	SCH. 40 PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	5	10	4"	.010 PVC
Tail Piece		N/A		
Gravel Pack	4	10		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 475
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DVR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22682
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24
County BERGEN Municipality LODI BORO Lot No. 10A-1-2A Block No. 81A-1.61
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 11/10/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	4"	SCH. 40 PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	5	10	4"	.010 PVC
Tail Piece		N/A		
Gravel Pack	4	10		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW-20S

SHEET NO. 2 OF 2

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 11/9/90

PERMIT NUMBER 26-22679 WATER TABLE 6'

DATE COMPLETED 11/9/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4" IN. DIA. FROM 16 TO 21 FT. DEPTH

GRAVEL FILTER 4 Bags

RISER 15' PVC 4" IN. DIA. FROM 1 TO 16 FT. DEPTH

BENTONITE SEAL 1 Pail

FLUSH BOX STICK-UP Emco Wheaton

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
17	19	Silt/Sand, Some Gravel, Rust/Brown					
19	21	Fine Silt, Some Sand - Brown					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW-22

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 12/11/90

PERMIT NUMBER 26-22680

WATER TABLE 6'

DATE COMPLETED 12/11/9

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4" IN. DIA. FROM 5 TO 10 FT. DEPTH

RISER 4' PVC 4" IN. DIA. FROM 1 TO 5 FT. DEPTH

FLUSH BOX STICK-UP Emco Wheaton

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Concrete, Gravel, Cobbles					
1	3	Tan, Medium-Fine Sand					
3	7	Reddish-Tan, Medium-Fine Sand					
7	10	Grey Silty Clay- Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW-20S

SHEET NO. 1 OF 2

G EQUIPMENT Speed Star

RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED ~~11/9/90~~

ERMIT NUMBER 26-22679

WATER TABLE 6'

DATE COMPLETED 11/9/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4"IN. DIA. FROM 16 TO 21 FT. DEPTH

GRAVEL FILTER 4 Bags

RISER 15' PVC 4"IN. DIA. FROM 1 TO 15 FT. DEPTH

BENTONITE SEAL 1 Pail

FLUSH BOX STICK-UP Emco Wheaton

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
1	3	Light Brown, Fine Sand -No Odor					
3	6	Same as Above					
	7	Rust Colored Coarse Sand and Gravel - Saturated					
7	9	Same as Above - Last 12" Much Finer Sand - Saturated					
9	11	Very Fine Sand - Rust Colored					
11	13	Rust Colored Sand and Gravel Saturated - No Odor					
13	15	Sand/Silt - Saturated - Rust Colored					
15	17	Sand w/Some Silt, Gravel - No Odor -Rust/Brown - Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22680
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENG
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-22
County BERGEN Municipality LODI BORO Lot No. 10A-1-2A Block No. 81A-161
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12/11/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	4"	sch. 40 PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	5	10	4"	.010 PVC
Tail Piece		N/A		
Gravel Pack	4	10		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 117.5
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES **TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION**

)3) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME

LOCATION Lodi, NJ

BORING RW-7-10

SHEET NO. 1 OF 1

G EQUIPMENT Speedstar RIG NO.

ILLING METHOD Hollow stem auger PROJECT NO. 1342

ILLER R.Head HELPER D.O'dell,P.Classen INSPECTOR D.Fiorentino DATE STARTED 2/12/91

RMIT NUMBER WATER TABLE DATE COMPLETED 2/12/91

)MMENTS

MONITORING WELL CONSTRUCTION

SCREEN 4 IN. DIA. FROM 11½ TO 6½ FT. DEPTH GRAVEL FILTER 5

RISER IN. DIA. FROM 6½ TO 0 FT. DEPTH BENTONITE SEAL 1

FLUSH BOX EMCO Wheaton STICK-UP SURFACE SEAL cement LOCKING CAP

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	5	sandy silt black clayey					
5	10	saturated runny black sand silt					
10	15	silty clay sandy silt saturated grey					
		very fine silty clay					
		well at 12'					

SAMPLE IDENTIFICATION

- SLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

RECEIVED NOV - F 1990

Well Permit No. 26 -22679
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENG
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-20S
County BERGEN Municipality LODI BORO Lot No. 10A-1-2A Block No. 81A-161
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/9/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	16	4"	SCH. 40 PVC
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	16	21	4"	.010 PVC
Tail Piece		N/A		
Gravel Pack	15	21		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
)3) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation
PROJECT NAME
LOCATION Lodi, NJ

BORING RW 7-9
SHEET NO. 1 OF 1

EQUIPMENT Speedstar
RIG NO.
ILLING METHOD Hollow stem auger
PROJECT NO. 1342
ILLER R.Head HELPER D.O'dell, P.Classen INSPECTOR D.Fiorentino
DATE STARTED 2/12/91
RMIT NUMBER
WATER TABLE
DATE COMPLETED 2/12/91
MMENTS

MONITORING WELL CONSTRUCTION
SCREEN 4 IN. DIA. FROM 17 TO 12 FT. DEPTH
GRAVEL FILTER 5
RISER 4 IN. DIA. FROM 12 TO 0 FT. DEPTH
BENTONITE SEAL 1
FLUSH BOX EMCO Wheaton STICK-UP
SURFACE SEAL cement
LOCKING CAP 4" & lock

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	5	asphalt, gravel black sand, gravel					
	7	concrette					
5	10	black satuated sandy silt, strong odor					
10	17	fine grey silty clay, satuated					

SAMPLE IDENTIFICATION
- SLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22107
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address ~~205 MAIN STREET~~
City ~~LODI~~ State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW 7-10
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 2/12/92
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 18 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6 1/2	4	
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	6 1/2	11 1/2	4	
Tail Piece		N/A		
Gravel Pack	5 1/2	11 1/2		#2 SAND
Annular Seal/Grout	2 1/2	4 1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEEDSTAR
Name of Driller RICHARD HEAD
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. #1376
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Richard H. Head Jr. Dan Fiorentino Date 6/3/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

BORING LOG

Coord 26:03:558

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING F5S (MW-2
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER John Wolford HELPER Pete Classen INSPECTOR
PERMIT NUMBER 26-22105 WATER TABLE 6'
COMMENTS

PROJECT NO. 1342
DATE STARTED 9/20/90
DATE COMPLETED 9/20/90

MONITORING WELL CONSTRUCTION
SCREEN 10' S.S. 4" DIA. FROM 3 TO 13 FT. DEPTH
RISER 2' S.S. 4" DIA. FROM 1 TO 3 FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
GRAVEL FILTER
BENTONITE SEAL
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	4	Black Soil and Gravel - Pieces of Wood					
4	6	Red, Black, and Brown Sandy Silt and Large Gravel - Moist					
6	8	Red Sandy Silt with Large Gravel - Saturated					
8	10	Rocks - Little Recovery					
10	12	Red and Brown Sand and Gravel Very Fine Silt/Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22106
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address ~~205 MAIN STREET~~
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW 7-9
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address

TYPE OF WELL (as per Well Permit Categories)
Date well completed 2/12/91
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	12	4	
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	12	17	4	
Tail Piece		N/A		
Gravel Pack	11	17		#2 SAND
Annular Seal/Grout	9	11		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig SPEEDSTAR
Name of Driller Richard Head # 1376
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. # 1376
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Richard Head / Dan Fiorentino Date 6/3/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. @6:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F6S (MW-2

SHEET NO. 1 OF 1

R[illegible]G EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 9/20/90

PERMIT NUMBER 26-22104

WATER TABLE 6'

DATE COMPLETED 9/20/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4 IN. DIA. FROM 5 TO 10 FT. DEPTH

RISER 4' S.S. 4 IN. DIA. FROM 1 TO 5 FT. DEPTH

FLUSH BOX STICK-UP Emco Wheaton

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Concrete					
0	6	Fill (From Previous Drilling) Strong Odor					
6	8	Coarse Sand and Gravel - Some Very Fine Silt (Brown) - Slight Odor - Saturated					
8	10	Same as Above - Native Very Fine Silt/Clay Grey/Brown Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22105
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address ~~205 MAIN STREET~~
City ~~LODI~~ State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-25
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 9/20/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	3	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	
Screen (Note slot size)	3	13	4"	.010 S.S.
Tail Piece	—	N/A	—	
Gravel Pack	2	13		~~#2~~ SAND
Annular Seal/Grout	0	1		~~BENTONITE~~ PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig ~~BEED~~ STAK
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

3) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F10S (MW-28

SHEET NO. 1 OF 1

EQUIPMENT Speed Star

RIG NO. 214

LLING METHOD Hollow Stem Auger

PROJECT NO. 1342

LLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 9/20/90

IMIT NUMBER 26-22103

WATER TABLE 6'

DATE COMPLETED 9/20/90

MMENTS

MONITORING WELL CONSTRUCTION

SCREEN 10' S.S. 4" IN. DIA. FROM 4 TO 14 FT. DEPTH

RISER 3' S.S. 4" IN. DIA. FROM 1 TO 4 FT. DEPTH

FLUSH BOX STICK-UP Emco Wheaton

GRAVEL FILTER

BENTONITE SEAL

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel					
2	4	Dark Brown Silty Sand with Gravel (Round) Pieces of Red Sandstone					
4	6	Dark Brown Silty Sand - Moist					
6	8	Fine Grained, Light Brown Sand Saturated					
8	10	Grey, Saturated, Fine Sand Coarse Silt					
10	12	Reddish Brown Coarse Sand and Gravel - Fine Silt/Clay					
12	14	Grey Brown Fine Silt/Clay Saturated - Slight DNAPL Odor					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

38 M

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22104
Atlas Sheet Coordinates 26 : 03 : 558

IER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
ess ~~205 MAIN STREET~~ State NJ Zip Code 07644
~~LODI~~

LL LOCATION - If not the same as owner please give address. Owner's Well No. MW-27
unty BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
dress SAME

Date well completed 9/20/90
PE OF WELL (as per Well Permit Categories) MONITORING Case I.D. #
egulatory Program Requiring Well
ONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp. Tele. # (203) 647-9169

VELL CONSTRUCTION

otal depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	5	4"	Sch. 40 S.S
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	5	10	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	4	10		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

D-900

Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:55

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING F2S (MW-
SHEET NO. 1 OF 1

[redacted] EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
DRILLER John Wolford HELPER Pete Classen INSPECTOR
DATE STARTED 9/20/90
PERMIT NUMBER 26-22101
WATER TABLE 6'
DATE COMPLETED 9/20/90
COMMENTS

MONITORING WELL CONSTRUCTION
SCREEN 10' S.S. 4" IN. DIA. FROM 4 TO 14 FT. DEPTH
RISER 3' S.S. 4" IN. DIA. FROM 1 TO 4 FT. DEPTH
FLUSH BOX STICK-UP Emco Wheaton
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	4	No Recovery					
4	6	Black Silty Soil, Coal, Ash Fill					
[redacted]	8	Light Brown Sand - Saturated - To Brown Silty Sand with Roots Diesel or Fuel Oil Odor					
8	10	Grey Brown Silty Sand, Some Gravel to Coarser Sand ;with Large Pieces of Red S.S.					
10	12	Same as Above - Sand is Slightly Finer - No Odor					
12	14	Brown Grey, Very Fine Silt/Clay Saturated					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- [redacted] THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

6/89

Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22103

Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~

Address 205 MAIN STREET

City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-28

County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A

Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 9/20/90

Regulatory Program Requiring Well MONITORING Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.

Well finished to 14 ft.

Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	4	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	4	14	4"	.010 S.S
Tail Piece	—	N/A	—	—
Gravel Pack	3	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.

Water level was measured using N/A

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Method Hollow STEM AUGER

Drilling Fluid — Type of Rig SPEED STAR

Name of Driller DAN FIORENTINO

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) (C) B A

N.J. License No. 1175

Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Could: #26:05:358

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING Fls (MW-3
SHEET NO. 1 OF 1

[redacted]NG EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
DRILLER Rich Head HELPER Pete Classen INSPECTOR
DATE STARTED 2/12/91
PERMIT NUMBER 26-22101
WATER TABLE 6'
DATE COMPLETED 2/12/91
COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4 IN. DIA. FROM 6 TO 11 FT. DEPTH
GRAVEL FILTER 4 Bags
RISER 5' PVC 4 IN. DIA. FROM 1 TO 6 FT. DEPTH
BENTONITE SEAL 1 Pail
FLUSH BOX STICK-UP Emco Wheaton
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Silty Sand and Gravel, Dark Brown					
1	5	Silty Sand, Light Brown - Moist					
5	7	Sandy, Silt, Dark Brown to Black Saturated					
7	8	Silt, Fine, Black/Brown					
8	9	Silty Clay					
9	11	Silty Clay, Fine, Grey, Saturated					

SAMPLE IDENTIFICATION
- [redacted] SPLIT SPOON
- [redacted] THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22102
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 9/20/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	4	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	4	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	3	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22101
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address ~~205 MAIN STREET~~
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-31
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 2/12/91
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
☐ shed above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	6	4"	SCH. 40 PVC
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	6	11	4"	.010 PVC
Tail Piece	—	N/A	—	—
Gravel Pack	5	11		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method Hollow STEM AUGER
Drilling Fluid ___ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

CLIENT: Heritage Remediation
PROJECT NAME: Fine Organics
LOCATION: 205 Main Street Lodi, NJ

BORING: F4S
SHEET NO. 1 OF 1

DRILLING EQUIPMENT: Speed Star
RIG NO.: 214
DRILLING METHOD: Hollow Stem Auger
DRILLER: Rich Head
HELPER: Pete Classen
INSPECTOR:
PERMIT NUMBER: 26-22100
WATER TABLE: 6'
COMMENTS:

PROJECT NO.: 1342
DATE STARTED: 2/12/91
DATE COMPLETED: 2/12/91

MONITORING WELL CONSTRUCTION
SCREEN: 5' PVC 4" IN. DIA. FROM 6 TO 11 FT. DEPTH
RISER: 5' PVC 4" IN. DIA. FROM 1 TO 6 FT. DEPTH
FLUSH BOX: Emco Wheaton
STICK-UP:
GRAVEL FILTER: 4 Bags
BENTONITE SEAL: 1 Pail
SURFACE SEAL: Locking Cap
LOCKING CAP: 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Sand and Gravel					
1	3	Coarser Gravel					
3	6	Sand, Medium Brown					
6	7	Sandy, Silt, Reddish Brown - Saturated					
7	9	Silty, Reddish Brown - Saturated					
9	11	Silty Clay, Very Fine, Saturated					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F3S

SHEET NO. 1 OF 1

G EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

ERMIT NUMBER 26-22099 WATER TABLE 6'

DATE STARTED 2/12/91

DATE COMPLETED 2/12/91

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' PVC 4" IN. DIA. FROM 6 TO 11 FT. DEPTH

RISER 5' PVC 4" IN. DIA. FROM 1 TO 6 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Silty Sand with Some Gravel - Brown					
2	4	Silty Sand, Light Brown - Large Gravel at 3.5', with Silty Sand Grades to Reddish at 4'					
4	6	Large Cobbles at 4.5'; Silty Sand and Gravel, Reddish becomes Clay sand - saturated with large gravel					
6	7	Sandy Silt - Saturated with some Gravel					
7	8	Silty Clay					
8	11	Silty Clay, Grey, Saturated					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22100
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-30 (F45)
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 2/12/91
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (~~203~~) 647-9169

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ~~—~~ ft.
Was steel protective casing installed? ☐ Yes ☒ ~~No~~

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	6	4"	sch-40 PVC
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	6	11	4"	.010 PVC
Tail Piece	—	N/A	—	—
Gravel Pack	5	11		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity ~~—~~ gpm
Pump type: ~~—~~
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ~~—~~ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ ~~Yes~~ ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Cont. # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING MW-9
SHEET NO. 1 OF 1

G EQUIPMENT Speed Star
RIG NO. 214
RILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
RILLER John Wolford HELPER Pete Classen INSPECTOR
DATE STARTED 9/19/90
ERMIT NUMBER 26-22098
WATER TABLE 6'
DATE COMPLETED 9/19/90
OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 15 TO 20 FT. DEPTH
GRAVEL FILTER 4 Bags
RISER 14' S.S. 4 IN. DIA. FROM 1 TO 15 FT. DEPTH
BENTONITE SEAL 1 Pail
FLUSH BOX Emco Wheaton STICK-UP
SURFACE SEAL Locking Cap.
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel					
1	3	Black Sandy Soil					
	5	Rocks					
5	10	Black Sandy Soil - Moist - Some Pebbles					
10	14	Black Silt, Sand and Gravel Saturated					
14	16	Gravel					
16	20	Grey Coarse Sand/Gravel - DNAPL Odor Very Fine Silt/Clay at 18'					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22099
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION INC.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-29 (F35)
County BERGEN Municipality LODI BORO Lot No. ~~1,A,2 A~~ Block No. ~~81 A~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 2/12/91
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	6	4"	SCH. 40 PVC
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	6	11	4"	.010 PVC
Tail Piece	—	N/A	—	—
Gravel Pack	5	11		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 112.5
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

03) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW-8

SHEET NO. 1 OF 1

G EQUIPMENT Speed Star

RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 9/19/90

ERMIT NUMBER 26-22097

WATER TABLE 6'

DATE COMPLETED 9/19/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 10 TO 15 FT. DEPTH

RISER 9' S.S. 4" IN. DIA. FROM 1 TO 10 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel					
2	6	Black Sand, Silt and Gravel - Moist					
	10	Rocks					
10	11	Black Sand, Gravel Silt					
11	12	Fine Sand and Silt, Saturated					
		Lighter in Color					
12	13	Cobbles					
13	15	Very Fine Grey Silt - Wet - No Odor					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR 138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22098
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 9/19/90
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	15	4"	sch. 40 S.S
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	15	20	4"	.010 S.S
Tail Piece		N/A		
Gravel Pack	15	20		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ___ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING MW-7
SHEET NO. 1 OF 1

NG EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER John Wolford
HELPER Pete Classen
INSPECTOR
PERMIT NUMBER 26-22096
WATER TABLE 6'
PROJECT NO. 1342
DATE STARTED 9/20/90
DATE COMPLETED 9/20/90
COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 10 TO 15 FT. DEPTH
RISER 9' S.S. 4" IN. DIA. FROM 1 TO 10 FT. DEPTH
FLUSH BOX Emco Wheaton
STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel					
2	5	Black Silty, Sandy Soil (Fill)					
	12	Rocks - Few Cuttings					
12	14	Dark Brown Sandy Silt to Red Sandy Silt with Gravel - Some Green - Saturated - Odor- Fine Silt/Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-136 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22097
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 9/19/90
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	10	4"	SCH-40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	10	15	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	9	15		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) (C) B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22096
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENG.~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7 (RW7-8)
County BERGEN Municipality LODI BORO Lot No. 1,A,2-A Block No. 81-A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/20/90
Regulatory Program Requiring Well Case I.D. # 86009
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
Well finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	10	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	10	15	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	9	15		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using INTERFACE
Well was developed for N/A hours at N/A gpm
Method of development BAILER
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid ——— Type of Rig GUS PECH
Name of Driller DANIEL FIORENTINO
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord. # 20:05:35S

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING MW-6
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head
HELPER
INSPECTOR Pete Classen
PERMIT NUMBER 26-21877
WATER TABLE 6'
COMMENTS

PROJECT NO. 1342
DATE STARTED 8/27/90
DATE COMPLETED 8/27/90

MONITORING WELL CONSTRUCTION
SCREEN 6' S.S. 4" IN. DIA. FROM 13 TO 19 FT. DEPTH
RISER 12' S.S. 4" IN. DIA. FROM 1 TO 13 FT. DEPTH
FLUSH BOX STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL
LOCKING CAP

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Gravel					
3	5	Black Silty Sand and Gravel - Damp					
5	14	Black Sandy Silt and Gravel - Wet					
14	17	Gravel - Black Sand and Gravel					
		DNAPL in Spoon - Brown Sand & Gravel					
17	19	Grey Fine Silt					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT: Heritage Remediation
PROJECT NAME: Fine Organics
LOCATION: 205 Main Street Lodi, NJ

BORING: MW-5
SHEET NO. 1 OF 1

DRILLING EQUIPMENT: Speed Star
RIG NO.: 214
DRILLING METHOD: Hollow Stem Auger
DRILLER: Rich Head
HELPER: Pete Classen
INSPECTOR:
PERMIT NUMBER: 26-21876
WATER TABLE: 6'
PROJECT NO.: 1342
DATE STARTED: 8/27/90
DATE COMPLETED: 8/27/90
COMMENTS:

MONITORING WELL CONSTRUCTION
SCREEN: 6' S.S. 4" DIA. FROM 11.5 TO 17.5 FT. DEPTH
RISER: 10.5' S.S. 4" DIA. FROM 1 TO 11.5 FT. DEPTH
FLUSH BOX: Emco Wheaton
STICK-UP:
GRAVEL FILTER: 4 Bags
BENTONITE SEAL: 1 PAIL
SURFACE SEAL: Locking Cap
LOCKING CAP: 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Gravel					
3	7	Black Silty Sand					
7	10	Black Silty Sand with Gravel Saturated - Strong Odor					
10	12	Black Silty Sand with Gravel Black Sand - Saturated - Gravel and Wood					
12	15.5	Sandy Silt with Gravel					
15.5	17.5	Grey Fine Silt - Trace of Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21877
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 8/22/90
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 19 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	13	4"	sch. 40 S.S
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	13	19	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	12	19		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method Hollow STEM AUGER
Drilling Fluid ——— Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING MW - 4

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/27/90

PERMIT NUMBER 26-21875 WATER TABLE 6'

DATE COMPLETED 8/27/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 6' S.S. 4" IN. DIA. FROM 11.5 TO 17.5 FT. DEPTH

RISER 10.5' S.S.4" IN. DIA. FROM 1 TO 11.5 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP SURFACE SEAL Locking Cap. LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Gravel					
3	7	Brown Silty Sand					
	10	Brown Silty Sand - Saturated					
10	12	Rocks					
12	15.5	Black Sandy Silt - Strong Odor Saturated					
15.5	17.5	Grey Fine Silt					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21876
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 8/27/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 17 1/2 ft.
Well finished to 17 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	11 1/2	4"	SCH. 40 S.S
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	11 1/2	17 1/2	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	10 1/2	17 1/2		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method Hollow STEM AUGER
Drilling Fluid ___ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING MW-3
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
DRILLER Rich Head
HELPER Pete Classen
INSPECTOR
DATE STARTED 8/27/90
PERMIT NUMBER 26-21874
WATER TABLE 6'
DATE COMPLETED 8/27/90
COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 12 TO 18 FT. DEPTH
RISER 11' S.S. 4" IN. DIA. FROM 1 TO 12 FT. DEPTH
FLUSH BOX STICK-UP Emco Wheaton
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Gravel					
3	6	Black Silty Sand and Gravel					
	10	Black, Sandy Silt and Gravel - Saturated					
10	16	Rocks, Black Silty Sand and Gravel - Traces of Oil-Like Substance					
16	18	Grey Clay Silt					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21875
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/27/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 17 1/2 ft.
Well finished to 17 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	11 1/2	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	11 1/2	17 1/2	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	10 1/2	17 1/2		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Hollow STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21874
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/27/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	12	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	12	18	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	11	18		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling — ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-20

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/24/90

PERMIT NUMBER 26-21873

WATER TABLE 6'

DATE COMPLETED 8/24/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX STICK-UP Emco Wheaton

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	3	Sand and Gravel Fill					
3	5	Brown Sandy Silt					
5	7	Brown Sandy Silt with Gravel					
7	12	Brown Sandy Silt, Coarser- Gravel					
12	14	Red Sandy Silt - Saturated Clay with Gravel					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-21

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/24/90

PERMIT NUMBER 26-21872

WATER TABLE 6'

DATE COMPLETED 8/24/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX STICK-UP Emco Wheaton

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	3	Sand and Gravel Fill					
3	5	Brown Sandy Silt					
5	8	Brown Sandy Silt with Gravel					
8	11	Brown Sandy Silt - Saturated					
11	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21873
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. FCW-20
County BERGEN Municipality LODI BORO Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/24/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	Sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Cocid # 26:03:558

CLIENT: Heritage Remediation
PROJECT NAME: Fine Organics
LOCATION: 205 Main Street Lodi, NJ

BORING: PCW-18
SHEET NO. 1 OF 1

DRILLING EQUIPMENT: Speed Star
RIG NO.: 214
DRILLING METHOD: Hollow Stem Auger
DRILLER: John Wolford
HELPER: Pete Classen
INSPECTOR:
PROJECT NO.: 1342
DATE STARTED: 8/24/90
PERMIT NUMBER: 26-21871
WATER TABLE: 6'
DATE COMPLETED: 8/24/90
COMMENTS:

MONITORING WELL CONSTRUCTION

SCREEN: 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH
RISER: 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH
FLUSH BOX: Emco Wheaton
STICK-UP:
GRAVEL FILTER: 4 Bags
BENTONITE SEAL: 1 Pail
SURFACE SEAL: 4" Locking Cap
LOCKING CAP: 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Gravel Fill					
3	12	Brown Sandy Silt					
12	14	Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21872
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW - 21
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A716
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 8/24/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Hollow STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11975
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - DEP Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-1

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

PERMIT NUMBER 26-21870

WATER TABLE 6'

DATE COMPLETED 8/23/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	7	Reddish Brown, Sandy Silt					
7	13	Reddish Brown Sandy Silt, Saturated					
13	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21871
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ~~(B-76)~~ PCW-18
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/24/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method Hollow STEM AUGER
Drilling Fluid ——— Type of Rig SPEEDSTAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-22
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER John Wolford
HELPER Pete Classen
INSPECTOR
PROJECT NO. 1342
DATE STARTED 8/24/90
PERMIT NUMBER 26-21869
WATER TABLE 6'
DATE COMPLETED 8/24/90
COMMENTS

MONITORING WELL CONSTRUCTION
SCREEN 5' S.S. 4'IN. DIA. FROM 9 TO 14 FT. DEPTH
RISER 8' S.S. 4'IN. DIA. FROM 1 TO 9 FT. DEPTH
FLUSH BOX Emco Wheaton
STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	2	Sand and Gravel Fill					
2	5	Black Sandy Silt					
5	7	Black Silty Sand with Cobbles					
7	12	Brown Sandy Silt - Sand is Coarser Some Gravel - Saturated					
	12	Cobbles					
12	14	= Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-8	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21870
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-17
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method Hollow STEM AUGER
Drilling Fluid _____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Could # 20.05.556

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi NJ

BORING PCW-14
SHEET NO. 1 OF 1

[redacted]ING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head
HELPER
INSPECTOR Pete Classen
PROJECT NO. 1342
DATE STARTED 8/23/90
PERMIT NUMBER 26-21868
WATER TABLE 6'
DATE COMPLETED 8/23/90
COMMENTS

MONITORING WELL CONSTRUCTION
SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH
GRAVEL FILTER 4 Bags
RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH
BENTONITE SEAL 1 Pail
FLUSH BOX STICK-UP Emco Wheaton
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	6	Black Silty Sand					
[redacted]	10	Black Sandy Silt - Saturated					
10	14	Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- [redacted] THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21869
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-22
County BERGEN Municipality LODI BORO Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 8/24/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Hollow STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-11
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER John Wolford HELPER Pete Classen INSPECTOR
PERMIT NUMBER 26-21867 WATER TABLE 6'
COMMENTS

PROJECT NO. 1342
DATE STARTED 8/24/90
DATE COMPLETED 8/24/90

MONITORING WELL CONSTRUCTION
SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH
RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
SURFACE SEAL
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
LOCKING CAP ~~Locking Cap~~ 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel Fill					
2	6	Black Sandy Silt					
	12	Water					
12	14	Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DW -138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21868
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-14
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203)647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10½ in.
Bottom 10½ in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method N/A HOLLOW STEM AUGER
Drilling Fluid N/A Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) (C) B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-12

SHEET NO. 1 OF 1

G EQUIPMENT speed Star

RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

ERMIT NUMBER 26-21866

WATER TABLE 6'

DATE COMPLETED 8/23/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel Fill					
2	6	Dark Brown Sandy Silt, Strong Odors					
	8	Brown Sandy Silt - Saturated Strong Odor					
8	13	Brown Sandy Silt - Saturated - Strong Odors - Cobbles - Wood Pieces					
13	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21867
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. CW-11
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 8/24/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Hollow STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Coord. # 26:03:558

TES **TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION**

:03) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-10

SHEET NO. 1 OF 1

G EQUIPMENT Speed Star RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

ERMIT NUMBER 26-21865 WATER TABLE 6'

DATE COMPLETED 8/23/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Aspahlt					
0	3	Black Sand and Gravel Fill					
3	8	Fine Silt with Sand					
	10	Sandy Silt - Saturated - Strong Odors					
10	13	Sandy Silt - Saturated - Strong Odors Cobbles					
13	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21866
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. CW-12
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Hollow STEM AUGER
Drilling Fluid _____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

:03) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME ~~Fine Organics~~

LOCATION ~~205 Main Street Lodi, NJ~~

BORING OCW-9

SHEET NO. 1 OF 1

G EQUIPMENT Speed Star

RIG NO. 214

RILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

RILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

ERMIT NUMBER 26-21864

WATER TABLE 6'

DATE COMPLETED 8/23/90

OMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Black Sand and Gravel Fill					
3	5	Few Cuttings					
5	12	Sandy Silty, Some Pebbles, Clay Tile					
12	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21865
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address ~~205 MAIN STREET~~
City ~~LODI~~ State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. CW-10
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 8/23/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was *permanent pumping equipment* installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ____ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

033) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-7

SHEET NO. 1 OF 1

EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

PERMIT NUMBER 26-21863

WATER TABLE 6'

DATE COMPLETED 8/23/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Black Sand and Gravel Fill					
3	5	Dark Brown Clayey Silt, Some Sand					
	13	Fine, Sandy Silt, Dark Brown					
13	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWK-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21864
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. CW-9
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig Speedstar
Name of Driller Dan Fiorentino
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company Dan Fiorentino

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING RW 7-

SHEET NO. 1 OF 1

[redacted]ING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER John Wolford HELPER Pete Classen INSPECTOR

DATE STARTED 9/19/90

PERMIT NUMBER 26-21862

WATER TABLE 6'

DATE COMPLETED 9/19/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 10 TO 15 FT. DEPTH

RISER 9' S.S. 4" IN. DIA. FROM 1 TO 10 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	2	Gravel					
2	5	Black Sand, Silt and Gravel					
[redacted]5	6	Rocks					
6	11	Black Sand, Silt and Gravel - Moist to Wet - Slight Odor					
11	13	Grey/Tan very Fine Silt/Clay Saturated					
13	15	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- [redacted] THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21863
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address ~~205 MAIN STREET~~
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. CW-7
County BERGEN Municipality LODI BORO Lot No. ~~10-A, 1-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 8/23/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ___ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-4
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head HELPER Pete Classen INSPECTOR
PROJECT NO. 1342
DATE STARTED 9/28/90
PERMIT NUMBER 26-21622
WATER TABLE 6'
DATE COMPLETED 9/28/90
COMMENTS

MONITORING WELL CONSTRUCTION
SCREEN 5' S.S. 4" IN. DIA. FROM 7 TO 12 FT. DEPTH
RISER 6' S.S. 4" IN. DIA. FROM 1 TO 7 FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Grass					
0	1	Black Topsoil					
1	6	Brown Fill Sand and Gravel					
6	8	Water - Strong Odor (Pesticides?)					
8	10.5	Gravel or Cobbles					
10.5	11	Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21862
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW 7-6
County BERGEN Municipality LODI BORO Lot No. 10-A, 1-A Block No. 81-A/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) recovery Date well completed 9/19/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	10	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)		N/A		
Screen (Note slot size)	10	15	4"	.010 S.S.
Tail Piece		N/A		
Gravel Pack	9	15		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig Speed Star
Name of Driller Dan Fiorentino
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company Dan Fiorentino

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-2

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO.

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER Rich Head HELPER Pete Classen INSPECTOR

DATE STARTED 9/28/90

PERMIT NUMBER 26-21621

WATER TABLE 6'

DATE COMPLETED 9/28/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4 IN. DIA. FROM 7 TO 12 FT. DEPTH

RISER 6' S.S. 4 IN. DIA. FROM 1 TO 7 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Grass					
0	1	Black Topsoil					
1	3	Brown Silty Sand With Large Gravel					
3	5	Water - Diesel or Fuel Oil Odor					
5	8	Cuttings					
8	12	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21622
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW 4
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1 A, 2 A~~ Block No. ~~81 A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/28/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade
☒ ~~flush~~ mounted
If finished above grade, casing height (stick up) above land surface ~~—~~ ft.
Was steel protective casing installed?
☐ Yes ☒ ~~No~~

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	7	4"	Sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	
Screen (Note slot size)	7	12	4"	.010 S.S.
Tail Piece	—	N/A	—	
Gravel Pack	6	12		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity ~~—~~ gpm
Pump type: ~~—~~
Drilling Method Hollow STEM AUGER
Drilling Fluid ~~—~~ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ ~~Yes~~ ☐ No
Level of Protection used on site (circle one) None ~~D~~ C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-6
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
DRILLER Rich Head HELPER Pete Classen INSPECTOR
PERMIT NUMBER 26-21620
WATER TABLE 6'
COMMENTS

PROJECT NO. 1342
DATE STARTED 9/20/90
DATE COMPLETED 9/20/90

MONITORING WELL CONSTRUCTION
SCREEN 5' S.S. 4" IN. DIA. FROM 4 TO 9 FT. DEPTH
RISER 3' S.S. 4" IN. DIA. FROM 1 TO 4 FT. DEPTH
FLUSH BOX Emco Wheaton STICK-UP
GRAVEL FILTER 4 Bags
BENTONITE SEAL 1 Pail
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	4	Light Brown Sand					
4	8	Brown/Black Sandy Silt with Pebbles					
		Wet					
	9	Grey Very Fine Silt/Clay					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21621
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-2
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1-A, 2-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) Date well completed 9/28/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade
☒ ~~flush~~ mounted
If finished above grade, casing height (stick up) above land surface ~~—~~ ft.
Was steel protective casing installed? ☐ Yes ☒ ~~No~~

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	7	4"	SCH 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	7	12	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	6	12		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ~~—~~ gpm
Pump type: ~~—~~
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ~~—~~ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-952

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F8S

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/24/90

PERMIT NUMBER 26-21619 WATER TABLE 6'

DATE COMPLETED 8/24/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 1.5 TO 6.5 FT. DEPTH

RISER 1' S.S. 4" IN. DIA. FROM .5 TO 1.5 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Concrete					
0	1	Reddish-Brown Silty Sand and Gravel					
1	4	Grey Silty Sand - Moist					
4	6	Black Silty Sand and Gravel, Poorly Sorted (Wet)					
6	6.5	Black Silty Sand and Gravel, Poorly Sorted - With Traces of Wood Fragments - Clay -Some Silt					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21620
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-6
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1-A,2-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/20/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	4	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	4	9	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	3	9		#2 SAND
Annular Seal/Grout	0	1		BENTOUITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method HOLLOW STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F9D

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head

HELPER Pete Classen

INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/16/90

PERMIT NUMBER 26-21618

WATER TABLE 6'

DATE COMPLETED 8/17/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 5.75 TO 10.75 FT. DEPTH

RISER 4' S.S. 4" IN. DIA. FROM 1.5 TO 5.75 FT. DEPTH

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Concrete					
0	1	Two Layers of Concrete					
1	3	Brown Sand (Fill)					
3	6	No Cuttings - Rubble from 3'-6' Extremely Hard to Drill Through					
6	10.75	Red-Brown Sandy Silt - Saturated Odor - Very Little Cuttings at Surface					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21619
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. F8S
County BERGEN Municipality LODI BORO Lot No. ~~1-A,2-A~~ Block No. ~~81-A~~/16
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/24/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 6 1/2 ft.
Well finished to 6 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1/2	1 1/2	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	1 1/2	6 1/2	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	1	6 1/2		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling ——— ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ——— Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-1

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO.

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 9/28/90

PERMIT NUMBER 26-21617 WATER TABLE 6'

DATE COMPLETED 9/28/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 7 TO 12 FT. DEPTH

RISER 5.5' S.S. 4" IN. DIA. FROM 1.5 TO 7 FT. DEPTH

GRAVEL FILTER 4 BAGS

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Grass					
0	1	Topsoil					
1	5	Tan-Brown, Silty, Sand, Some Pebbles Moist					
5	7	Large Gravel					
7	10	Sand and Gravel - Cobbles - Strong Odor in Water					
10	12	Very Fine Silt/Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21618
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner ~~HERITAGE REMEDIATION ENGI~~
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. F9D
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1-A,2-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/17/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 10 3/4 ft.
Well finished to 10 3/4 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1 1/2	5 3/4	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	
Screen (Note slot size)	5 3/4	10 3/4	4"	.010 S.S.
Tail Piece	—	N/A	—	
Gravel Pack	4 3/4	10 3/4		#2 SAND
Annular Seal/Grout	0	1 1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING F7S

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/16/90

PERMIT NUMBER 26-21616 WATER TABLE 6'

DATE COMPLETED 8/16/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 7.5' S.S. 4" IN. DIA. FROM 1.5 TO 9 FT. DEPTH

FLUSH BOX ~~Emco Wheaton~~ STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL ~~4" Locking Cap~~

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	~~Surface - Asphalt~~					
0	1	Concrete					
1	2	~~Brown, Fine Sand, Odor, Some Gravel~~					
	7	~~Reddish Brown Fine Sand, Odor (Fill)~~					
7	10	Reddish Brown, Sandy Silt - Fine Grained Silt With Some Sand Size Grains Poorly Sorted - Saturated- Strong Odor					
10	12	Same as Above - Large Cobbles and Pieces of Wood (Cobbles are Slightly Rounded Red Silt Stone, Gneiss, and an Aggragate of Siltstone, Quartz w/Quartz Veins					
12	14	Grey, Brown Fine Silt with Some Sand Size Grains - Strong Odor - Runny					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21617
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-1
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1-A, 2-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/28/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES Corp Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1 1/2	7	4"	sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	7	12	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	6	12		#2 SAND
Annular Seal/Grout	0	1 1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling — ft.
Water level was measured using 6
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1125
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Permit # 26-21224

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-19

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER Rich Head HELPER Pete Classen INSPECTOR

DATE STARTED 8/24/90

PERMIT NUMBER 26-21224 WATER TABLE 6'

DATE COMPLETED 8/24/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	3	Black Gravel					
3	6	Brown-Black, Sandy, Fine Silt, Poorly Sorted					
	13	Brown-Black, Sandy, Fine Silt Poorly Sorted - Saturated					
13	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21616
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner HERITAGE REMEDIATION ENGI
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. F7S
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~1-A, 2-A~~ Block No. ~~81-A/16~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 8/16/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable): TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1'/2	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1'/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method Hollow Stem Auger
Drilling Fluid ——— Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-16

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO.

DRILLING METHOD Hollow Stem Auger

DRILLER Rich Head HELPER Pete Classen INSPECTOR

PROJECT NO. 1342

DATE STARTED 8/23/90

PERMIT NUMBER 26-21223 WATER TABLE 6'

DATE COMPLETED 8/23/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	7	Brown-Black Sandy Silt					
7	9	Brown-Black Sandy Silt - Saturated					
9	12	Brown-Black Sandy Silt With Cobbles					
12	14	Clay					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 21224
Atlas Sheet Coordinates 26 :03 :558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-19
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10A, 1A, 2~~ Block No. ~~161A~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/24/90
Regulatory Program Requiring Well ~~AT OBS WELL~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SIEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/12/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES

TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

Coord # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO. 214

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER Rich Head HELPER Pete Classen INSPECTOR

DATE STARTED 8/23/90

PERMIT NUMBER 26-21222

WATER TABLE 6'

DATE COMPLETED 8/23/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 9 TO 14 FT. DEPTH

GRAVEL FILTER 4 Bags

RISER 8' S.S. 4" IN. DIA. FROM 1 TO 9 FT. DEPTH

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	1	Gravel Fill					
1	7	Brown Black Sandy Silt - Strong Odor					
	12	Brown Black Sandy Silt - Strong Odor Cobbles					
12	14	Clay and Some Cobbles					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21223
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-16
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~10A, 1A,~~ 2 Block No. ~~161A~~
Address SAME

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 8/23/90
Regulatory Program Requiring Well AT ORS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TES CORP Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ___ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method Hollow STEM AUGER
Drilling Fluid ___ Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Coord. # 26:03:558

CLIENT Heritage Remediation

PROJECT NAME Fine Organics

LOCATION 205 Main Street Lodi, NJ

BORING PCW-3

SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star

RIG NO.

DRILLING METHOD Hollow Stem Auger

PROJECT NO. 1342

DRILLER Rich Head HELPER Pete Classen INSPECTOR

DATE STARTED 7/24/90

PERMIT NUMBER 26-21221

WATER TABLE 6'

DATE COMPLETED 7/24/9

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' S.S. 4" IN. DIA. FROM 6.5 TO 11.5 FT. DEPTH

GRAVEL FILTER 4 Bags

RISER 6' S.S. 4" IN. DIA. FROM .5 TO 6.5 FT. DEPTH

BENTONITE SEAL 1 Pail

FLUSH BOX Emco Wheaton STICK-UP

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
	0	Surface - Asphalt					
0	6	Gravel - Reddish Brown Sand - Moist					
6	7	Brown Fine Sand - Some Small Medium Stones					
7	11.5	Coarse Fine Brown Sand - Medium Small Stones - Wet - Grey Green Pumice Type Material					
		Smell at 9'					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 21222
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State ~~NJ~~ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-13 (
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/23/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1	9	4"	Sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	—
Screen (Note slot size)	9	14	4"	.010 S.S.
Tail Piece	—	N/A	—	—
Gravel Pack	8	14		#2 SAND
Annular Seal/Grout	0	1		BENTONITE & PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow Stem Auger
Drilling Fluid — Type of Rig Speed Star
Name of Driller Dan Fiorentino
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

TES
TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION
(203) 647-9169
210 MAIN ST., MANCHESTER, CT 06040

Gold # 20:03:556

CLIENT Heritage Remediation
PROJECT NAME Fine Organics
LOCATION 205 Main Street Lodi, NJ

BORING PCW-8
SHEET NO. 1 OF 1

DRILLING EQUIPMENT Speed Star
RIG NO. 214
DRILLING METHOD Hollow Stem Auger
PROJECT NO. 1342
DRILLER Rich Head HELPER Pete Classen INSPECTOR
DATE STARTED 7/24/90
PERMIT NUMBER 26-21220
WATER TABLE 8'
DATE COMPLETED 7/24/90
COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' 4" S.S. IN. DIA. FROM 9.5 TO 14.5 FT. DEPTH
GRAVEL FILTER 4 Bags
RISER 9' 4" S.S. IN. DIA. FROM .5 TO 9.5 FT. DEPTH
BENTONITE SEAL 1 Pail
FLUSH BOX Emco Wheaton STICK-UP
SURFACE SEAL 4" Locking Cap
LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	2	Fill, Blacktop, Brown Dirt					
2	4	Black Pumice Type Material- Small Pebbles					
4	10	Fine Brown and Black Fill- Wood					
		Wet - Light Clay Mix					
	15	Silty Sand - Brown Reddish Clay Texture					
		Brown Black Color- Some Wood Pieces - Wet					

SAMPLE IDENTIFICATION
- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE
140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50 +	VERY DENSE	16 +	VERY STIFF

PROPORTIONS USED
- TRACE 1-10%
- LITTLE 10-20%
- SOME 20-30%
- AND 30-50%

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 21221
Atlas Sheet Coordinates ~~26 03~~ 558 : :

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State ~~NJ~~ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-3
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/24/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 11 1/2 ft.
Well finished to 11 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	1/2	6 1/2	4"	SCH. 40 S.S.
Outer Casing (Not Protective Casing)	———	N/A	———	———
Screen (Note slot size)	6 1/2	11 1/2	4"	.010 S.S.
Tail Piece	———	N/A	———	———
Gravel Pack	5 1/2	11 1/2		#2 SAND
Annular Seal/Grout	0	1/2		BENTOUITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 6 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ——— gpm
Pump type: ———
Drilling Method Hollow STEM AUGER
Drilling Fluid ——— Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175 DAN FIORENTINO
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-970

Coord # 26:03:558

TES TECHNICAL ENVIRONMENTAL SPECIALISTS CORPORATION

(203) 647-9169 210 MAIN ST., MANCHESTER, CT 06040

CLIENT: Heritage Remediation

PROJECT NAME: Fine Organics

LOCATION: 205 Main Street Lodi, NJ

BORING: PCW-1

SHEET NO. 1 OF 1

DRILLING EQUIPMENT: Speed Star RIG NO. 214

DRILLING METHOD: Hollow Stem Auger

DRILLER: Rich Head HELPER: Pete Classen INSPECTOR:

PROJECT NO. 1342

DATE STARTED 7/24/90

PERMIT NUMBER 26-21219 WATER TABLE 6'

DATE COMPLETED 7/24/90

COMMENTS

MONITORING WELL CONSTRUCTION

SCREEN 5' 4" S.S. IN. DIA. FROM 9.5 TO 14.5 FT. DEPTH

RISER 9" 4" S.S. IN. DIA. FROM .5 TO 9.5 FT. DEPTH

FLUSH BOX Enco Wheaton STICK-UP

GRAVEL FILTER 4 Bags

BENTONITE SEAL 1 Pail

SURFACE SEAL 4" Locking Cap

LOCKING CAP 4"

DEPTH FROM	DEPTH TO	FIELD CLASSIFICATION AND REMARKS	SAMPLES NO.	SAMPLES FROM	SAMPLES TO	SAMPLES BLOW / 6"	WELL EQUIPMENT INSTALLED
0	5	Fill/Blacktop/Processed Stone Silty Sand - Black Soil					
5	6	Wet Silty Sand - Clay - Black and Grey Wood					
6	7	Sand, Silt, Clay Texture Moist- Some Gravel, Medium-Small					
7	10	Black Sand, Medium Coarse-Fine- Moist					
10	13	Wet Swampy Material- Silty Brown - Odor					
13	14	Wet Clay- Silty Texture- Brown Grey- Black					

SAMPLE IDENTIFICATION

- SPLIT SPOON
- THIN WALL TUBE
- UNDISTURBED PISTON
- OPEN END ROD
- WASH SAMPLE
- GRAB SAMPLE

PENETRATION RESISTANCE

140 lb. wt. FALLING 30" ON 2" O.D. SAMPLER

COHESIONLESS	DENSITY	COHESIVE	CONSISTENCY
0-4	VERY LOOSE	0-2	VERY SOFT
5-9	LOOSE	3-4	SOFT
10-29	MED. DENSE	5-8	M/STIFF
30-49	DENSE	9-15	STIFF
50+	VERY DENSE	16+	VERY STIFF

PROPORTIONS USED

TRACE	1-10%
LITTLE	10-20%
SOME	20-30%
AND	30-50%

6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21220
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner FINE ORGANICS CORP
Address 205 MAIN STREET
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PCW-8
County BERGEN Municipality LODI BORO Lot No. 10A, 1A, 2 Block No. 161A
Address SAME

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/24/90
Regulatory Program Requiring Well AT OBS WELL Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) T.E.S. CORP. Tele. # (203) 647-9169

WELL CONSTRUCTION

Total depth drilled 14 1/2 ft.
Well finished to 14 1/2 ft.
Borehole diameter:
Top 10 1/2 in.
Bottom 10 1/2 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	1/2	9 1/2	4"	Sch. 40 S.S.
Outer Casing (Not Protective Casing)	—	N/A	—	
Screen (Note slot size)	9 1/2	14 1/2	4"	.010 S.S.
Tail Piece	—	N/A	—	
Gravel Pack	8 1/2	14 1/2		#2 SAND
Annular Seal/Grout	0	1/2		BENTONITE + PORTLAND CEMENT
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 8 ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Hollow STEM AUGER
Drilling Fluid — Type of Rig SPEED STAR
Name of Driller DAN FIORENTINO
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1175
Name of Drilling Company DAN FIORENTINO

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

(SEE ATTACHED)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dan Fiorentino Date 4/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 39045
Atlas Sheet Coordinates 26 : 03 : 558

OWNER IDENTIFICATION - Owner MATHE CO.
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. 21 Block No. 153
Address 169 KENNEDY DRIVE

TYPE OF WELL (as per Well Permit Categories) ~~REPLACE MONITOR~~ Date well completed 12 / 7 / 94
Regulatory Program Requiring Well ~~OWNER INVESTIGATION~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EDER ASSOCIATES Tele. # 609-695-1050

WELL CONSTRUCTION

Total depth drilled 12'4" ft.
Well finished to 12'4" ft.
Borehole diameter:
Top 10 5/8 in.
Bottom 10 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2'4"	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'4"	12'4"	4	#20 SLOT PVC
Tail Piece				
Gravel Pack	1'4"	12'4"		#2 GRAVEL
Annular Seal/Grout	0	1'4"		NEAT CEMENT
Method of Grouting	GRAVITY			

Static water level after drilling 5 ft.
Water level was measured using M SCOPE
Well was developed for 1 hours at 2 gpm
Method of development PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method HOLLOW STEM AUGER
Drilling Fluid Type of Rig AUGER TH10
Name of Driller DAVID IANSON
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1532
Name of Drilling Company PLAINFIELD WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 1' SMALL GRAVEL, SAND
1 - 5' SANDY CLAY
5 - 12'4" SAND, CLAY, COBBLES

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature David Ianson Date 12/7/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41789
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 558

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP.
Address PO BOX 1099
City NEWARK State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW16
County BERGEN Municipality LODI BORO Lot No. ~~1A~~ 89 Block No.
Address MAIN ST , & UNION ST.

TYPE OF WELL (as per Well Permit Categories) ~~OWNER INVESTIGATION~~ MONITORING Date well completed ~~93-3-11-1343-48~~ 8 31 95
Regulatory Program Requiring Well Case I.D. #

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyree-Allen Poimann Tele. # 609-239-0030

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 8 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	~.0"	1	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1	8	2	.020 SLOT SCH 40 PVC
Tail Piece	—	—	—	—
Gravel Pack	1	10.5	6	#2 MONIC SAND
Annular Seal/Grout	.5 ~~0~~	1 ~~0~~ 5	6	BENTONITE SLURRY CEMENT GROUT
Method of Grouting	gravity displacement			

Static water level after drilling 4.5 ft.
Water level was measured using ~~OOO~~ M. SCOPE
Well was developed for NA hours at NA gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity NA gpm
Pump type: N.A
Drilling Method hand auger tripod
Drilling Fluid none Type of Rig hand auger
Name of Driller Jerry Mallack
Health and Safety Plan submitted? ☑ Yes ☑ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1167
Name of Drilling Company ADT-MIDATLANTIC INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 10.5 Fine sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Jerry Mallack Date 9-1-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26. 41790
Atlas Sheet Coordinates 26 03 558

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP.
Address PO BOX 1099
City NEWARK State NJ Zip Code 07101

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW17
County BERGEN Municipality LODI BORO Lot No. 1A Block No. 89
Address MAIN ST., & UNION ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING ~~OWNER INVESTIGATION~~ Date well completed 8/31/95
Regulatory Program Requiring Well ~~93-3-11-1343-48~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tyrrel-Allen Poiman Tele. # 609-239-0030

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 9.5 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
Finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1.5	2	sch 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1.5	9.5	2	.020 slot sch 40 PVC
Tail Piece	—	—	—	—
Gravel Pack	1	10.5	6	#2 morie sand
Annular Seal/Grout	.5 / 0	1 / .5	6	Bentonite/Portland cement/Bentonite
Method of Grouting	Gravity displacement			

Static water level after drilling 6 ft.
Water level was measured using M. Scope
Well was developed for NA hours at NA gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method hand auger tripod
Drilling Fluid none Type of Rig hand auger
Name of Driller Jerry Malcuit
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11167
Name of Drilling Company ADT-MIDATLANTIC INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-10.5' - Fine Brown sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Jerry Malcuit Date 9-1-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 54349

Atlas Sheet Coordinates 26 : 03 :55[redacted]

OWNER IDENTIFICATION - Owner MARKTEX CORPORATION
Address 161 COOLIDGE AVE.
City ENGLEWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW19
County BERGEN Municipality LODI BORO Lot No. 1.09 Block No. 67
Address ARNOT STREET

DATE WELL STARTED 6/30/99
DATE WELL COMPLETED 6/30/99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 87647

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Killam Associates Tele. #

WELL CONSTRUCTION

Total depth drilled 22.5' ft.
Well finished to 22.5' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 1.5' ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling Dry ft.

Water level was measured using Tape

Well was developed for _____ hours at Dry gpm

Method of development Dry

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+1.5'	12.5'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	12.5'	22.5'	4"	PVC	Sch. 40 .020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	11'	22.5'		Morie #2	
Grout	0'	11'		Neat Cement Bentonite	282 lbs. 15 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B-80

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. J16992 Date 7/7/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

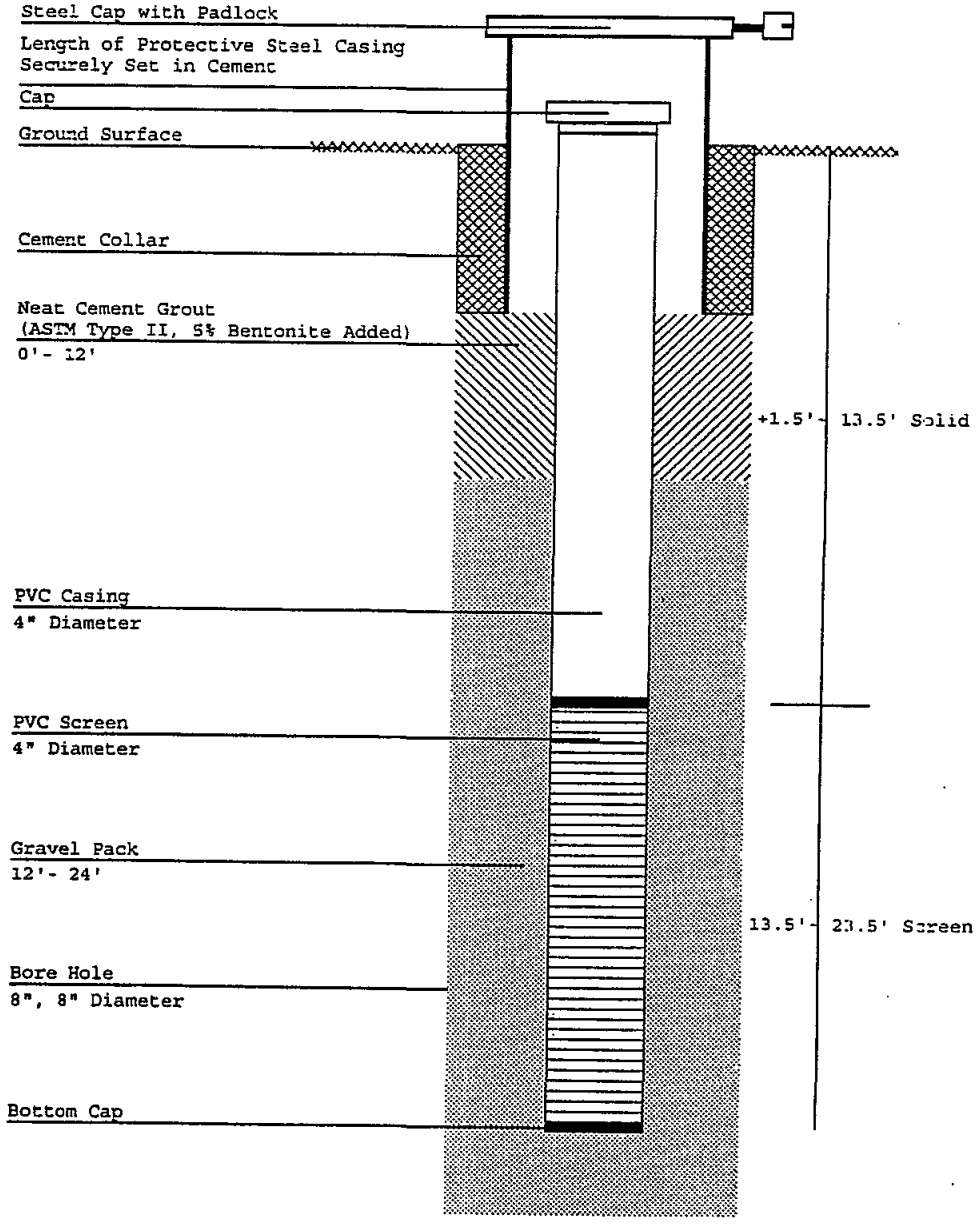
WELL: MW20 DATE DRILLED: 06/30/1999 COORD #1: 26.03.558 PERMIT #1: 26-54350
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Marktex Corporation, Arnot Street, , Lodi, NJ XSTREET:
OWNER: Mark -Tex Corporation, 161 Coolidge Avenue, , Englewood, NJ USE: Monitor

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Air Rotary
DIAMETER:	4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	15'	LENGTH:	DIAMETER:	4"	HOLE DIA: 8", 8"
			LENGTH 1:	10'	TOTAL DEPTH: 24'
SET WELL:	23.5'	GAL PER MIN: Dry	LENGTH 2:		
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: Dry	SLOT SIZE:	.020	
DRILLER:	Todd Naugel	DEVELOPMENT METHOD: Dry	CASING SEAL:	Portland	
SURFACE COMPLETION:	S	DEVELOPMENT TIME:	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
20' - 22'	None
22' - 24'	None

REMARKS / SOILS IDENTIFICATION

0'- 16' Silty fine brown sand trace gravel.
16'-20' Silty fine sand & gravel some cobbles.
20'- 24' Weathered shale.



SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW19 DATE DRILLED: 06/30/1999 COORD #1: 26.03.558 PERMIT #1: 26-54349
COORD #2: PERMIT #2:
SITE: Marktex Corporation, Arnot Street, , Lodi, NJ COUNTY: Bergen
OWNER: Mark -Tex Corporation, 161 Coolidge Avenue, , Englewood, NJ XSTREET:
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 14'

SET WELL: 22.5'
GRAVEL PK SZ: Morie #2
DRILLER: Todd Naugel
SURFACE COMPLETION: S

OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: Dry
STAT H2O LVL: Dry
DEVELOPMENT METHOD: Dry
DEVELOPMENT TIME:

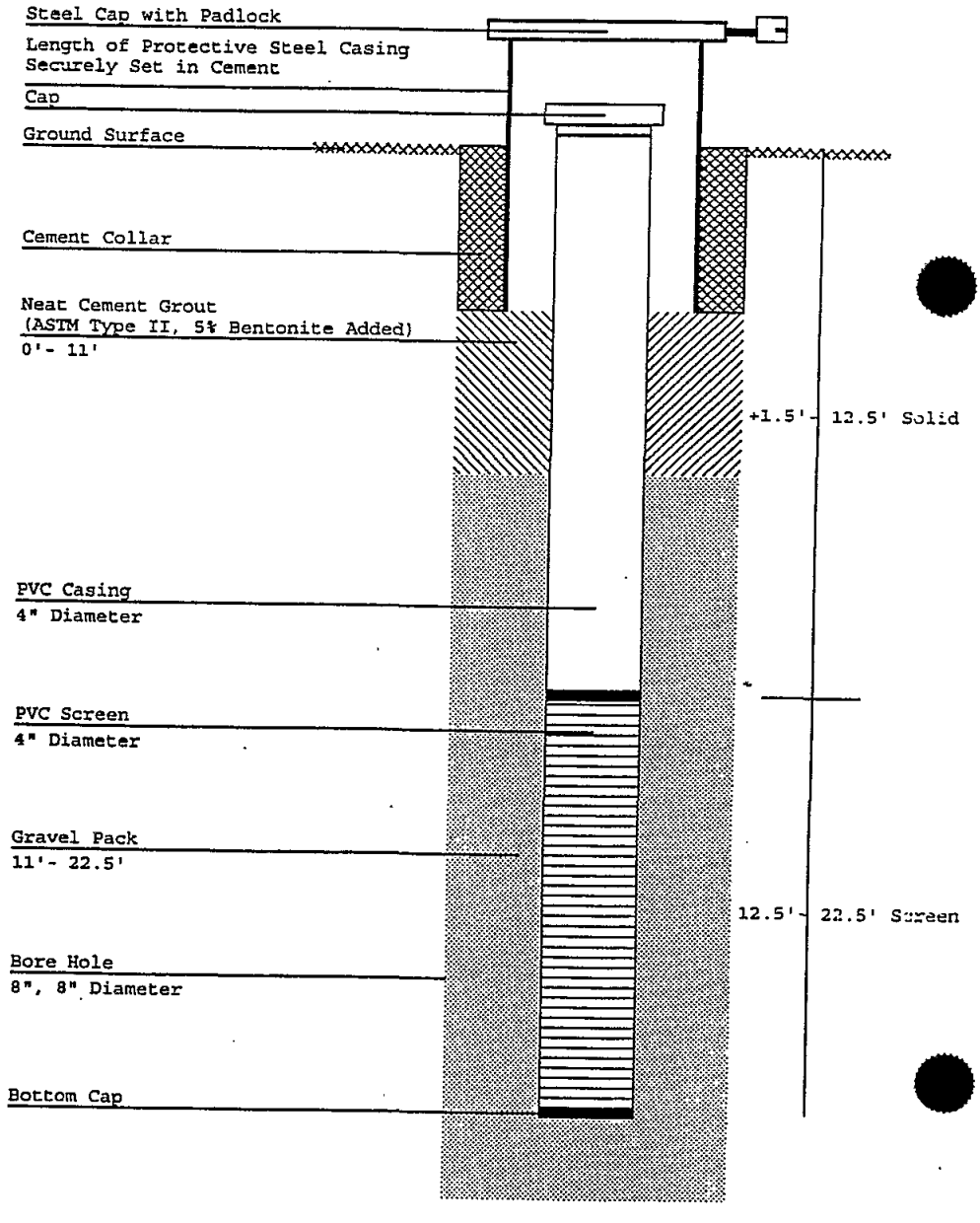
SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 22.5'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
20' - 22'	None

REMARKS / SOILS IDENTIFICATION

0'- 16' Silty fine brown sand trace gravel.
16'-20' Silty fine sand & gravel some cobbles.
20'- 22'6" Weathered shale.



NR-138A
38

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15202
APPLICATION NO. _____
COUNTY BERGEN
COORD. 26·03·559

SEALED 4/23/93

WELL RECORD

1. OWNER D.P.C. Realty Co. ADDRESS 18 Hill St, Lodi, N.J.
Owner's Well No. MW I SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION SAME
3. DATE COMPLETED 1/27/89 DRILLER E.D.I.
4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 15 Feet
5. CASING: Type PVC Diameter 4 Inches Length 3.5 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 10 Feet
Range in Depth { Top 4.5 Feet / Bottom 14.5 Feet } Geologic Formation BOULDERS & SAND
Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 1/28/89 Yield 2+ Gallons per minute
Static water level before pumping _____ Feet below surface
Pumping level _____ feet below surface after _____ hours pumping
Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped SUBMERSIBLE How measured _____
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type — Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR MONITORING AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER — Sample: Yes ____ No ____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-15' BOULDERS & SAND Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA EDI
14. DATA OBTAINED BY ENVIRONMENTAL DRILLING, INC. P.O. BOX 323 STAFFORD FORGE ROAD EAGLESWOOD TWP. WEST CREEK, NEW JERSEY 08092-0323 Date 3/22/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WR-138A
'88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15203
APPLICATION NO. _____
COUNTY BERGEN
COORD. 26.03.55

WELL SEALED 4/23/93

WELL RECORD

1. OWNER D.P.C. REALTY Co. ADDRESS 18 MAIN ST, LODI,
   Owner's Well No. MW 2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION SAME
3. DATE COMPLETED 1/27/89 DRILLER E.D.I
4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 15 Feet
5. CASING: Type PVC Diameter 4 Inches Length 5 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 10 Feet
   Range in Depth { Top 5 Feet / Bottom 15 Feet } Geologic Formation BOULDERS & SAND
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 1/28/89 Yield 2+ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped SUBMERSIBLE How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type — Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR MONITORING AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-15 BOULDERS & SAND. Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA EDI ENVIRONMENTAL DRILLING, INC. P.O. BOX 323
14. DATA OBTAINED BY STAFFORD FORGE ROAD EAGLESWOOD TWP. WEST CREEK, NEW JERSEY 08092-0323 Date 3/23/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 53709

Atlas Sheet Coordinates 26 :03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW9
County BERGEN Municipality LODI BORO Lot No. 31 Block No. 132.01
Address 137 RT. 46

DATE WELL STARTED 8/ 30/ 99
DATE WELL COMPLETED 8/ 30/ 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours
at 1 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	25'		Morie #1	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 9/ 7/ 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

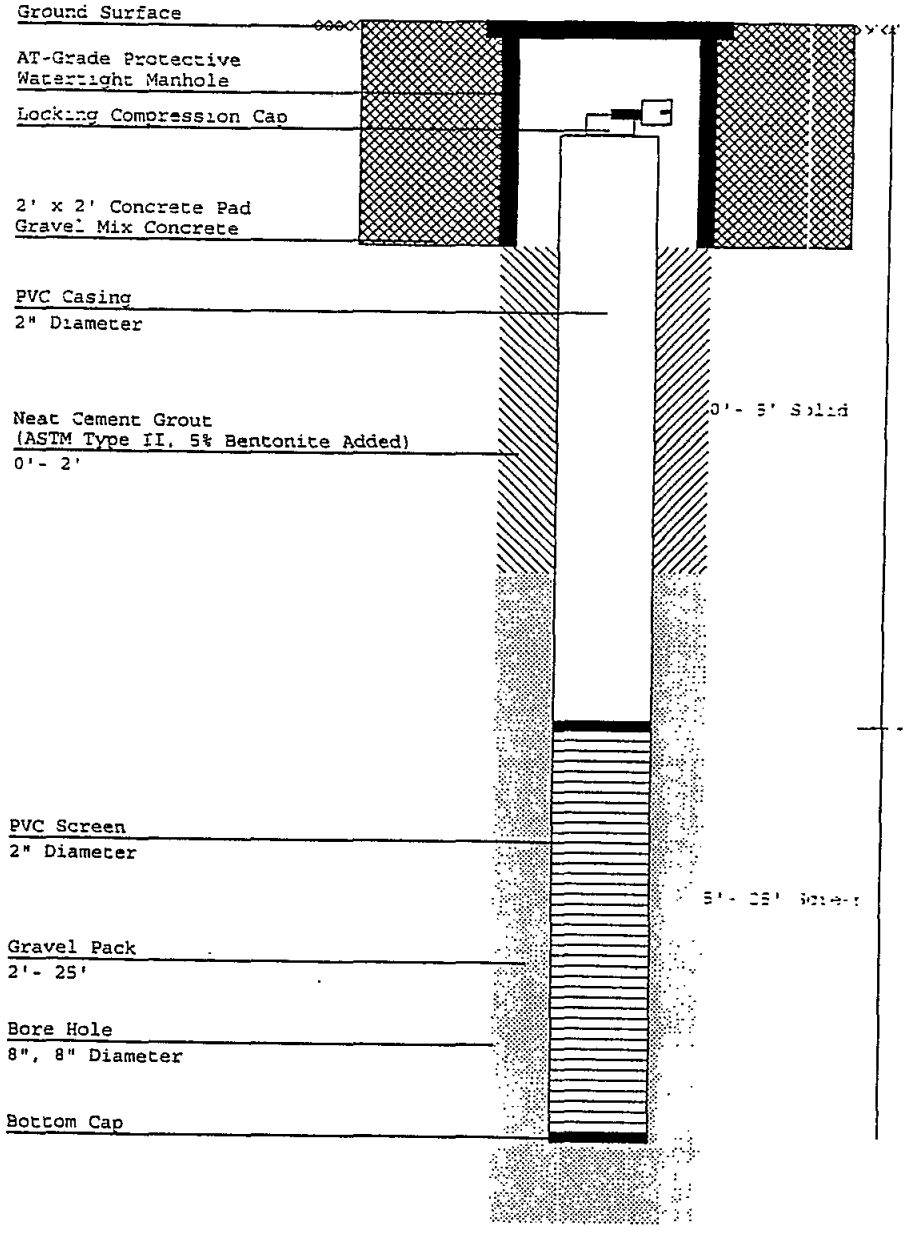
WELL: MW9 DATE DRILLED: 08/30/1999 COORD #1: 26.03.559 PERMIT #1: 26-53709
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Goodyear Motors, 137 Route 46, , Lodi, NJ XSTREET:
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 USE: Monitor

INNER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
DIAMETER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
LENGTH: 5' LENGTH: DIAMETER: 2" HOLE DIA: 8", 8"
LENGTH 1: 20' TOTAL DEPTH: 25'
SET WELL: 25' GAL PER MIN: 1 LENGTH 2:
GRAVEL PK SZ: Morie #1 STAT H2O LVL: 10' SLOT SIZE: .010
DRILLER: John Vogt DEVELOPMENT METHOD: Pump CASING SEAL: Portland
SURFACE COMPLETION: M DEVELOPMENT TIME: 1 Hour OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 10' Sand, fill.
10'- 25' Red sand.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53711

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW8
County BERGEN Municipality LODI BORO Lot No. 31 Block No. 132.01
Address 69 KENNEDY DRIVE

DATE WELL STARTED 8/ 30/ 99
DATE WELL COMPLETED 8/ 30/ 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 13' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	3'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	3'	13'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	13'		Morie #1	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 9 / 7 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling
email: info@summitdrilling

WELL LOG

WELL: MW8 DATE DRILLED: 08/30/1999 COORD #1: 26.03.559 PERMIT #1: 26-53711
COORD #2: PERMIT #2:
SITE: Ace Scaffold, 69 Kennedy Drive, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET: Garibaldi
USE: Monitor

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8" 8"
TOTAL DEPTH: 13'

SET WELL: 13'
GRAVEL PK SZ: Morie #1
DRILLER: John Vogt
SURFACE COMPLETION: M

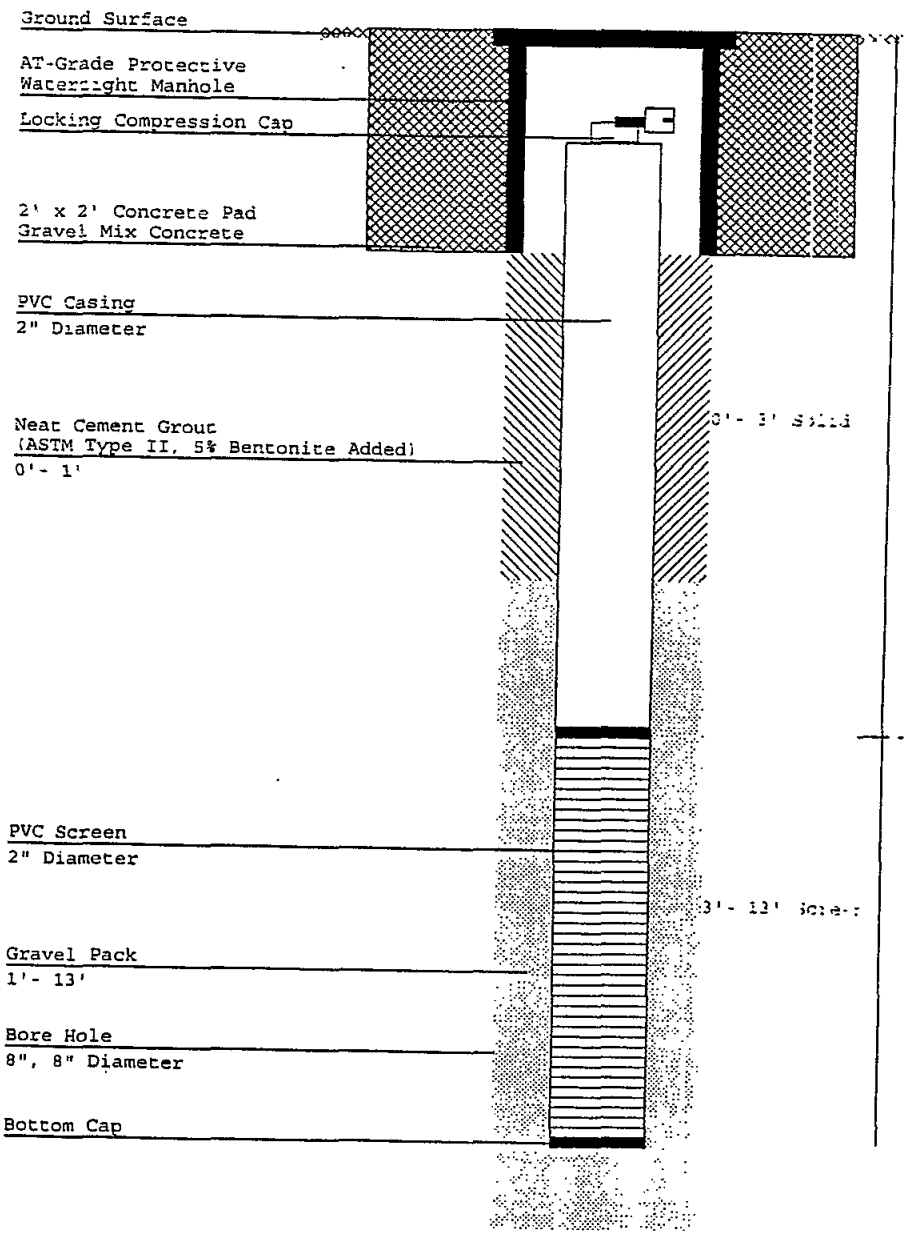
GAL PER MIN: 1
STAT H2O LVL: 7'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 13' Red sand refusal at 13'.



)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 53710

Atlas Sheet Coordinates 26 .03 559

[redacted]ER IDENTIFICATION - Owner NJDOT
[redacted]ess 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7
County BERGEN Municipality LODI BORO Lot No. 31 Block No. 132.01
Address 69 KENNEDY DRIVE

DATE WELL STARTED 8/ 30/ 99
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 8/ 30/ 99
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ___ ft.

Was steel protective casing installed?
[redacted]s ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 1 Hour hours at 1 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	12'		Morie #1	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ___ gpm

Pump type: ___

Drilling Fluid ___ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

[redacted]r's Signature John Vogt

Registration No. J1544 Date 9/ 7/ 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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Bound Brook, NJ 08805
Telephone: (908) 722-4266
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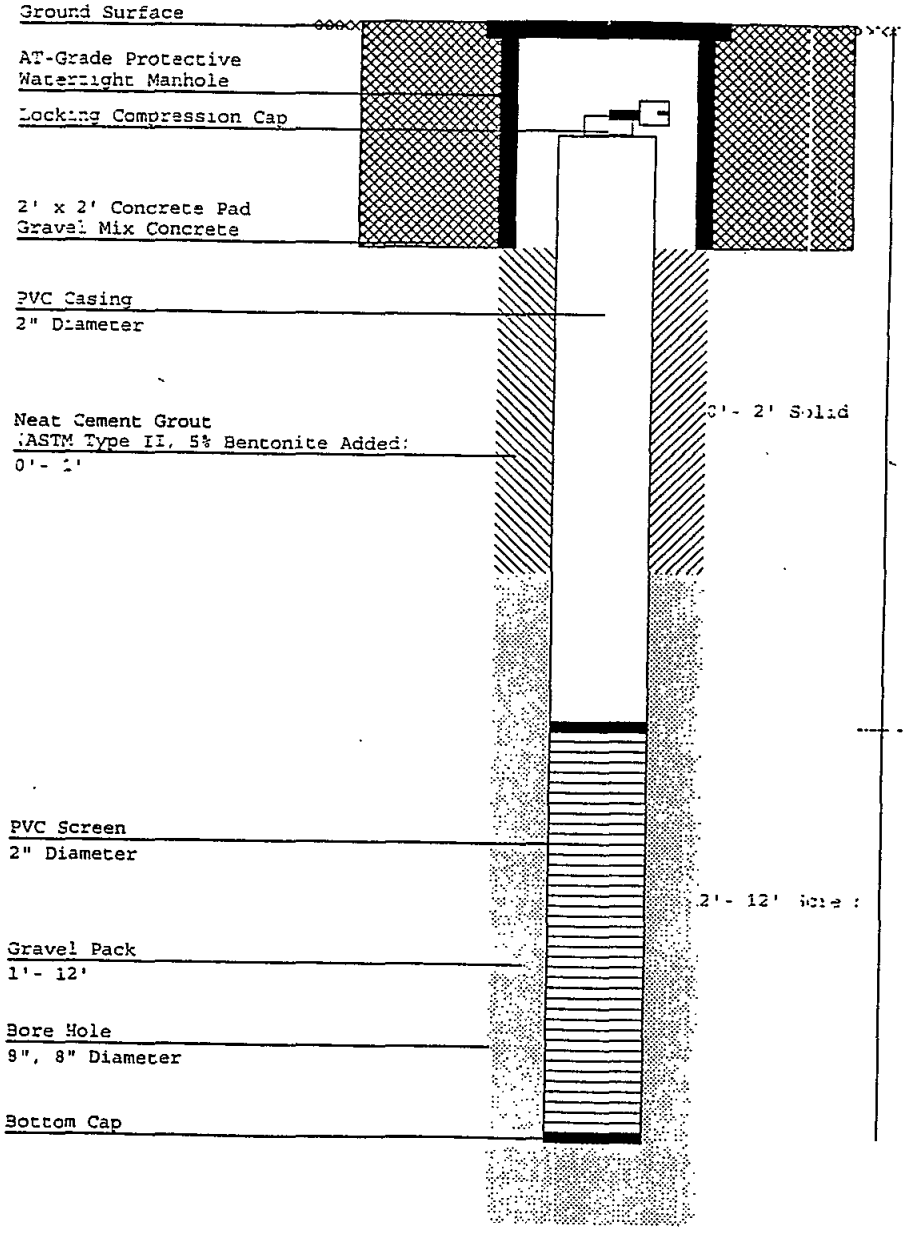
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling

WELL LOG

WELL: MW7 DATE DRILLED: 08/30/1999 COORD #1: 26.03.559 PERMIT #1: 26-53710
COORD #2: PERMIT #2:
SITE: Ace Scaffold, 69 Kennedy Drive, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET: Garibaldi Ave.
USE: Monitor

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	2'	LENGTH:	DIAMETER:	2"	HOLE DIA: 9", 8"
			LENGTH 1:	10'	TOTAL DEPTH: 12'
SET WELL:	12'	GAL PER MIN: 1	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 7'	SLOT SIZE:	.010	
DRILLER:	John Vogt	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0 - 12'		Red sand refusal at 12'.



NR-1 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53719

Atlas Sheet Coordinates 26 : 03 559

WNER IDENTIFICATION - Owner NJDOT
ddress 1035 PARKWAY AVE.
ity TRENTON State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW13
ounty BERGEN Municipality LODI BORO Lot No. 6 Block No. 81
ddress 115 GRAHAM LANE

DATE WELL STARTED 8/ 31/ 99
YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 8/ 31/ 99
egulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

otal depth drilled 19' ft.
/ell finished to 19' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) above land surface ____ ft.

/a el protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 7' ft.

/ater level was measured using Tape

/ell was developed for 1 Hour hours
t 1 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	4'	2"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	4'	19'	2"	PVC	Sch. 40 .010
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	19'		Morie #1	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-57

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Dr s Signature John Vogt

Registration No. J1544 Date 9/ 7/ 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling
email: info@summitdrilling

WELL LOG

WELL: MW13 DATE DRILLED: 08/31/1999 COORD #1: 26.03.559 PERMIT #1: 26-53719
COORD #2: PERMIT #2:

SITE: Lodi Housing Authority, 20 Rennie Place, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue. CN 600, Trenton, NJ 08625 XSTREET: Church S
USE: Monitor

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 4'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 15'
LENGTH 2:
SLOT SIZE: .010

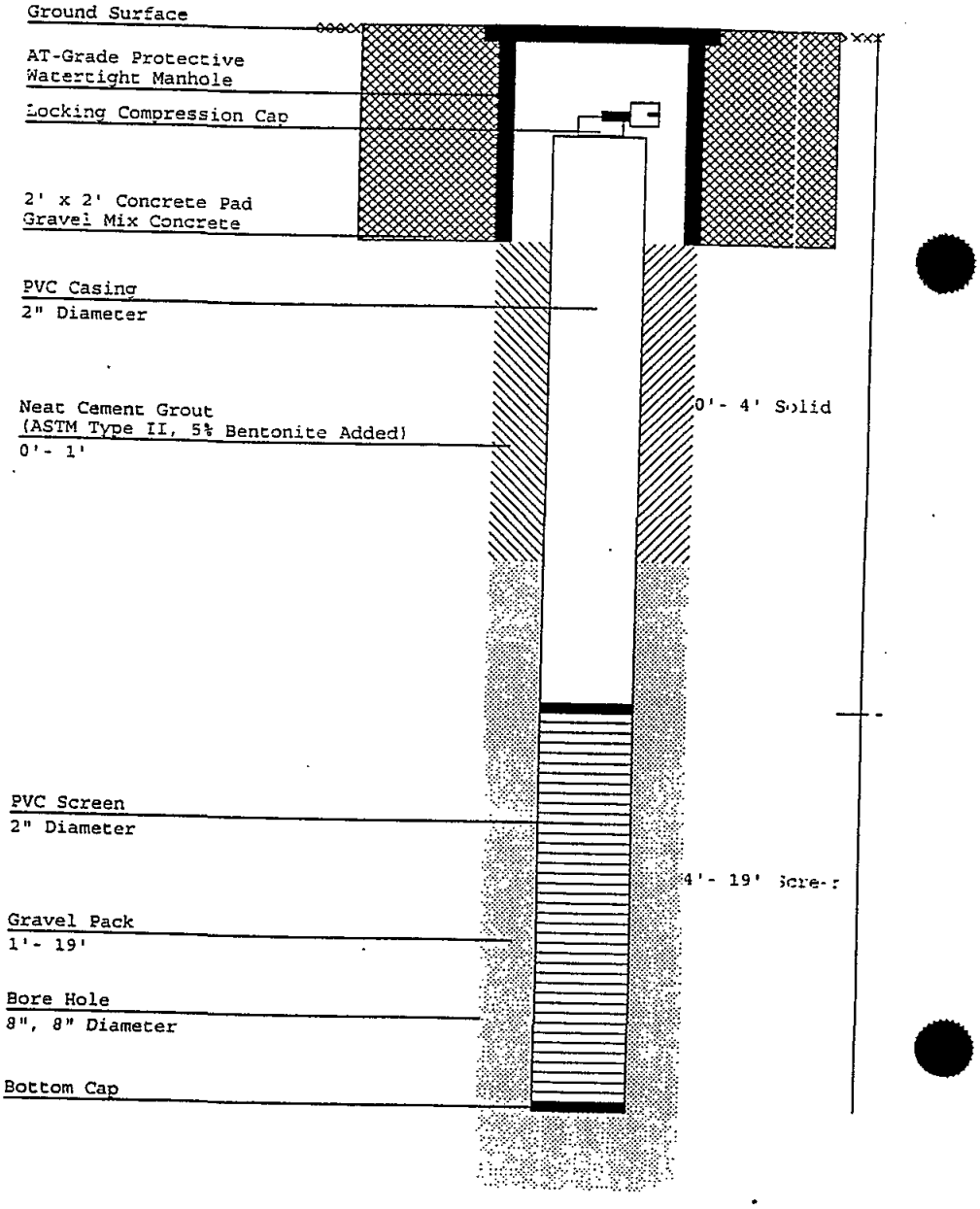
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 19'

SET WELL: 19'
GRAVEL PK SZ: Morie #1
DRILLER: John Vogt
SURFACE COMPLETION: M

GAL PER MIN: 1
STAT H2O LVL: 7'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 19'		Stone, brown sand & fill.



DWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58318

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW16
County BERGEN Municipality LODI BORO Lot No. 1.01 Block No. 158
Address 2 HOPE ST

DATE WELL STARTED 8/ 10/ 00
DATE WELL COMPLETED 8/ 10/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	2"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	12'		Morie #2	
Grout	0'	1'		Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. J16992 Date 8/ 18/ 00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.

WELL LOG

WELL: MW16 DATE DRILLED: 08/10/2000 COGRD #1: 26.03.559 PERMIT #1: 26-58318
COGRD #2: PERMIT #2:

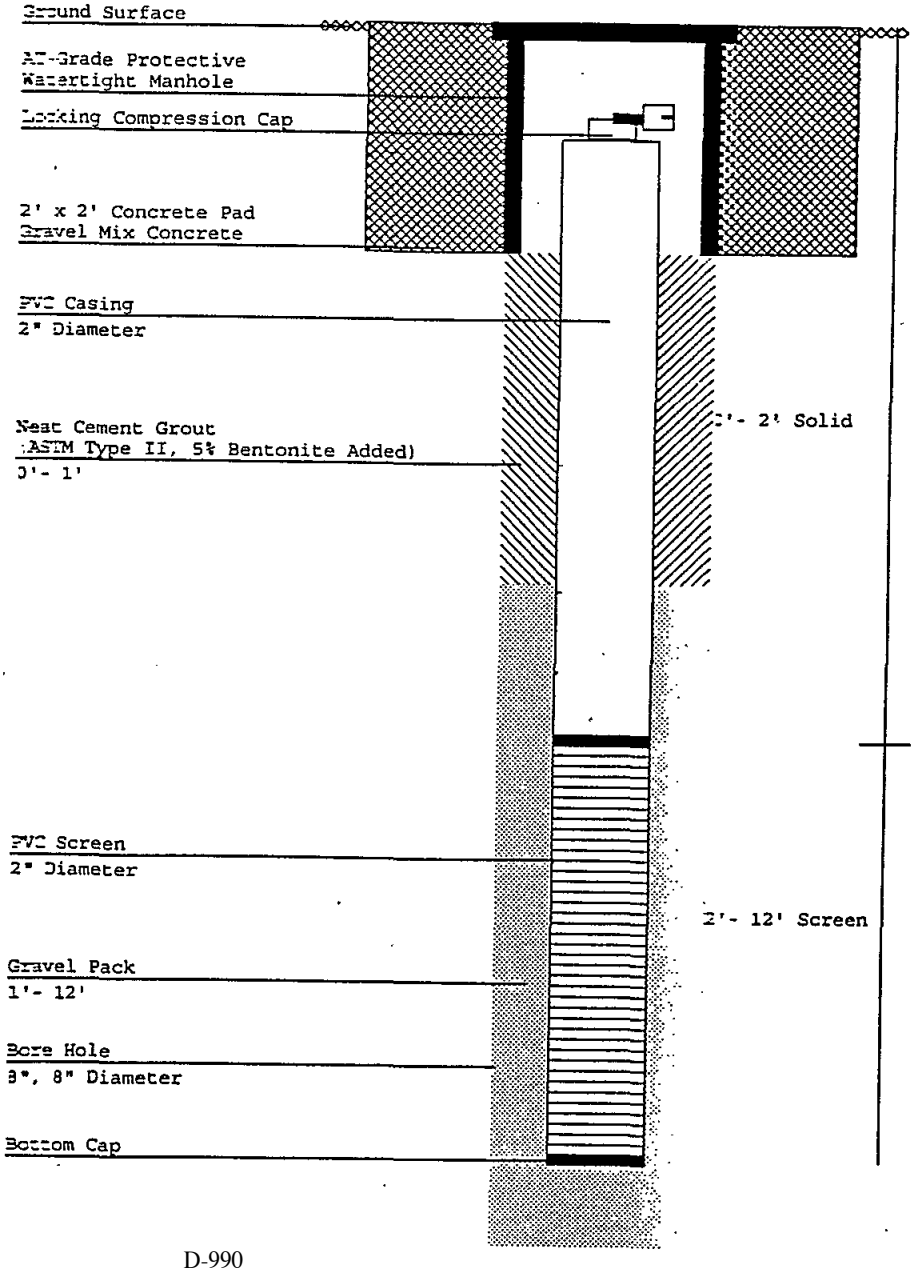
SITE: Residence, 2 Hope Street, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET: Church Street
USE: Monitoring

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	2'	LENGTH:	DIAMETER:	2"	HOLE DIA: 8", 8"
			LENGTH 1:	10'	TOTAL DEPTH: 12'
SET WELL:	12'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: 4'	SLOT SIZE:	.010	
DRILLER:	Todd Naugle	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	M	DEVELOPMENT TIME: 1/2 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 12' Sand & gravel some silt.



)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 58434

Atlas Sheet Coordinates 26 03 559

)WNER IDENTIFICATION - Owner N J D O T
Address 1035 PARKWAY AVE.
City TRENTON State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW18
County BERGEN Municipality LODI BORO Lot No. 3 Block No. 274
Address 100 ROUTE 46

DATE WELL STARTED 8/ 12/ 00
DATE WELL COMPLETED 8/ 12/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	2"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	12'		Morie #2	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. J16992 Date 8 / 18 / 00

COPIES: White - DEP Canary - Driller D-991 Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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email: info@summitdrilling.com

WELL LOG

WELL: MW18 DATE DRILLED: 08/12/2000 COORD #1: 26.03.559 PERMIT #1: 26-58434
COORD #2: PERMIT #2:
SITE: LBK Associates, 100 Route 46, , Lodi, NJ COUNTY: Bergen
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 12'

SET WELL: 12'
GRAVEL PK SZ: Morie #2
DRILLER: Todd Naugle
SURFACE COMPLETION: M

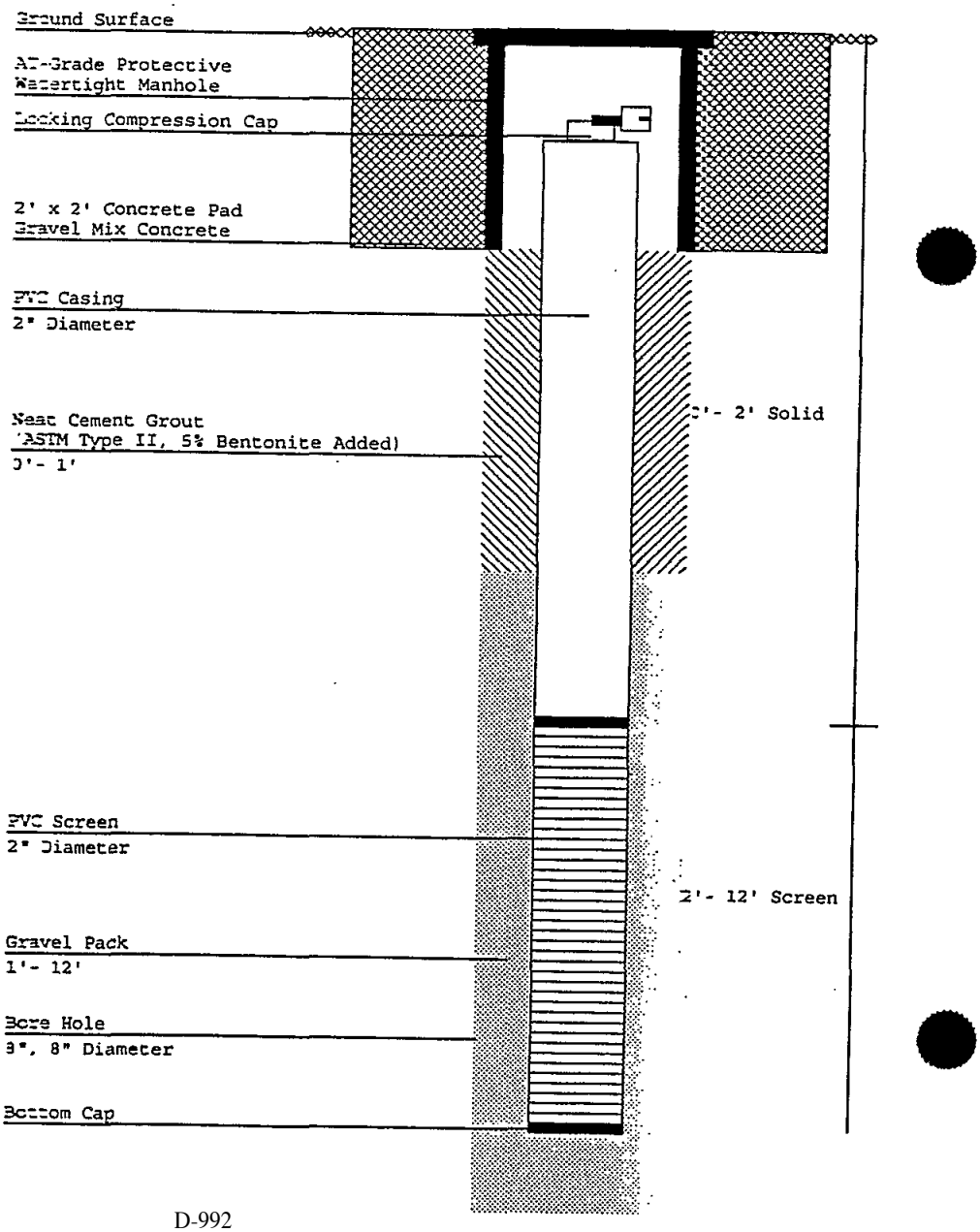
GAL PER MIN: 1/2
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
6" - 2'	18-14-16
2' - 4'	4-3-2-2
4' - 6'	6-15-28-18
6' - 8'	7-5-4-6

REMARKS / SOILS IDENTIFICATION

0'- 12' Sand & gravel some silt.



DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58320

Atlas Sheet Coordinates 26 : 03 559

OWNER IDENTIFICATION - Owner NJDOT
Address 1035 PARKWAY AVE
City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW18
County BERGEN Municipality LODI BORO Lot No. 122.01 Block No. 90
Address 120 ROUTE 46

DATE WELL STARTED 8/ 10/ 00
DATE WELL COMPLETED 8/ 10/ 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BEM Systems, Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 4' ft.

Water level was measured using Tape

Well was developed for 1/2 Hour hours
at 1/2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	2'	2"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	2'	12'	2"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	12'		Morie #2	
Grout	0'	1'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. J16992 Date 8/ 18/ 00

COPIES: White - DEP Canary - Driller P-993 Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.c
email: info@summitdrilling.

WELL LOG

ELL: MW18 DATE DRILLED: 08/10/2000 COORD #1: 26.03.559 PERMIT #1: 26-58320
COORD #2: PERMIT #2:

ITE: The Princess Chateau, 120 Route 46 West, , Lodi, NJ COUNTY: Bergen
WNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

NNER CASING: PVC
IAMETER: 2"
ENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 12'

ET WELL: 12'
RAVEL PK SZ: Morie #2
RILLER: Todd Naugle
URFACE COMPLETION: M

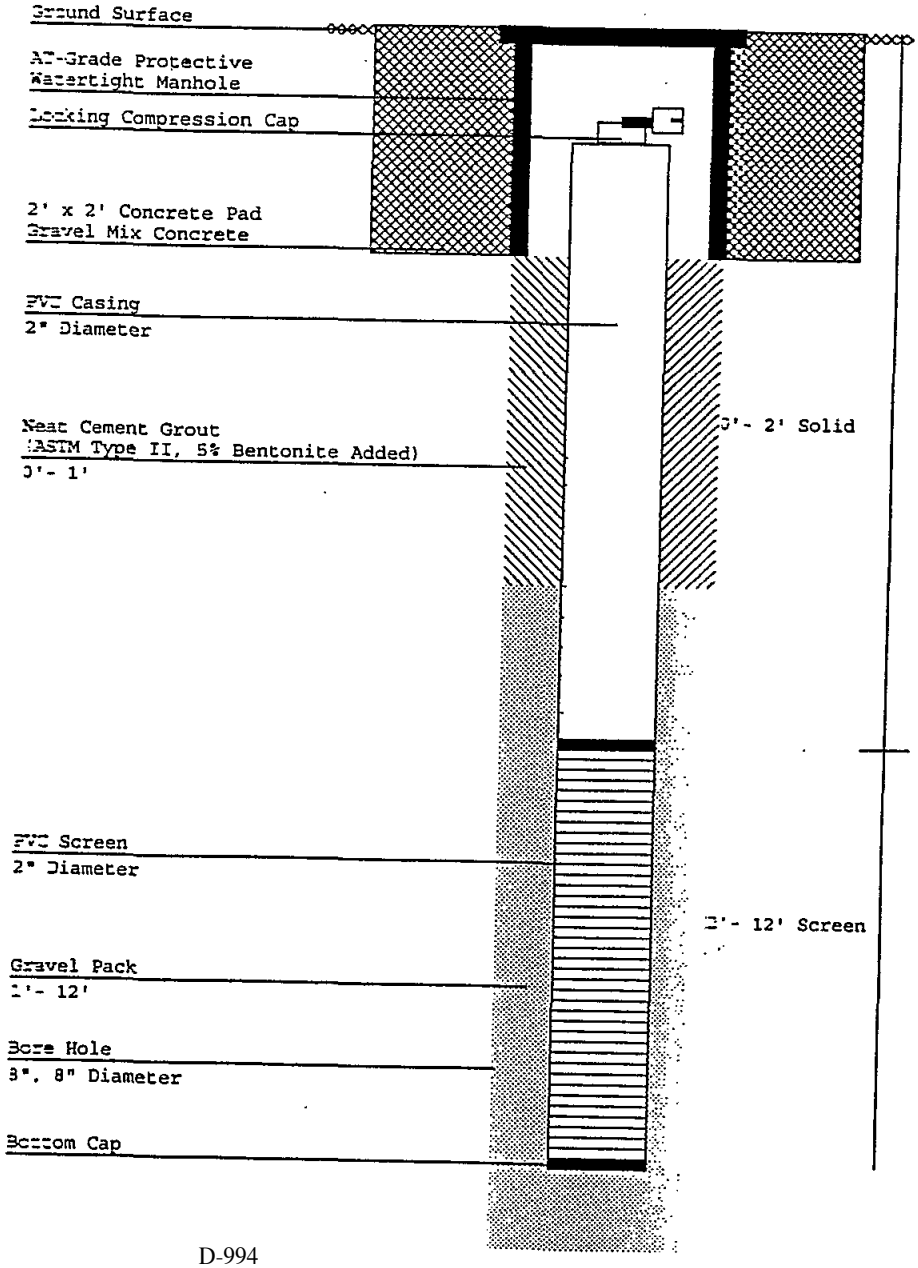
GAL PER MIN: 1/2
STAT H2O LVL: 4'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
6" - 2'	11-12-11
2' - 4'	15-15-4-5
4' - 6'	4-9-18-18
6' - 8'	13-23-23-26
8' - 10'	8-10-7-9
10' - 12'	13-17-23-18

EMARKS / SOILS IDENTIFICATION

'- 12' Sand & gravel some silt.



ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO: ADV-252	HOLE NUMBER: E-7
MUNICIPALITY:	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO: 26 4645
START DATE:	COMPLETION DATE: 1-13-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25	TOTAL DEPTH:
LOT: -	BLOCK: 51.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 6.5 Feet
PROTECTIVE CASING: Steel	NOTES:			

Soil Boring Cross-Reference E-7

Town and City [illegible]

County and State Bergen, New Jersey

Installation Date (s) 1-13-97

Drilling Method Hollow Stem Auger

Driller Scott Alberalla

Drilling Fluid None

Static water level after drilling 6.5 ft.

Well developed for _____ hours at _____ gpm

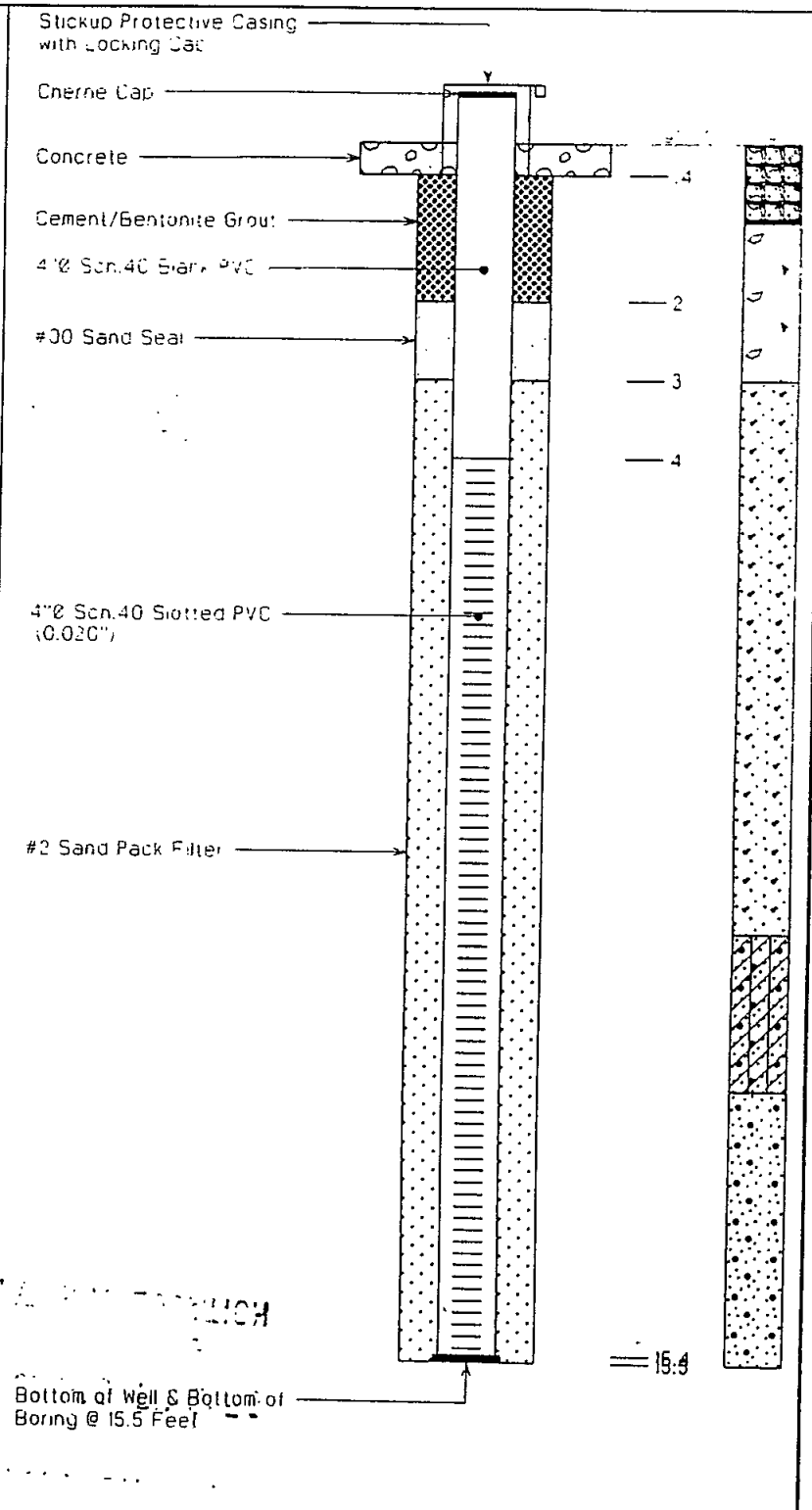
Method of development By ENSR

Well Purpose Monitoring

Remarks

Prepared By Scott

Date Prepared 1/29/97



ADVANCED DRILLING, INC.

PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO: [illegible]	HOLE NUMBER: E-7		
MUNICIPALITY: [illegible]	COUNTY: Berger	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 [illegible]	
START DATE: [illegible]	COMPLETION DATE: 1-13-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA: 8.25	TOTAL DEPTH: [illegible]
LOT: [illegible]	BLOCK: 81.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 6.5 Feet	
PROTECTIVE CASING: [illegible]	NOTES:			SHEET: [illegible]	

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DEPTH	GRAPHIC LOG	SAMPLE	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc
				1.0				12" CONCRETE	
		3,5/3,3	8	3.0				Moist brown fine SAND, trace of gravel	
		[illegible]	22		5			Moist to wet red/grey fine to coarse SAND, some Gravel	
	3	14/12 17/16	31	10.0	10			wet grey coarse SAND & SILT, little clay	
	4	15/17 18/18	35	12.0	15			Wet grey/black medium to coarse SAND	
				15.5				Boring Complete @ 15.5 Feet	
					20				
					25				
					30				
					35				

[illegible]

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: BP3 DATE DRILLED: 6/14/1995 COORD #1: 26.03.582 PERMIT #1: 26-40871
COORD #2: PERMIT #2:
SITE: Former Hexcel Facility, 205 Main Street, , Lodi, NJ COUNTY: Bergen
OWNER: Hexcel Corporation, 5794 W. Las Posita Blvd., P.O. Box 8181, Pleasanton, CA 94588 XSTREET:
USE: Piezometer

INNER CASING: GALV
DIAMETER: 2"
LENGTH: 2'8"

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: GALV
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 1'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Hand
SAMPLING METHOD: S/S
HOLE DIAMETER: 6"
TOTAL DEPTH: 4.5'

SET WELL: 1.8'
GRAVEL PK SZ: Morie #1
DRILLER: Don Grahamer, Jr
SURFACE COMPLETION: S

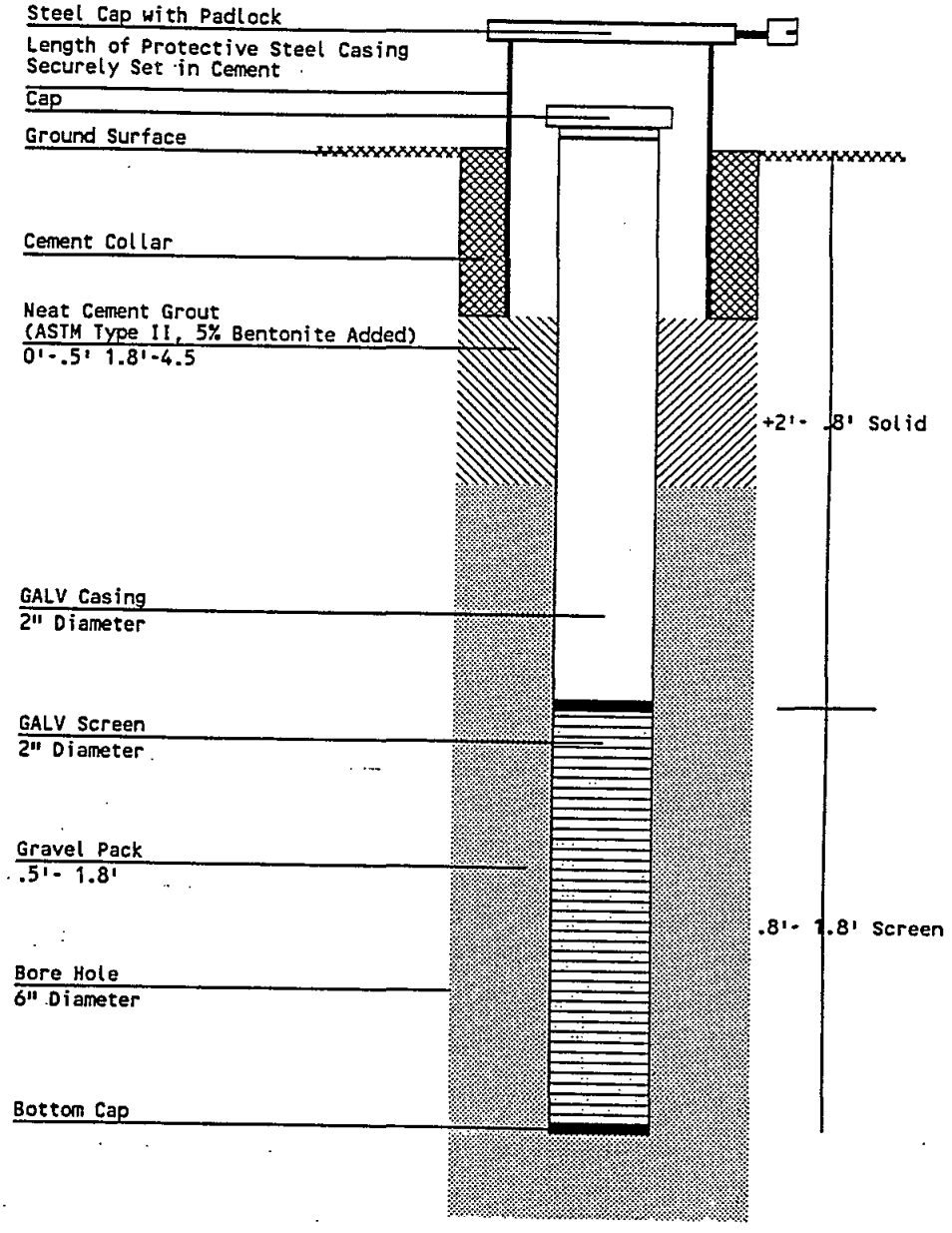
GAL PER MIN: SLOW
STAT H2O LVL: 6"
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
6' - 2.5'	With Jack Hammer
2.5' - 4.5'	With Jack Hammer

REMARKS / SOILS IDENTIFICATION

0' - 1' Concrete & gravel.
1' - 4'6" Red-brown clayey silt.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 4087 1
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner Hexcel Corp
Address 5794 W. Las Positas Blvd
City Pleasanton State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BP 3
County Bergen Municipality Lodi Boro Lot No. 10.01 Block No. 81.01
Address 205 Main St

TYPE OF WELL (as per Well Permit Categories) Piezometer Date well completed 6/14/85
Regulatory Program Requiring Well ISRA Site Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GEO ENG Tele. #

WELL CONSTRUCTION

Total depth drilled 4.5 ft.
Well finished to 1.8 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	.8	2	Galv
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	.8	1.8	2	Galv .010
Tail Piece				
Gravel Pack	.5	1.8		Morie #1
Annular Seal/Grout	0 / 1.8	5 / 4.5		Portland
Method of Grouting	Gravity			

Static water level after drilling 6" #
Water level was measured using Pump
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity gpm
Pump type:
Drilling Method Hand Auger
Drilling Fluid Type of Rig
Name of Driller Don Graham JR
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 000 1620
Name of Drilling Company Summit Drilling

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Graham Jr Date 6-23-85

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: BP2 DATE DRILLED: 6/13/1995 COORD #1: 26.03.582 PERMIT #1: 26-40870
COORD #2: PERMIT #2:
SITE: Former Hexcel Facility, 205 Main Street, , Lodi, NJ COUNTY: Bergen
OWNER: Hexcel Corporation, 5794 W. Las Posita Blvd., P.O. Box 8181, Pleasanton, CA 94588 XSTREET:
USE: Piezometer

INNER CASING: GALV
DIAMETER: 2"
LENGTH: 2'8"

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: GALV
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 1'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Hand
SAMPLING METHOD: S/S
HOLE DIAMETER: 6"
TOTAL DEPTH: 4.5'

SET WELL: 1.8'
GRAVEL PK SZ: Morie #1
DRILLER: Don Grahamer, Jr
SURFACE COMPLETION: S

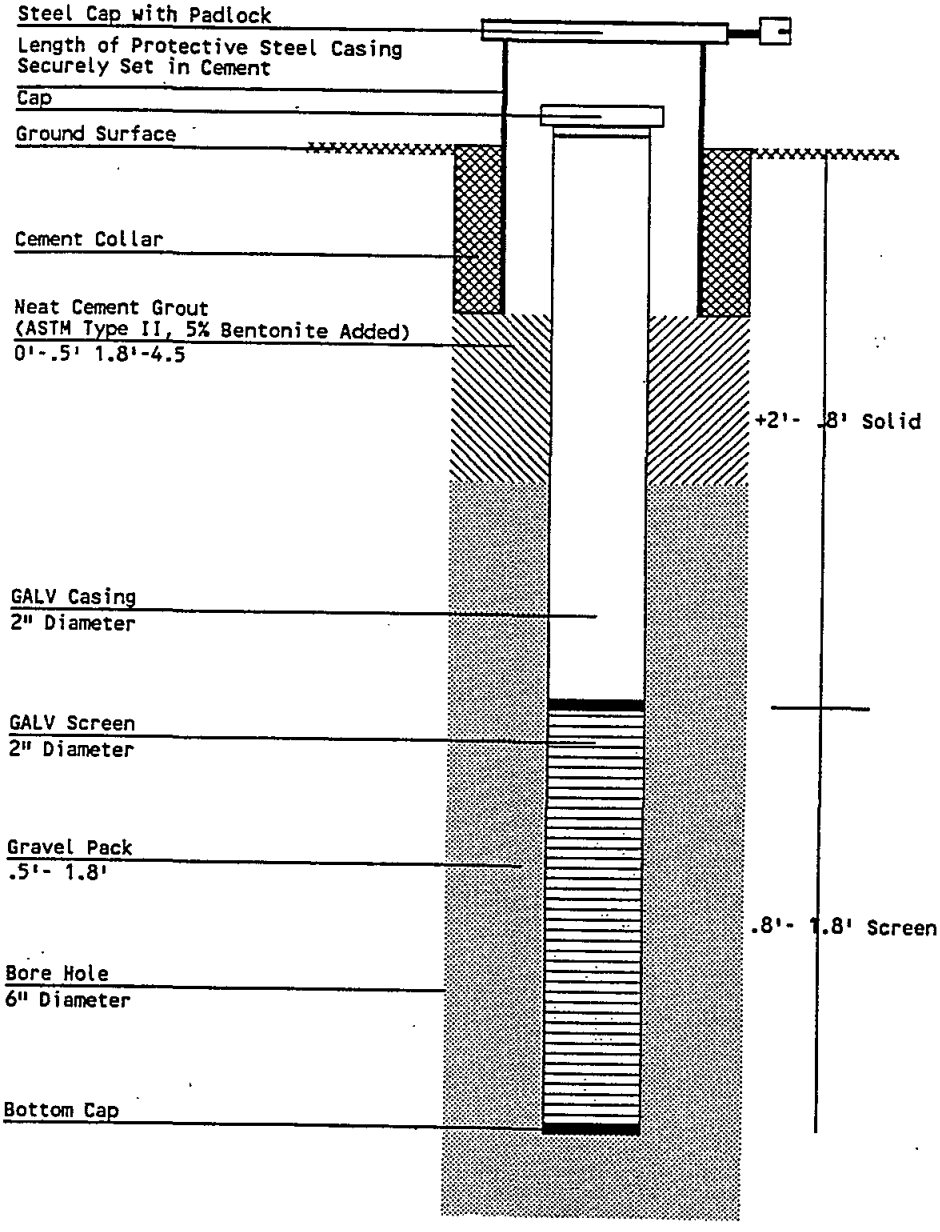
GAL PER MIN: SLOW
STAT H2O LVL: 6"
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
6" - 2.5'	With Jack Hammer
2.5' - 4.5'	With Jack Hammer

REMARKS / SOILS IDENTIFICATION

0' - 1' Concrete & gravel.
1' - 4'6" Red-brown clayey silt.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 40870
Atlas Sheet Coordinates 28 : 05 : 582

OWNER IDENTIFICATION - Owner HEXCEL CORP.
Address 5794 W. LAS POSITAF BLVD.
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BP2
County BERGEN Municipality LODI BORO Lot No. 10.01 Block No. 81.01
Address 205 Main St

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 6/13/95
Regulatory Program Requiring Well ISRA SITE Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GEO ENG Tele. #

WELL CONSTRUCTION

Total depth drilled 4.5 ft.
Well finished to 1.8 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	.8	2	Galv
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	.8	1.8	2	Galv .010
Tail Piece				
Gravel Pack	.5	1.8		Morie #1
Annular Seal/Grout	0 / 1.8	.5 / 4.5		Portland
Method of Grouting	Tremie			

Static water level after drilling 6" ft.
Water level was measured using Tape
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Hand Auger
Drilling Fluid Type of Rig
Name of Driller Don Terhune IV
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000162J
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Terhune IV Date 6-23-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

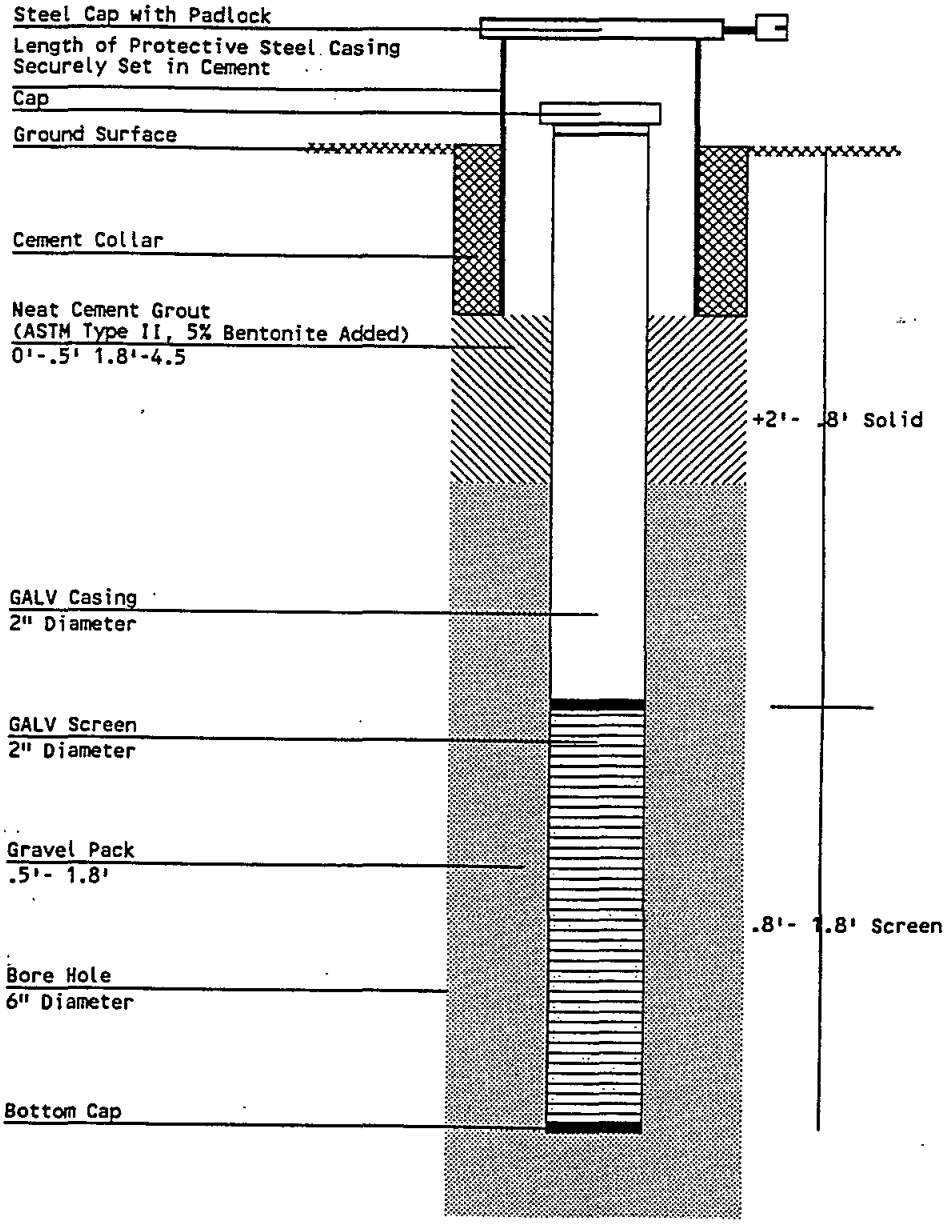
WELL: BP1 DATE DRILLED: 6/13/1995 COORD #1: 26.03.582 PERMIT #1: 26-40869
COORD #2: PERMIT #2: COUNTY: Bergen
SITE: Former Hexcel Facility, 205 Main Street, , Lodi, NJ XSTREET:
OWNER: Hexcel Corporation, 5794 W. Las Posita Blvd., P.O. Box 8181, Pleasanton, CA 94588 USE: Piezometer

INNER CASING:	GALV	OUTER CASING:	SCREEN TYPE 1:	GALV	DRILLING METHOD: Hand
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD: S/S
LENGTH:	2'8"	LENGTH:	DIAMETER:	2"	HOLE DIAMETER: 6"
			LENGTH 1:	1'	TOTAL DEPTH: 4.5'
SET WELL:	1.8'	GAL PER MIN: SLOW	LENGTH 2:		
GRAVEL PK SZ:	Morie #1	STAT H2O LVL: 6"	SLOT SIZE:	.010	
DRILLER:	Don Grahamer, Jr	DEVELOPMENT METHOD: Pump	CASING SEAL:	Portland	
SURFACE COMPLETION:	S	DEVELOPMENT TIME: 1 Hour	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
64 - 2.5'	With Jack Hammer
2.5' - 4.5'	With Jack Hammer

REMARKS / SOILS IDENTIFICATION

0' - 1' Concrete & gravel.
1' - 4'6" Red-brown clayey silt.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 40867
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner HEXCEL CORP.
Address 5794 W. LAS POSITAS BLVD.
City PLEASANTON State CA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BP 1
County ~~BERGEN~~ Municipality ~~LODI BORO~~ Lot No. ~~10.01~~ Block No. ~~81.01~~
Address 205 Main St

TYPE OF WELL (as per Well Permit Categories) ~~PIEZOMETER~~ Date well completed 6/13/95
Regulatory Program Requiring Well ISRA SITE Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GEO ENG Tele. #

WELL CONSTRUCTION

Total depth drilled 4.5 ft.
Well finished to 1.8 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	.8	2	GalV.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	.8	1.8	2	GalV .010
Tail Piece				
Gravel Pack	.5	1.8		Morie #1
Annular Seal/Grout	0 / 1.8	.5 / 4.5		Portland
Method of Grouting	Gravity			

Static water level after drilling 6" ft.
Water level was measured using Tape
Well was developed for 1 hours at Slow gpm
Method of development Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity gpm
Pump type:
Drilling Method Hand Auger
Drilling Fluid Type of Rig
Name of Driller Don Grahamer Jr
Health and Safety Plan submitted? [X] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 001620
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Don Grahamer Jr Date 6-23-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

GEO

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

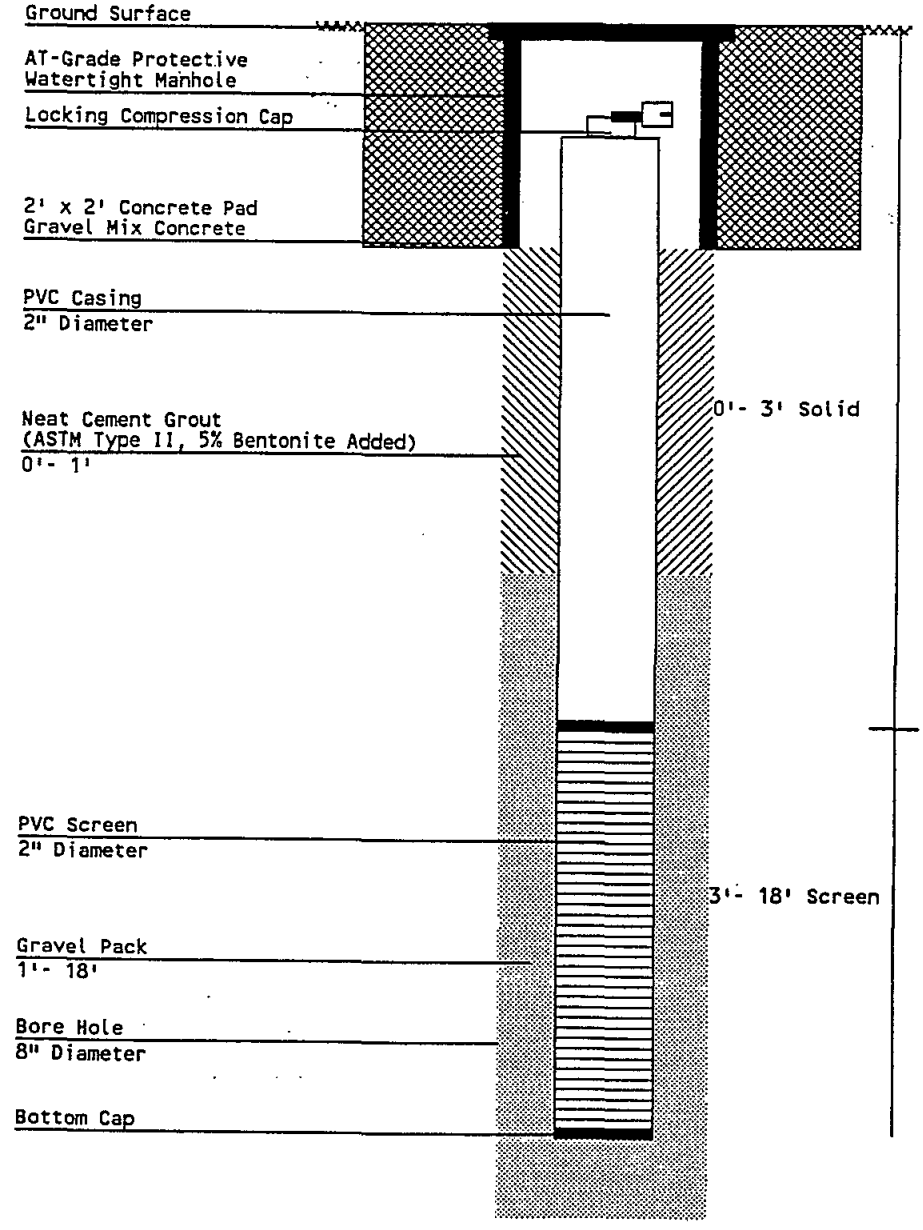
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW3 DATE DRILLED: 11/07/1995 COORD #1: 26.03.582 PERMIT #1: 26-40191
COORD #2: PERMIT #2:
SITE: Rellim Properties, 139-160 Main Street, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: Rellim Properties, 405 Kingsland Avenue, , Harrison, NJ 07029 XSTREET: Graham Lane
USE: Monitor

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC		DRILLING METHOD: Auger
DIAMETER: 2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH: 3'	LENGTH:	DIAMETER: 2"		HOLE DIAMETER: 8"
		LENGTH 1: 15'		TOTAL DEPTH: 18'
SET WELL: 18'	GAL PER MIN:	LENGTH 2:		
GRAVEL PK SZ: Morie #2	STAT H2O LVL: Not Taken	SLOT SIZE: .020		
DRILLER: Matthew Raab	DEVELOPMENT METHOD: Not dev.	CASING SEAL: Portland		
SURFACE COMPLETION: M	DEVELOPMENT TIME:	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0' - 4'		*C/f gravel & grey c/f sand.*
4' - 18'		Dark brown silty f/csand trace fine gravel.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

E
LAS

MONITORING WELL RECORD

Well Permit No. 26 - 40191
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner ~~RELLIM PROPERTIES~~
Address 405 KINGSLAND AVE.
City HARRISON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality ~~LODI BORO~~ Lot No. ~~7 & 27~~ Block No. ~~81~~
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/7/95
Regulatory Program Requiring Well ~~ISRA SITE~~ Case I.D. # ~~93-025~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ECC Tele. #

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	2	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	18	2	Sch 40 PVC .020
Tail Piece				
Gravel Pack	1	18		Morie #2
Annular Seal/Grout	0	1		Portland
Method of Grouting	Gravity			

Static water level after drilling 10 Not ft.
Water level was measured using Tape
Well was developed for 1/2 hours at 2 gpm
Method of development Not Developed Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-59
Name of Driller Matt Robb
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000135
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matt Robb Date 11-16-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

CL

WELL LOG

WELL: MW2 DATE DRILLED: 10/07/1994 COORD #: 26.03.582 PERMIT #: 26-38161 COUNTY: Bergen
SITE: Rellim Properties, 139-160 Main Street, , Lodi, NJ 07644 XSTREET: Graham Lane
OWNER: Rellim Properties, 405 Kingsland Avenue, , Harrison, NJ 07029 USE: Monitor

INNER CASING:	PVC	OUTER CASING:		SCREEN TYPE:	PVC	DRILLING METHOD:	Auger
DIAMETER:	4"	DIAMETER:		DIAMETER:	4"	SAMPLING METHOD:	N/A
LENGTH:	6'	LENGTH:		LENGTH:	14'	HOLE DIAMETER:	10"
				SLOT SIZE:	.020	TOTAL DEPTH:	18'

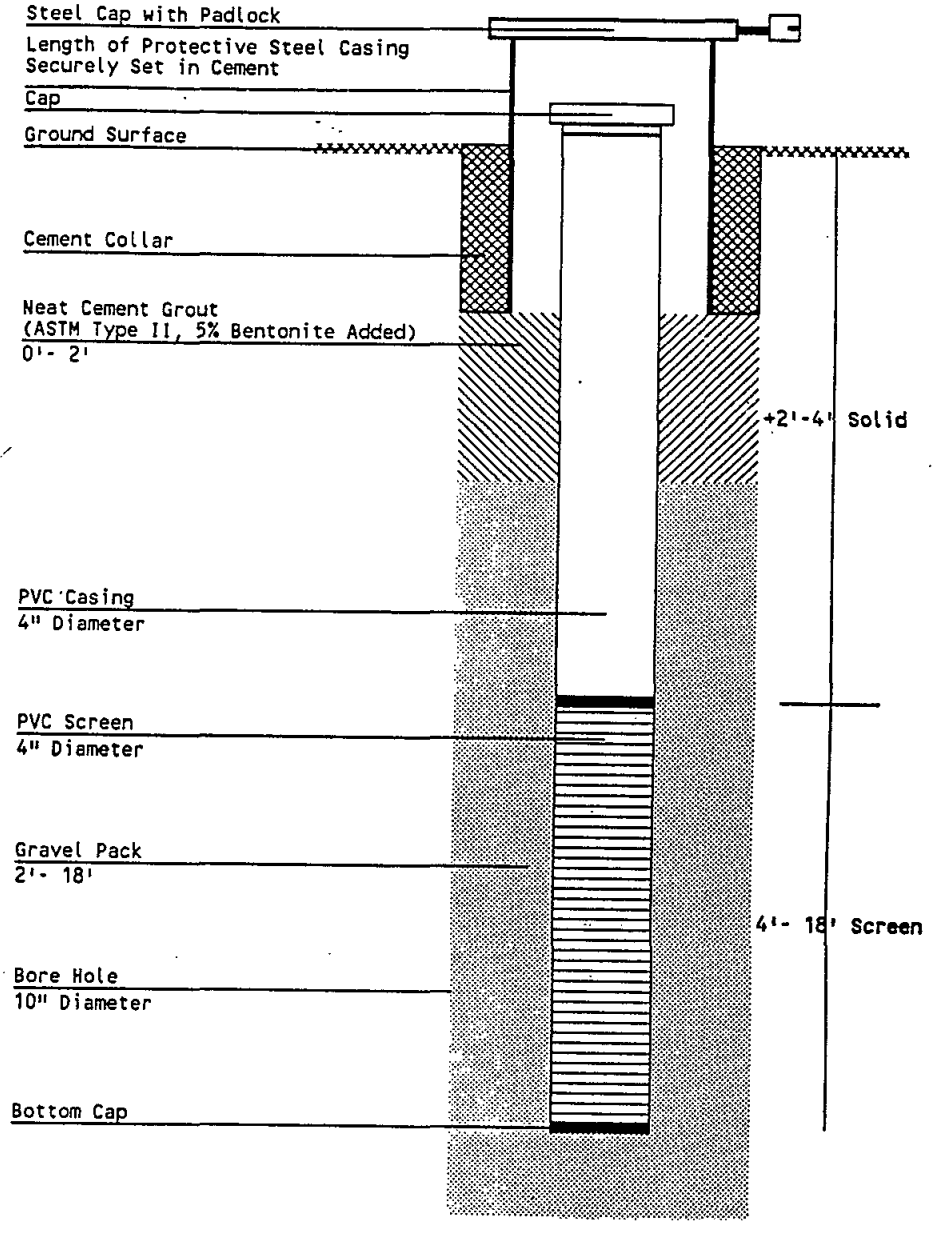
SET WELL: 18' GAL PER MIN: 15 OPEN HOLE:
GRAVEL PK SZ: Morie #1 STAT H2O LVL: 7' CASING SEAL: Portland
DRILLER: John Vogt DEVELOPMENT METHOD: Pump DEVELOPMENT TIME: 1 Hour
SURFACE COMPLETION: S GEOLOGIC FORMATION:

DEPTH BELOW SURFACE, FROM - TO | BLOWS PER 6" ON SAMPLER

-

REMARKS / SOILS IDENTIFICATION

0' - 10' Black sand fill.
10' - 18' Black sand & silt.



DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 38161
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RELLIM PROPERTIES
Address 405 KINGSLAND AVE.
City HARRISON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County BERGEN Municipality LODI BORO Lot No. 7 & 27 Block No. 81
Address 139-140 Main St

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/7/94
Regulatory Program Requiring Well ISRA SITE Case I.D. # 93-025

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ECC Tele. #

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2	4	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	18	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	2	18		Morie #1
Annular Seal/Grout	0	2		Portland
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for 1 hours at 15 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig B-57
Name of Driller John Vogt
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1544
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Vogt Date 10-17-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42537
Atlas Sheet Coordinates 26 : Ø3 : 582

OWNER IDENTIFICATION - Owner ~~RELLIM PROPERTIES~~
Address 405 KINGSLAND AVE.
City HARRISON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County BERGEN Municipality LODI BORO Lot No. 7 & 27 Block No. 81
Address ~~139 160 MAIN ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/7/95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 93-Ø25

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ECC Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	2"	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	16	2"	Sch 40 PVC .020
Tail Piece				
Gravel Pack	2	16		Morie #2
Annular Seal/Grout	0	2		Portland
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using Tape Down
Well was developed for ½ hours at 2 gpm
Method of development Bottom pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-59
Name of Driller Matt Kaab
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 000315
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matt Kaab Date 11-16-95

COPIES: White - DEP Canary - Driller 1007 Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

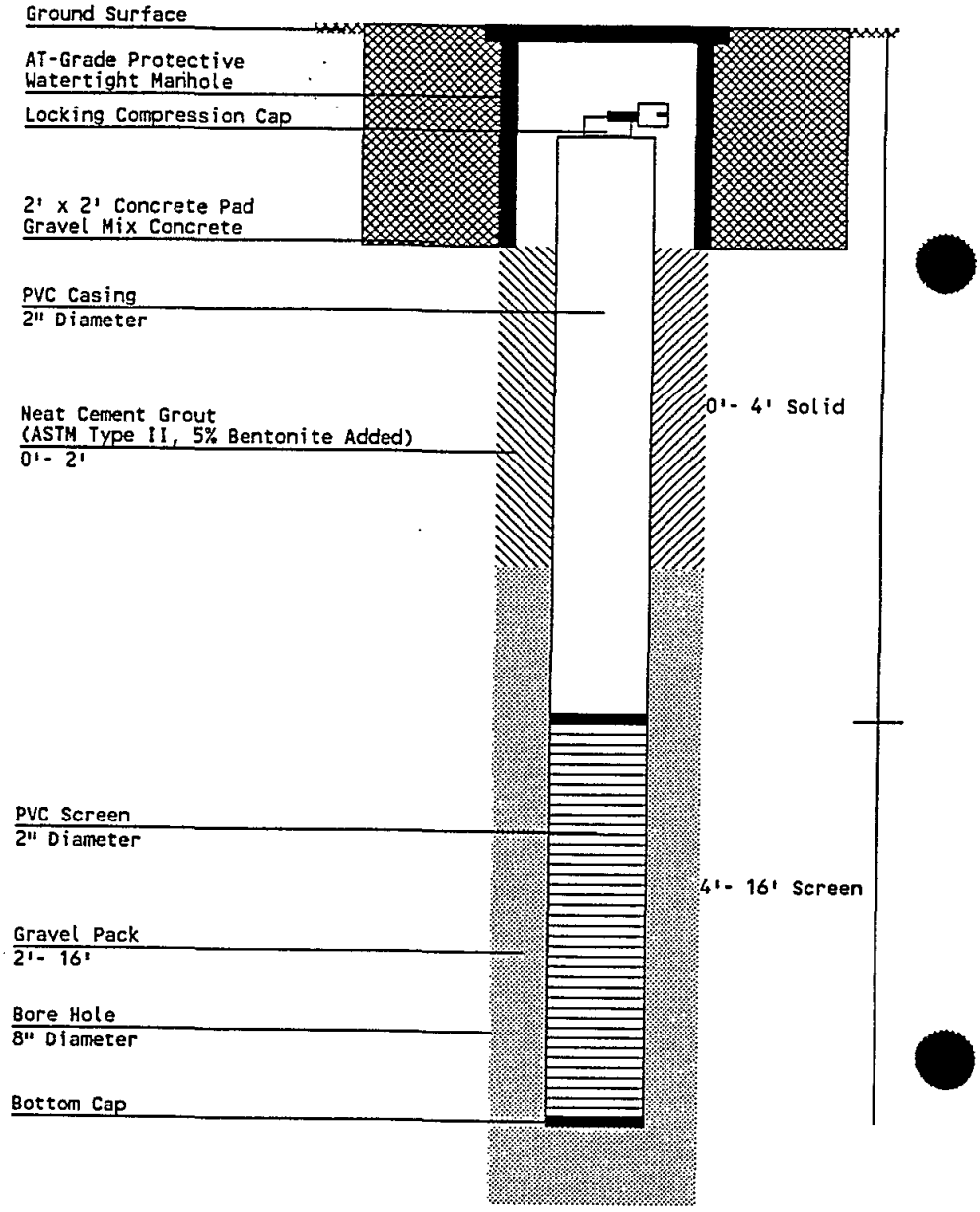
WELL: MW4 DATE DRILLED: 11/07/1995 COORD #1: 26.03.582 PERMIT #1: 26-42537
COORD #2: PERMIT #2:
SITE: Rellim Properties, 139-160 Main Street, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: Rellim Properties, 405 Kingsland Avenue, , Harrison, NJ 07029 XSTREET: Graham Lane
USE: Monitoring

INNER CASING:	PVC	OUTER CASING:	SCREEN TYPE 1:	PVC	DRILLING METHOD: Auger
DIAMETER:	2"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH:	4'	LENGTH:	DIAMETER:	2"	HOLE DIAMETER: 8"
			LENGTH 1:	12'	TOTAL DEPTH: 16'
SET WELL:	16'	GAL PER MIN:	LENGTH 2:		
GRAVEL PK SZ:	Morie #2	STAT H2O LVL: Not Taken	SLOT SIZE:	.020	
DRILLER:	Matthew Raab	DEVELOPMENT METHOD: Not dev.	CASING SEAL:	Portland	
SURFACE COMPLETION: M		DEVELOPMENT TIME:	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0' - 5' C/f gravel & grey c/f sand.
5' - 16' Brown-grey silty f/c sand trace fine gravel.



DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42538
Atlas Sheet Coordinates 26 : 03 : 582

OWNER IDENTIFICATION - Owner RELLIM PROPERTIES
Address 405 KINGSLAND AVE.
City HARRISON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5
County BERGEN Municipality LODI BORO Lot No. 7 & 27 Block No. 81
Address ~~139 160 MAIN ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/7/95
Regulatory Program Requiring Well ISRA SITE Case I.D. # 93-025

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ECC Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+3	4	2"	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4	16	2"	Sch 40 PVC .020
Tail Piece				
Gravel Pack	2	16		Morie #2
Annular Seal/Grout	0	2		Portland
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using Water Taken
Well was developed for 1/2 hours at 2 gpm
Method of development Not Developed Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig B-59
Name of Driller Matt Raab
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 001315
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Matt Raab Date 11-16-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4280
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW5 DATE DRILLED: 11/07/1995 COORD #1: 26.03.582 PERMIT #1: 26-42538
COORD #2: PERMIT #2:

SITE: Rellim Properties, 139-160 Main Street, , Lodi, NJ 07644
OWNER: Rellim Properties, 405 Kingsland Avenue, , Harrison, NJ 07029

COUNTY: Bergen
XSTREET: Graham Lane
USE: Monitoring

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 7'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 16'

SET WELL: 16'
GRAVEL PK SZ: Morie #2
DRILLER: Matthew Raab
SURFACE COMPLETION: S

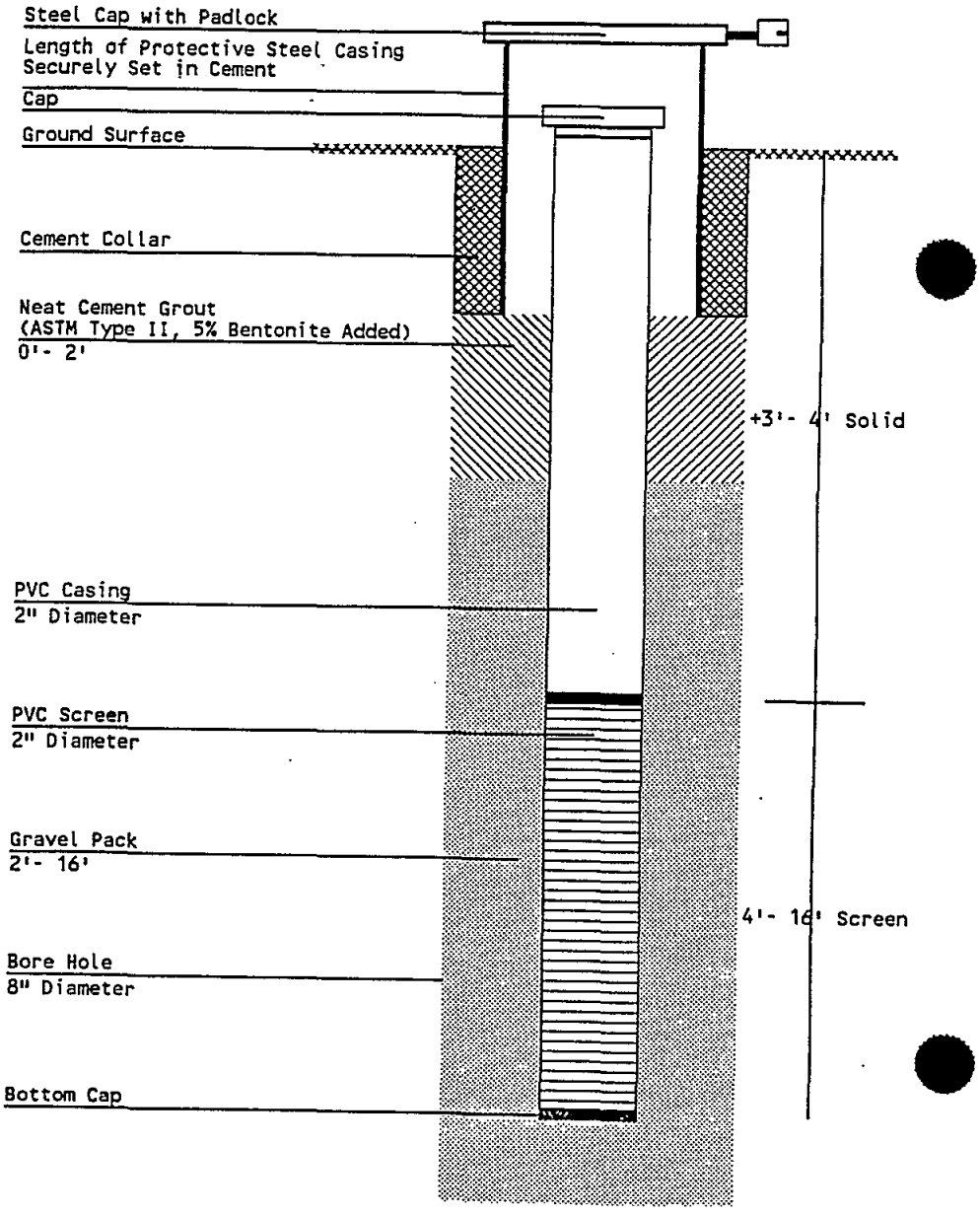
GAL PER MIN:
STAT H2O LVL: Not Taken
DEVELOPMENT METHOD: Not dev.
DEVELOPMENT TIME:

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0' - 5' C/f gravel & grey c/f sand.
5' - 16' Brown-grey silty f/c sand trace fine gravel.



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 46477

Atlas Sheet Coordinates 26 . Ø3 . 582

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-4
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 81.Ø1
Address 199 MAIN ST

DATE WELL STARTED 1/10/97
DATE WELL COMPETED 1/10/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Is steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling .5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	C	3	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 20)	3	15	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	2.5	15		#2 SAND	#2
Gravel Pack	2	2.5		#00 SAND	#00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAILING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. 1320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-4
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46477
START DATE: 1-10-97	COMPLETION DATE: 1-10-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25 / TOTAL DEPTH: 15 Ft.
LOT: 6	BLOCK: 81.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5 Feet
PROTECTIVE CASING: 3' Stickup	NOTES:			

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				.3		
				1.0	3" Asphalt + 9" Subbase	
1-3	1	7/8/12/8	20			
3-5	2	2/4/2/3	6		Moist to wet red/black/tan fine SAND, some Clay,	
				9.0		
10-12	3	4/3/3/4	6		Wet grey/green fine SAND, some Silt, little clay	
				13.0		
13-15	4	5/6/7/6	13		Wet green/grey SILT, some fine Sand, little clay	
				15.0	Boring Complete @ 15 Feet	

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-4

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO.
Lodi	Bergen	New Jersey	26 : 03 : 582	26 46477

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
1-10-97	1-10-97	Scott Alberalla	J 1320	8.25	15 Ft.

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
6	81.01	Hollow Stem Auger	Split Spoon	5 Feet

PROTECTIVE CASING	NOTES
3' Stickup	

Soil Boring Cross-Reference *E-4*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-10-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alberalla*

Drilling Fluid *None*

Static water level after drilling *5 ft.*

Well developed for _____ hours at _____ gpm

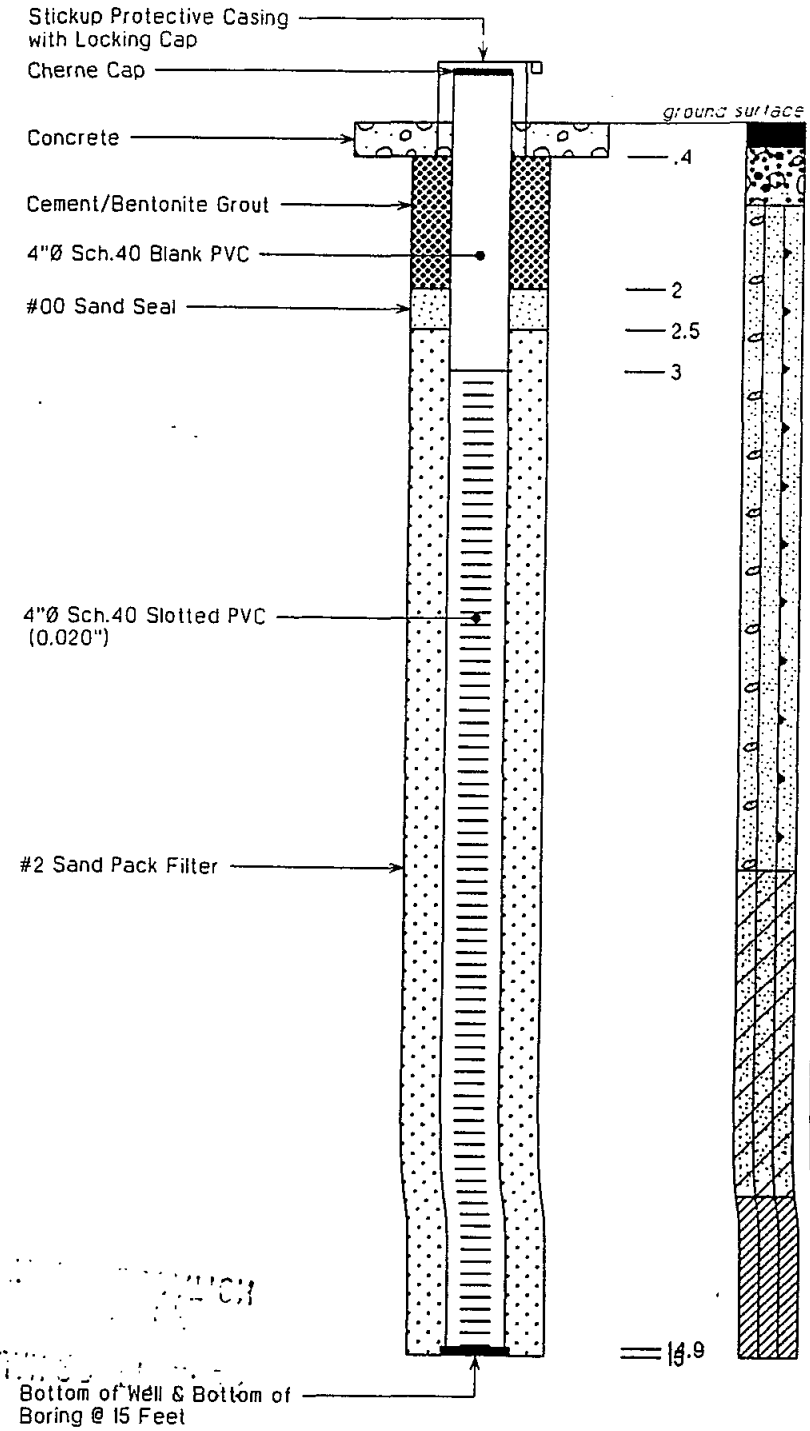
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



OWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 46478

Atlas Sheet Coordinates 26 : 03 : [redacted]

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-5
County BERGEN Municipality LODI BORO Lot No. 6 Block No. 81.01
Address 199 MAIN ST

DATE WELL STARTED 1/9/97
DATE WELL COMPETED 1/10/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5 ft.

Water level was measured using TAPE

Well was developed for 1 hours at 3/4 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) (No. Used 20)	3.5	15	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3	17		SAND	#2
Gravel Pack	2	3		SAND	#00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

Method of development SUBMERSIBLE PUMP

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAILING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. J1320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT Napp Site	CLIENT ENSR	PROJECT NO	HOLE NUMBER E-5
MUNICIPALITY	COUNTY Bergen	STATE New Jersey	COORDINATES 26 : 03 : 582	WELL PERMIT NO.
START DATE	COMPLETION DATE 1-10-97	DRILLER Scott Alberalla	DRILLER LICENSE NO. J 1320	BORING DIA. 8.25	TOTAL DEPTH
LOT	BLOCK 81.01	DRILLING METHOD Hollow Stem Auger	SAMPLE TYPE Split Spoon	DEPTH OF GROUNDWATER 5 Feet
PROTECTIVE CASING	NOTES	SHEET

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DEPTH	GRAPHIC LOG	SAMPLE	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				.2				2" Asphalt + 10" Subbase	
		4/3.5/5	8						
			10		5			Moist to wet black fine to coarse SAND & CLAY, little brick (FILL)	
	3	10/9/9/9	18		10				
				13.0					
	4	7/6/7/6	13		15			Wet red/brown fine to medium Sand	
				17.0				Boring Complete @ 17 Feet	
					20				
					25				
					30				
					35				

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.	HOLE NUMBER: E-5
MUNICIPALITY	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.
START DATE	COMPLETION DATE: 1-10-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA. / TOTAL DEPT
LOT	BLOCK: 81.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5 Feet
PROTECTIVE CASING	NOTES			

Soil Boring Cross-Reference: E-5
Town and City: Lodi
County and State: Bergen, New Jersey

Installation Date (s): 1-10-97

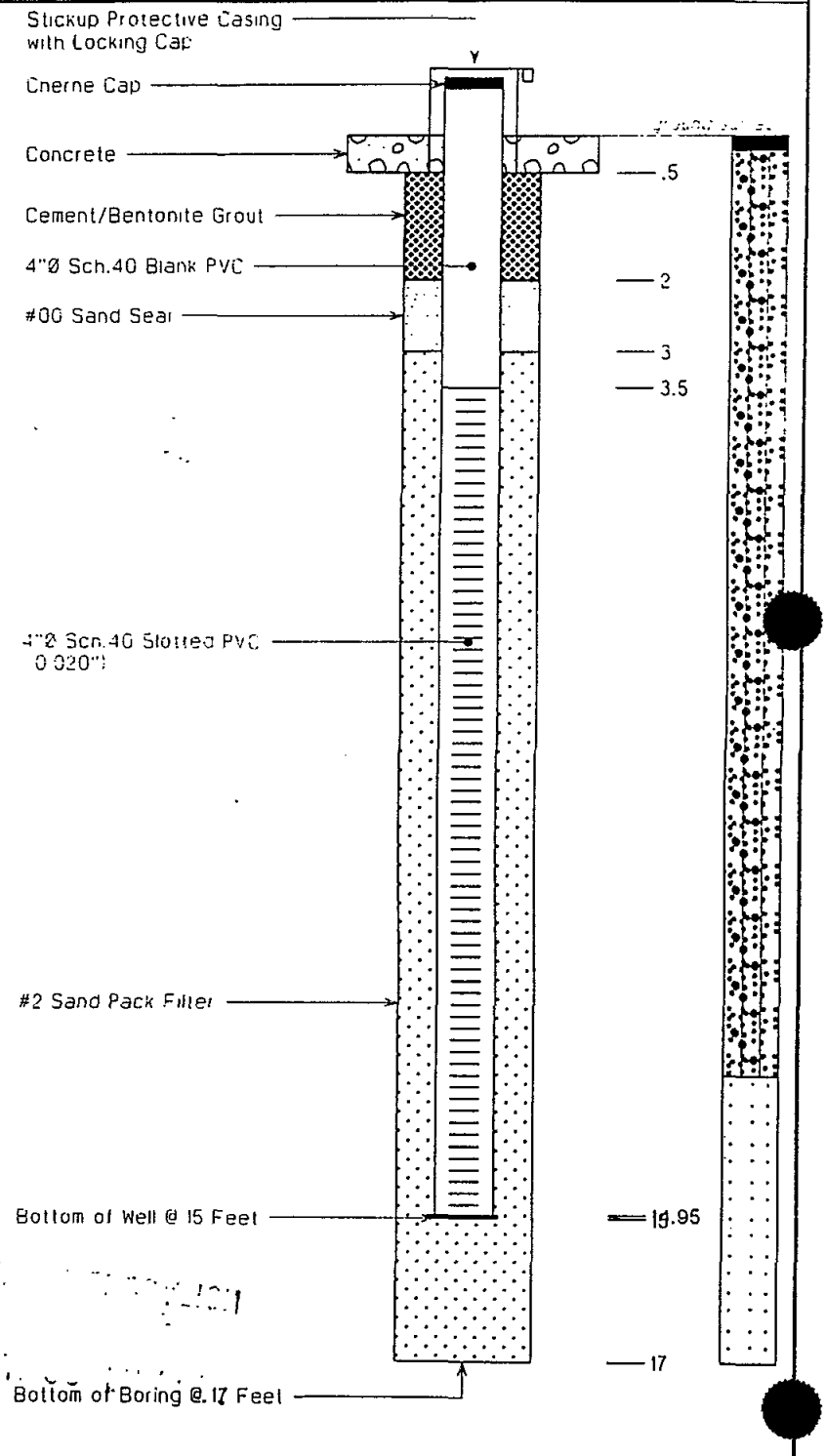
Drilling Method: Hollow Stem Auger
Driller: Scott Alberalla
Drilling Fluid: None

Static water level after drilling: 5 ft.
Well developed for: 1 hours at: 3/4 gpm
Method of development: Submersible Pump

Well Purpose: Monitoring

Remarks: Water brown @ begining, cleared @ conclusion

Prepared By: Scott
Date Prepared: 1/21/97



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 46479

Atlas Sheet Coordinates 26 : Ø3 . 582

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-3
County BERGEN Municipality LODI BORO Lot No. 7 Block No. 81.Ø1
Address 199 MAIN ST

DATE WELL STARTED 1/14/97
DATE WELL COMPETED 1/14/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAINING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	C	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 20)	4	14	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3	14		#2SAND	#2
Gravel Pack	2	3		#00SAND	#00
Grout	C	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla (JM)

Registration No. 71320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations. See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-3
MUNICIPALITY: Lodi	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.: 26 46479
START DATE: 1-14-97	COMPLETION DATE: 1-14-97	DRILLER: Scott Alberalla	DRILLER LICENSE NO.: J 1320	BORING DIA.: 8.25
LOT: 7	BLOCK: 81.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5 Feet
PROTECTIVE CASING: 3' Stickup	NOTES: Hit obstruction on first attempt; moved hole a few feet and completed well to 14 feet			SHEET

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				1.0	12" Concrete + 6" Subbase	
1-3	1	1/3/3/2	6			
3-5	2	2/12 17/26	29		Moist to wet red/brown medium SAND & GRAVEL	
				10.0		
10-12	3	12/24 24/29	48		Wet grey/brown SILT, trace of fine sand & clay	
				14.0	Boring Complete @ 14 Feet	

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-3

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO.
Lodi	Bergen	New Jersey	26 : 03 : 582	26 46479

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
1-14-97	1-14-97	Scott Alberalla	J 1320	8.25	14 Ft.

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
7	81.01	Hollow Stem Auger	Split Spoon	5 Feet

PROTECTIVE CASING	NOTES
3' Stickup	Hit obstruction on first attempt; moved hole a few feet and completed well to 14 feet

Soil Boring Cross-Reference *E-3*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-14-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alberalla*

Drilling Fluid *None*

Static water level after drilling *5 ft.*

Well developed for _____ hours at _____ gpm

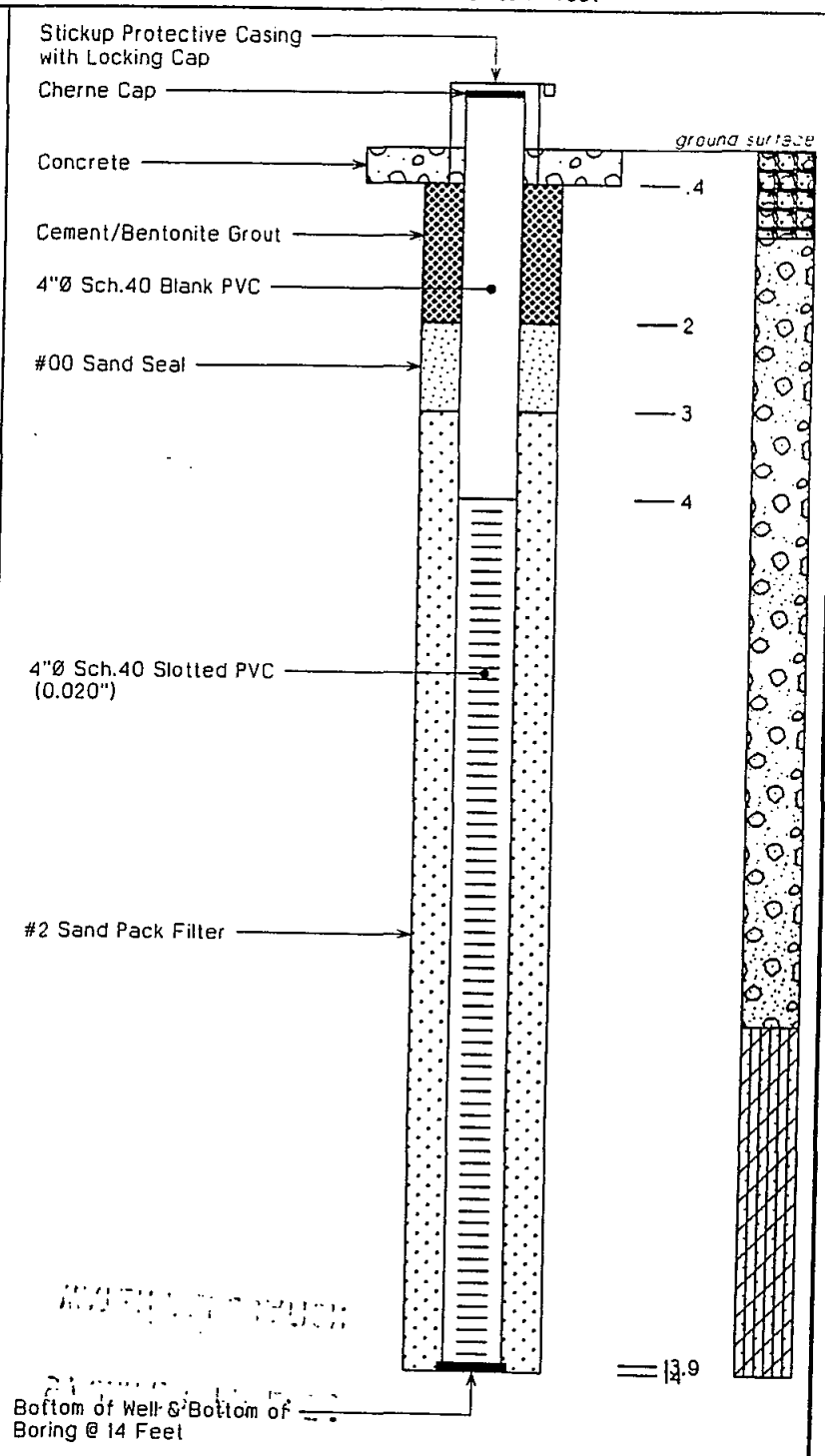
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



OWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46480

Atlas Sheet Coordinates 26 : 03 : [redacted]2

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-1
County BERGEN Municipality LODI BORO Lot No. 8 Block No. 81.01
Address 199 MAIN ST

DATE WELL STARTED 1/9/97
DATE WELL COMPETED 1/9/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-0500

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 16 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 10.2 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 20)	4	16	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	3.5	17		#2 SAND	# 2
Gravel Pack	2.5	3.5		# 00 SAND	# 00
Grout	0	2.5		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method TREMIE
Drilling Method HOLLOW STEM AUGER

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAINING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla (for)

Registration No. 13320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller 1020 Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.: ADV-252.N	HOLE NUMBER: E-1

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO.
Lodi	Bergen	New Jersey	26 : 03 : 582	26 46480

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
1-9-97	1-9-97	Scott Alberalla	J 1320	8.25	17 Ft.

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
8	81.01	Hollow Stem Auger	Split Spoon	6 Feet

PROTECTIVE CASING	NOTES	SHEET
2.5' Stickup		1 of 1

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER *Elev.* Depth	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
				.4	4" Asphalt	
1-3	1	11/11 12/13	23	3.0	Moist black fine SAND, little clay	
3-5	2	13/14 7/5	21		Moist tan SILT & CLAY, some fine Sand, trace of gravel	
5-7	3	6/5/5/4	10	6.0		
7-9	4	5/4/4/6	8		Wet brown fine to coarse SAND, little silt	
15-17	5	1/1/4/7	5	15.0	Wet green/grey CLAY, little silt	
				17.0	Boring Complete @ 17 Feet	

ADVANCED DRILLING, INC.	PROJECT	CLIENT	PROJECT NO.	HOLE NUMBER
	Napp Site	ENSR	ADV-252.N	E-1

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO.
Lodi	Bergen	New Jersey	26 : 03 : 582	26 46480

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
1-9-97	1-9-97	Scott Alberalla	J 1320	8.25	17 Ft.

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
8	81.01	Hollow Stem Auger	Split Spoon	6 Feet

PROTECTIVE CASING	NOTES
2.5' Stickup	

Soil Boring Cross-Reference *E-1*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-9-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alberalla*

Drilling Fluid *None*

Static water level after drilling *10.2 ft.*

Well developed for _____ hours at _____ gpm

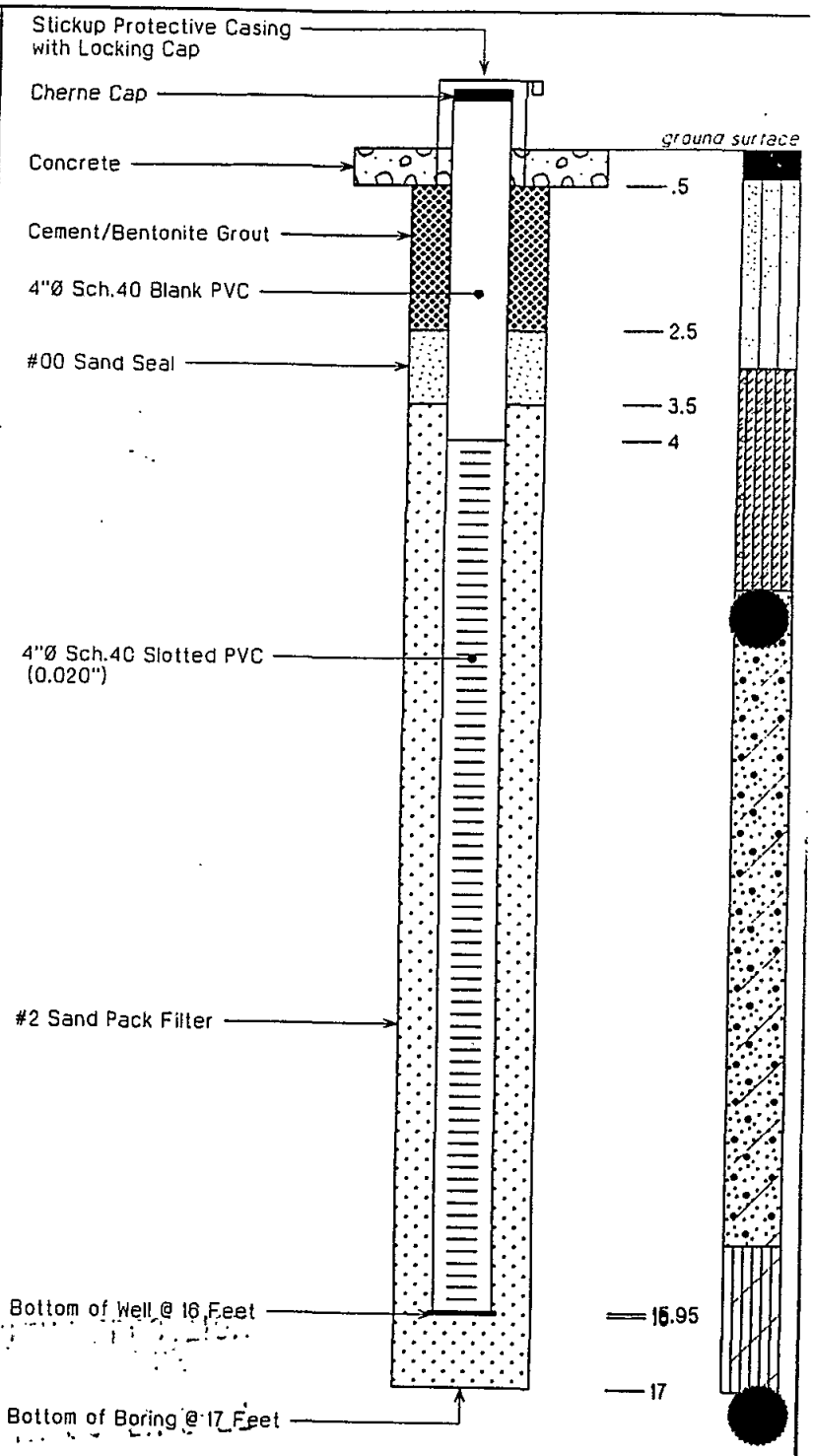
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46481

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

Atlas Sheet Coordinates 26 : 03 :

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-6
County BERGEN Municipality LODI BORO Lot No. 8 Block No. 81.0
Address 199 MAIN ST

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

DATE WELL STARTED 1/10/97
DATE WELL COMPETED 1/10/97

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-05

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FALLING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 20)	3	15	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACK FILTER	2.5	15		SAND	#2
Gravel Pack	2	2.5		SAND	#00
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method Hollow Stem Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) SCOTT ALBERALLA
Driller's Signature Scott Alberalla
Registration No. T 1330 Date 1/21/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ADVANCED DRILLING, INC.	PROJECT: Napp Site	CLIENT: ENSR	PROJECT NO.	HOLE NUMBER: E-6
MUNICIPALITY	COUNTY: Bergen	STATE: New Jersey	COORDINATES: 26 : 03 : 582	WELL PERMIT NO.
START DATE	COMPLETION DATE: 1-10-97	DRILLER: Scott Alderalla	DRILLER LICENSE NO.: J 1320	BORING DIA: 8.25
LOT	BLOCK: 81.01	DRILLING METHOD: Hollow Stem Auger	SAMPLE TYPE: Split Spoon	DEPTH OF GROUNDWATER: 5 Feet
PROTECTIVE CASING	NOTES			SHEET

DEPTH	SAMPLE NUMBER	BLOWS/6" ON SAMPLE SPOON	"N" VALUE	LAYER Elev. Depth	DEPTH	GRAPHIC LOG	SAMPLE	DESCRIPTION AND CLASSIFICATION density, grain size/shape, color, structure composition, sorting, texture, moisture facies, odor	DRILLING NOTES water levels, water return, character of drilling, etc.
		4.5 10/11	15	.3				3" CONCRETE	
					5			Moist to wet black fine SAND, some clay, trace of gravel	
		5.3 8/7	16	10.0	10			Wet black fine to medium SAND, some Gravel & tan/brown Clay/Silt	
								Cobbles @ 15'	
				15.0	15			Boring Complete @ 15 Feet	
					20				
					25				
					30				
					35				

ADVANCED DRILLING, INC.	PROJECT Napp Site	CLIENT ENSR	PROJECT NO.	HOLE NUMBER
				E-6

MUNICIPALITY	COUNTY	STATE	COORDINATES	WELL PERMIT NO
	Bergen	New Jersey	26 : 03 : 582	

START DATE	COMPLETION DATE	DRILLER	DRILLER LICENSE NO.	BORING DIA.	TOTAL DEPTH
	1-10-97	Scott Alderalla	J 1330	8.25	

LOT	BLOCK	DRILLING METHOD	SAMPLE TYPE	DEPTH OF GROUNDWATER
	81.01	Hollow Stem Auger	Split Spoon	5 Feet

PROTECTIVE CASING	NOTES

Soil Boring Cross-Reference *E-6*

Town and City *Lodi*

County and State *Bergen, New Jersey*

Installation Date (s) *1-10-97*

Drilling Method *Hollow Stem Auger*

Driller *Scott Alderalla*

Drilling Fluid *None*

Static water level after drilling *5 ft.*

Well developed for _____ hours at _____ gpm

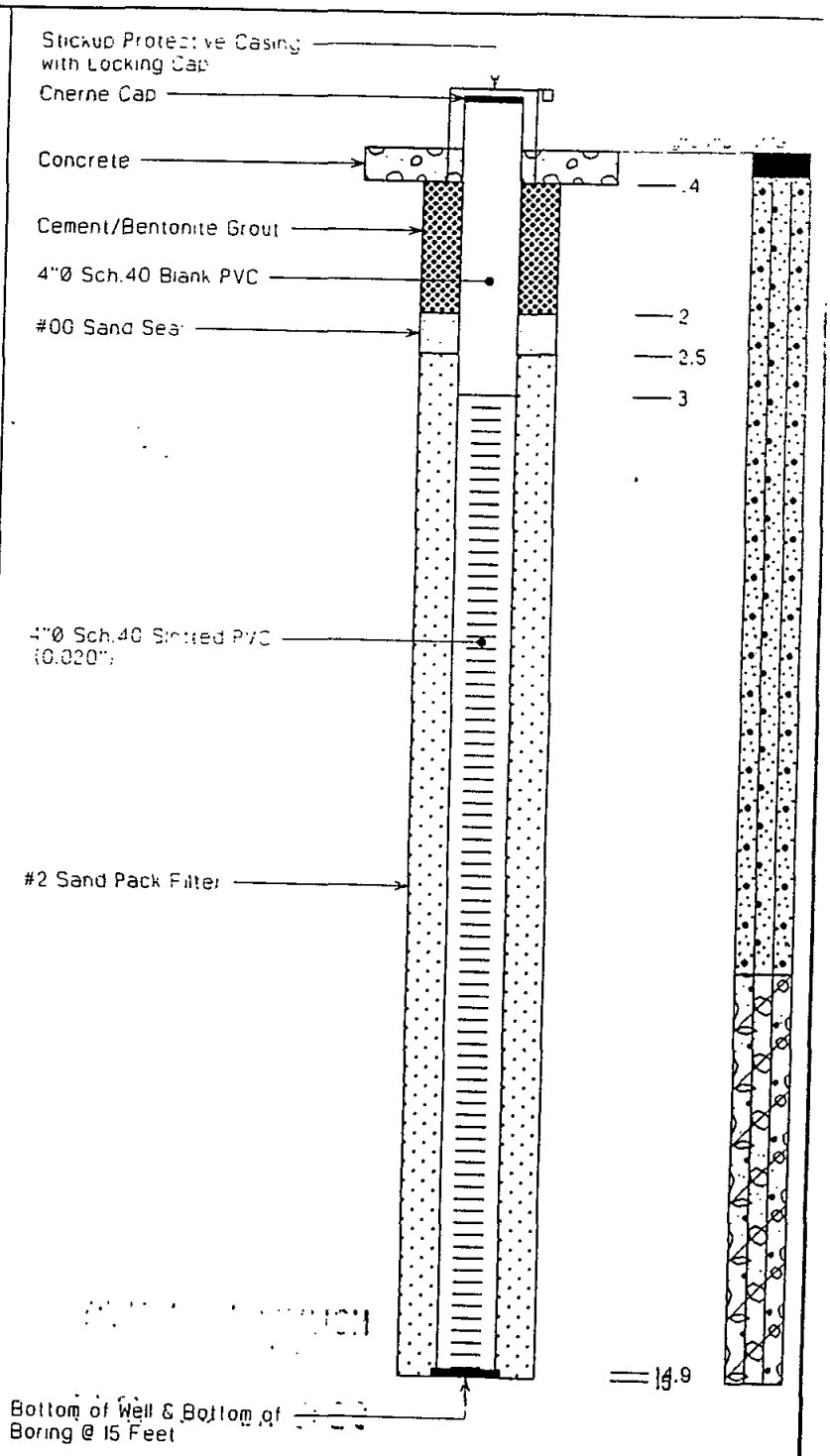
Method of development *By ENSR*

Well Purpose *Monitoring*

Remarks

Prepared By *Scott*

Date Prepared *1/21/97*



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46482

Atlas Sheet Coordinates 26 : Ø3 :

OWNER IDENTIFICATION - Owner NAPP TECHNOLOGIES INC
Address 299 MARKET ST
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. E-7
County BERGEN Municipality LODI BORO Lot No. 8 Block No. 81.Ø1
Address 199 MAIN ST

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ISRA SITE Case I.D.# 95400

DATE WELL STARTED 1 / 13/97
DATE WELL COMPETED 1 / 13/97

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ENSR Tele. # 908/457-050

WELL CONSTRUCTION

Total depth drilled 15.5 ft.
Well finished to 15.5 ft.

Borehole diameter:
Top 8.25 in.
Bottom 8.25 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for _____ hours at _____ gpm

Method of development _____

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	40 sch
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) (No. Used 20)	4	15.5	4	PVC	40 sch
Blank Casings (No. Used)					
~~Tail Piece~~ SAND PACKE FILTER	3	15.5		SAND	# 2
Gravel Pack	2	3		SAND	# CC
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method TREMIE
Drilling Method HOLLOW STEM AUGER

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid NONE Type of Rig FAILING

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) SCOTT ALBERALLA

Driller's Signature Scott Alberalla

Registration No. T1320 Date 1/21/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42498
Atlas Sheet Coordinates 26 : Ø3 : 582

OWNER IDENTIFICATION - Owner MATHE COMPANY
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County BERGEN Municipality LODI BORO Lot No. 21 Block No. 153
Address 169 KENNEDY DRIVE

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 31 / 95
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EDER ASSOCIATES Tele. # 609-695-1050

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 9 in.
Bottom 9 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2	12	2	.020 PVC
Tail Piece				
Gravel Pack	1.5	12		#2 WELL GRAVEL
Annular Seal/Grout	0	1.5		NEAT CEMENT
Method of Grouting	GRAVITY			

Static water level after drilling 6.8 ft.
Water level was measured using M SCOPE
Well was developed for .25 hours at 1 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid ____ Type of Rig IR TH-60
Name of Driller MICHAEL ASSANTE
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M775
Name of Drilling Company PLAINFIELD WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 1' TOPSOIL
1 - 5' SILT AND FILL
5 - 8' RED SANDY SILT, VERY COMPACT W/SMALL GRAVEL
8 - 13' SAND AND GRAVEL

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature ____ Date 10/31/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42499
Atlas Sheet Coordinates 26 : Ø3 : 582

OWNER IDENTIFICATION - Owner MATHE COMPANY
Address 169 KENNEDY DRIVE
City LODI State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County BERGEN Municipality LODI BORO Lot No. 21 Block No. 153
Address 169 KENNEDY DRIVE

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 31 / 95
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EDER ASSOCIATES Tele. # 609-695-1050

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 10.8 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2	2.8	2	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2.8	10.8	2	.020 PVC
Tail Piece				
Gravel Pack	2	10.8		#2 WELL GRAVEL
Annular Seal/Grout	0	2		NEAT CEMENT
Method of Grouting	gravity			

Static water level after drilling 4.2 ft.
Water level was measured using M SCOPE
Well was developed for .25 hours at 1 gpm
Method of development SUBMERSIBLE PUMP
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity gpm
Pump type:
Drilling Method HAND AUGER
Drilling Fluid Type of Rig OSCAR
Name of Driller MICHAEL ASSANTE
Health and Safety Plan submitted? [ ] Yes [X] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M775
Name of Drilling Company PLAINFIELD WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 1'	TOPSOIL
1 - 5'	SANDY SILT
5 - 7'	SAND & SMALL GRAVEL
7 - 12'	SAND AND SILT

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 10/31/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22412
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB-45
County Bergen Municipality ~~EAST RUTH~~ Lot No. ~~ROW~~ Block No. ~~ROW~~
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11/2/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

Total depth drilled 35' ft.
Well finished to 35' ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5'	4"	STEEL CASING (Removed)
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				Pressure Grout

Static water level after drilling NONE ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Mobil B-61
Name of Driller R.V. Gregory
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1296
Name of Drilling Company WARREN EXPLORATION INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-7' 0'
FILL- SILTY SAND + GRAVEL WOOD
7'-12.5'
CEMENT
12.5'-28'
RD. BL. CLAYEY SAND & GRAVEL
28'-30'
ROLLER BIT INTO ROCK
30'-35'
CORED ROCK 35'

4" DIA.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature R.V. Gregory Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22413
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB-46
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~RCW~~ Block No. ~~RCW~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~BRINE~~ Date well completed 11/1/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

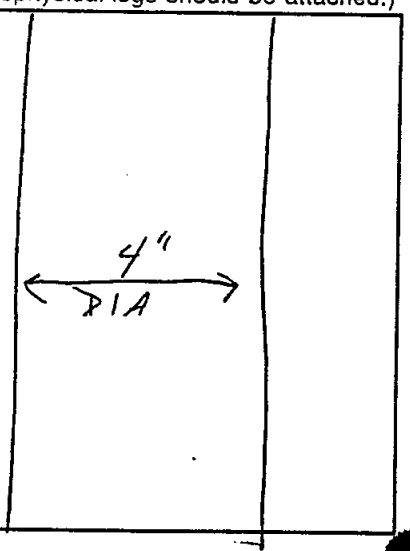
Total depth drilled 39 ft.
Well finished to 39 ft.
Borehole diameter:
Top 7" in.
Bottom 4" in.
Well was finished: ☐ above grade
☒ ~~flush~~ mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	39'	4"	STEEL CASING
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	Pressure grout ~~Tremie~~			

Static water level after drilling — ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ ~~No~~
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Mobil B-61
Name of Driller R V Gregory
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1290
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-9' 0' Fill, Silty Sand, Gravel
9-18' Brown Sand & Gravel
18'-32' Rd.-Br. Clayey Sand+Gravel Some Cobbles & Boulders
32'-34' Roller Bit into Rock
34-39' 39' Core Rock



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature R V Gregory Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22415
Atlas Sheet Coordinates 26 : 03 : 566

OWNER IDENTIFICATION - Owner N.J. DEPT OF TRANSPORTATI
Address 1035 PARKWAY AVENUE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PB-~~4~~ 4/7
County Bergen Municipality ~~LODI BORO~~ Lot No. ~~ROW~~ Block No. ~~ROW~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~ Date well completed 11/27/90
Regulatory Program Requiring Well Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

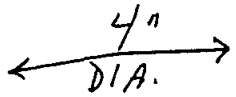
Total depth drilled 40' ft.
Well finished to 40' ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	5'	4"	STEEL CASING (Removed)
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting	Tremie			

Static water level after drilling 5' ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Mobil B-61
Name of Driller Joe Gorman
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B-0139
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'
0'-13' GRAY SAND + GRAVEL some SILT
13'-19' RD. SILTY SAND
19'-34' RED TILL
34'-40' ROCK
40'



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Joe Gorman Date 12-6-90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
5/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 24 - 23478
Atlas Sheet Coordinates 24 : 07 : 544

OWNER IDENTIFICATION - Owner COLDELITE CORP OF AMERICA
Address ROBINSON ROAD AND RT 17 SOUTH
City LODI State NJ Zip Code 07644

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County [illegible] Municipality LODI BORO Lot No. [illegible] Block No. [illegible]
Address [illegible]

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/31/91
Regulatory Program Requiring Well ECRA Case I.D. # [illegible]
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) WHITMAN Co Tele. # 201-390-5858

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 0 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	2'	4"	P.V.C. SCH. 40
Outer Casing (Not Protective Casing)	—	—		
Screen (Note slot size)	2'	10'	4"	" "
Tail Piece	—	—		
(20) Gravel Pack	1'	10'		#2
Annular Seal/Grout	0'	1'		6" BENT. PELL
Method of Grouting				

Static water level after drilling .5 ft.
Water level was measured using TAPE MEASURE
Well was developed for 1 hours at 10 gpm
Method of development SUBMERSIBLE
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGER
Drilling Fluid — Type of Rig SIMCO 2800 HS
Name of Driller MARK LAURA
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1496
Name of Drilling Company INLAND POLLUTION SERVICES INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-10' - MED. SANDS - W/ LITTLE SILT - (RED/BRN.)

WELL SEALED ... 5/10/91 ...

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1-30-91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1081

Form 87-5M-4-49

RECEIVED
JAN 10 1950
Department of Conservation & Economic Development Geological & Topographic Survey

26-03-566 [P]

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 26-130
Application No.
County Bergen

1. OWNER The Interchemical Corp ADDRESS PO Box 167 Hawthorne, N.J.

Owner's Well No. 1 SURFACE ELEVATION 10' Feet (Above mean sea level)

2. LOCATION Lodi, N.J. Bergen Co.

3. DATE COMPLETED Dec 23, 1949 DRILLER Wm. Stothoff Co. Inc.

4. DIAMETER: Top 10 Inches Bottom 10 Inches TOTAL DEPTH 435' Feet

5. CASING: Type Drive pipe Diameter 10 Inches Length 16'11" Feet

6. SCREEN: Type Size of Opening Diameter Inches Length Feet

Range in Depth { Top Feet / Bottom Feet } Geologic Formation

Tail piece: Diameter Inches Length Feet

7. WELL FLOWS NATURALLY Gallons per Minute at Feet above surface

Water rises to Feet above surface

8. RECORD OF TEST: Date Dec 21&22 Yield 187 Gallons per minute

Static water level before pumping 8 Feet below surface

Pumping level 186' feet below surface after 12 hours pumping

Drawdown 178 Feet Specific Capacity Gals. per min. per ft. of drawdown

How Pumped Turbine pump How measured Orifice

Observed effect on nearby wells none

9. PERMANENT PUMPING EQUIPMENT:

Type ? Capacity Gallons per minute

How Driven Horse Power R.P.M.

Depth of pump in well Feet Depth of foot piece in well Feet

10. USED FOR Factory use AMOUNT { Average Gallons Daily / Maximum Gallons Daily }

11. QUALITY OF WATER Sample: Yes No.

Taste none Odor none Color clear Temperature 50 °F

12. LOG See other side (Give details on back of sheet or on separate sheet) Are samples available? no

13. SOURCE OF DATA Well Statement

14. DATA OBTAINED BY H.J. Stothoff DATE Jan 6, 1950

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

FORM 87

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-213
Application No.
County Bergen

WELL RECORD

1. OWNER Frank Dini Co ADDRESS Route #17 Lodi N.J.
Owner's Well No. One SURFACE ELEVATION +35 Feet (Above mean sea level)
2. LOCATION South of #17 on West Side of building.
3. DATE COMPLETED Oct. 6, 1950 DRILLER Rinbrand Well Drilling Co. Inc.
4. DIAMETER: top 8 Inches Botton 8 Inches TOTAL DEPTH 200 Feet
5. CASING: Type Steel Diameter 8 Inches Length 32 Feet
6. SCREEN: Type Size of Opening Diameter Inches Length Feet
Range { Top Feet Geologic Formation
Bottom Feet
Tail piece. Diameter Inches Length Feet
7. WELL FLOWS NATURALLY Gallons per Minute at Feet above surface
Water rises to Feet above surface
8. RECORD OF TEST: Date Oct. 6, 1950 Yield 55 Gallons per minute
Static water level before pumping 5 Feet below surface
Pumping level 20 feet below surface after 8 hours pumping
Drawdown 15 Feet Specific Capacity Gals. per min. per ft. of drawdown
How Pumped Piston How measured barrel
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Fairbanks Morse Mfrs. Name
Capacity 35 G.P.M. How Driven electric H.P. 3 R.P.M. 3500
Depth of Pump in well 60 Feet Depth of Footpiece in well none Feet
Depth of Air Line in well Feet Depth of Meter on Pump
10. USED FOR Plant AMOUNT Average Gallons Daily
Maximum Gallons Daily
11. QUALITY OF WATER Sample: Yes No x
Taste good Odor none Color clear Temp. 60 °F
12. LOG Clay, hard pan, gravel Red rock. Are samples available no
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand
14. DATA OBTAINED BY Adam F Rinbfand Date Nov. 24, 1950

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24644
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS COPROATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~1,B,3,9~~ Block No. ~~8 205~~
Address Rt 17 So. & Bester Ave. - Maywood, N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 5/2/91
Regulatory Program Requiring Well UST Case I.D. # ~~91-02-15-1322-5~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.
Borehole diameter:
Top 8 in.
Bottom 2 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	18	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	18	8	Morie #2
Annular Seal/Grout	1.5 0	2 1.5	8 4	Ben Fonite Portland
Method of Grouting	GRAVITY			

Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller D.J Grahame
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 21212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED ... 5/8/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature D.J Grahame Date 5/17/91

COPIES: White & Gray - DEP Yellow - Driller

SUMMIT DRILLING
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-1266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 1 Coordinate No. 26.03.5.37 Permit No. 26-24644-9
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 18'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 15'
Gravel Pack Size morie # 2 Casing Seal portland
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 1.5'	GROUT	0' - 1'	
6" - 3'	SOLID	1' - 4.5'	red/brn. silty clay, some f/
1.5' - 2'	PELLETS		sand tr. c/f gravel
2' - 18'	GRAVEL	4.5' - 6'	gray organic silt
3' - 18'	SCREEN		
	OPEN HOLE	6' - 7'	gray silt m/f sand
18'	SET WELL	7' - 9'	brn. silty m/f sand
	GPM		
	STNDP.	9' - 11'	brn. m/f sand
X	MANHOLE		
	VAULT	11' - 18'	red/brn. silty f/ sand and c/f gravel, tr. cobbles

Identification of Soils / Remarks

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 24645
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS COPROATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 2
County Bergen Municipality MAYWOOD BORO Lot No. 1,B,3,9 Block No. 8 205
Address Rt. 17 So. & Becker Ave. Maywood N.J.

TYPE OF WELL (as per Well Permit Category) MONITORING Date well completed 5/2/91
Regulatory Program Requiring Well UST Case I.D. # 91-02-15-1322-5
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	16	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	16	8	Morie #2
Annular Seal/Grout	1.5 0	2 1.5	8 8	Ben Meyers, Portland
Method of Grouting	GRAVITY			

Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller D.J. Grahamer
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 21276 Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED ... 5/8/92 .....

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature D.J. Grahamer Date 5/17/91

COPIES: White & Green DEP ; Canary Driller Pink

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

ENVIRONMENTAL

WELL LOG

Well No. MW - 2 Coordinate No. 26.03.5.37 Permit No. 26-24645-7
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 16'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 13'
Gravel Pack Size morie # 2 Casing Seal portland & pellets
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 1.5'	GROUT	0' - 1'	top soil
6" - 3'	SOLID	1' - 5'	fill
1.5' - 2'	PELLETS		
2' 16'	GRAVEL		
3' - 16'	SCREEN	5' - 6'	gray organic silt
	OPEN HOLE	6' - 8'	gray m/f silty sand
16'	SET WELL		
10	GPM	8' - 10'	brn. m/f silty sand
	STNDP.		
X	MANHOLE	10' - 11.5'	gray c/f sand
	VAULT	11.5' - 16'	red/brn. silty f/ sand some c/f gravel, tr. cobbles

Identification of Soils / Remarks

DWR-138 M
6/89

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New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 24646
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS COPROATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County Bergen Municipality MAYWOOD BORO Lot No. 1,B,3,9 Block No. 8 205
Address Rt. 17 So. & Becker Ave - Maywood, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5/2/91
Regulatory Program Requiring Well UST Case I.D. # 91-02-15-1322-5
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	16	4	PVC-020
Tail Piece	—	—	—	—
Gravel Pack	2	16	8	Morie #2
Annular Seal/Grout	1.5 0	2 1.5	8 8	Bent Pellets portland
Method of Grouting	Gravity			

Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller D.J. Grahamer
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. MW- SUMMIT WELL DRILLING
Name of Drilling Company

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature D.J. Grahamer Date 5/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health D...

Summit DRILLING
ENVIRONMENTAL SPECIA

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 3 Coordinate No. 26.03.5.37 Permit No. 26-24646-5
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 16'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 13'
Gravel Pack Size morie # 2 Casing Seal portland & pellets
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

		Identification of Soils / Remarks	
0' - 1.5'	GROUT	0' - 1'	top soil
6" - 3'	SOLID	1' - 5'	fill
1.5' - 2'	PELLETS		
2' - 16'	GRAVEL		
3' - 16'	SCREEN	5' - 7'	gray organic silt
	OPEN HOLE		
16'	SET WELL	7' - 10'	gray-brn. sandy silt
10	GPM		
	STNDP.		
X	MANHOLE	10' - 13'	brn. m/f sand
	VAULT		
		13' - 16'	red/brn. silty f/ sand some c/f gravel, tr. cobbles

WELL SEALED 5/8/92

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24647
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS COPROATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~1,B,3,9~~ Block No. ~~8-205~~
Address Rt 17 So + Becker Ave. Maywood N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 5/21/91
Regulatory Program Requiring Well UST Case I.D. # 91-02-15-1322-5
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N.A. Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	16	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	16	8	Morie #2
Annular Seal/Grout	1.5 / 0	2 / 1.5	8 / 8	Ben Refers portland
Method of Grouting	Gravity			

Static water level after drilling 5 ft.
Water level was measured using TAPE
Well was developed for 1/2 hours at 2 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller DJ Grahames
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 21112 Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 5/8/91

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature DJ Grahames Date 5/17/91

D-1041

COPIES: White & Green - DEP Canary - Driller Pink - Co... Gold... Hard...

Summit DRILLING
ENVIRONMENTAL
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-[illegible]
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 4 Coordinate No. 26.03.5.37 Permit No. 26-24647-3
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 16'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 13'
Gravel Pack Size morie # 2 Casing Seal portland & pellets
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 1.5'	GROUT	0' - 1'	top soil
6" - 3'	SOLID	1' - 5'	fill
1.5' - 2'	PELLETS		
2' - 16'	GRAVEL		
3' - 16'	SCREEN	5' - 10'	gray silty clay, little f/ sand
	OPEN HOLE		
16'	SET WELL		
16'	GPM		
	STNDP.		
X	MANHOLE	10' - 10.5'	gray m/f sand
	VAULT	10.5' - 16'	red/brn. silty f/ sand, some c/f gravel, tr. cobbles

Summit DRILLING ENVIRONMENTAL SERVICES
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 5 Coordinate No. 26.03.5.37 Permit No. 26-24648-1
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 16'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 13'
Gravel Pack Size morie # 2 Casing Seal portland & pellets
Static Water Level 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design				Identification of Soils / Remarks
				0' - 1.5'	GROUT	0' - 1'	asphalt & gravel
				6" - 3'	SOLID	1' - 5'	fill
				1.5' - 2'	PELLETS		
				2' - 16'	GRAVEL		
				3' - 16'	SCREEN	5' - 11'	gray silty f/ sand
					OPEN HOLE		
				'6'	SET WELL		
					GPM		
					STNDP.		
10'				X	MANHOLE		
					VAULT	11' - 16'	brn. m/f sand and c/f gravel, tr. gravel, tr. silt
20'							
30'							
40'							

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24648
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS COPROATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5
County Bergen Municipality MAYWOOD BORO Lot No. ~~1,B,3,9~~ Block No. ~~8 205~~
Address Rt. 17 So. & Becker Ave - Maywood N.J.

TYPE OF WELL (as per Well Permit Category) MONITORING Date well completed 5/2/91
Regulatory Program Requiring Well UST Case I.D. # 91-02-15-1322-5
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	16	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	16	8	Morie #2
Annular Seal/Grout	1.5 / 0	2 / 1.5	8 / 8	Bent. Pellets / portland
Method of Grouting	GRAVITY			

Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 3 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller DJ Grahamer
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 21212 Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED 5/8/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature DJ Grahamer Date 5/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING
ENVIRONMENTAL

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. MW - 6 Coordinate No. 26.03.5.37 Permit No. 26-24649-0
Date Drilled 05/02/91 County Bergen Use monitor
Location Hess Station #30321, Route 17 South & Becker Avenue, Maywood, NJ
Owner Amerada Hess Corporation, 1 Hess Plaza, Woodbridge, NJ 07095
Drilling Method Air Rotary Sampling Method from cuttings
Hole Diameter 8" Total Depth 16'
Casing: Type PVC Diameter 4" Length 2.5'
Screen: Type PVC Slot .020 Diameter 4" Length 13'
Gravel Pack Size morie # 2 Casing Seal portland & pellets
Static Water Level 5' *Geologic Formation*

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

0' - 1.5'	GROUT	0' - 1'	asphalt & gravel
6" - 3'	SOLID	1' - 4.5'	red/brn. silty clay, some f/ sand, some c/f gravel
1.5' - 2'	PELLETS		
2' - 16'	GRAVEL	4.5' - 6'	*gray organic silt*
3' - 16'	SCREEN		
	OPEN HOLE	6' - 7'	gray silty m/f sand
16'	SET WELL	7' - 9'	brn. silty m/f sand
10	GPM		
	STNDP.	9' - 11'	brn. m/f sand
X	MANHOLE		
	VAULT	11' - 16'	red/ brn. silty f/sand, some c/f gravel

DWR-138 M
6/89.

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24649
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner AMERADA HESS CORPORATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW6
County Bergen Municipality MAYWOOD BORO Lot No. 1,B,3,9 Block No. 8 205
Address Ft. 15 So. of Becker Ave. Maywood, N.J.

TYPE OF WELL (as per Well Permit Categories) Date well completed 5/2/91
Regulatory Program Requiring Well MONITORING UST Case I.D. # 91-02-15-1322-5
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) NA Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0.5	3	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3	16	4	PVC-.020
Tail Piece	—	—	—	—
Gravel Pack	2	16	8	Morie #2
Annular Seal/Grout	1.5 / 0	2 / 1.5	8 / 8	Bex Plugs pre Hyd
Method of Grouting	Grout			

Static water level after drilling 5 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 2 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Rotary
Drilling Fluid NA Type of Rig Mobile B80
Name of Driller D.J. Grahamer
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 11212
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

WELL SEALED ... 5/8/92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature D.J. Grahamer Date 5/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
6/89

#532

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27717
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner KIELBASI, TED
Address 100 W. HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County Municipality ~~MAYWOOD BORO~~ Lot No. ~~1~~ Block No. ~~193~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 1/9/92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	10	20	4	PVC
Tail Piece				
Gravel Pack	8	20	8	#1 Morie
Annular Seal/Grout	0	8	8	portland
Method of Grouting	Tremmie			

Static water level after drilling 13 ft.
Water level was measured using Tape
Well was developed for ½ hours at 3 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1546
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Asphalt - Fill
2-4 F-M dk red sand
4-20 red shale with dk red silty fine sand damp

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1047

DWR-135A
1-82

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-1620
APPLICATION NO. 846
COUNTY _____
COORD. 26-03-53

WELL RECORD

1. OWNER Borough of Lodi ADDRESS Lodi, New Jersey
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lodi, New Jersey
3. DATE COMPLETED 5-29-57 DRILLER Artesian Well & Equip. Co.
4. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 403 Feet
5. CASING: Type Steel Diameter 12 Inches Length 48 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Trias. SS & Shi
Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 5-29-57 Yield 600 Gallons per minute
Static water level before pumping 1" Feet below surface
Pumping level 111 feet below surface after 24 hours pumping
Drawdown 110' 11" Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped Deep Well Turbine How measured Orifice
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See other side Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Artesian Well & Equipment Co., Inc
14. DATA OBTAINED BY Artesian Well & Equipment Date 6-3-57

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

D-1048

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17904
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 28
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 12 / 20 / 89
Regulatory Program Requiring Well N/A BORING Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller _____
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 9 Br. Silty Sand
9 - 17 Br. Silty Sand & Gravels
17 - 21 Gray Clay
21 - 27 Red Fine Grained Sandstone
TD 27

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cognascenti Date 12/20/89

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17905
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B38W19D
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 12 / 18 / 89
Regulatory Program Requiring Well MONITORING N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Donald Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 48.5 ft.
Well finished to 47.89 ft.
Borehole diameter:
Top _____ in.
Bottom _____ in.
Well was finished: [x] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2.56 ft.
Was steel protective casing installed? [x] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2.56	47.89	2"	
Outer Casing (Not Protective Casing)	N/A	N/A		
Screen (Note slot size)	21.72	31.90		
Tail Piece				
Gravel Pack	20.7	48.5		
Annular Seal/Grout	18.8	20.7		
Method of Grouting	Trimmie			

Static water level after drilling 13.7 ft.
Water level was measured using M Scope
Well was developed for NA hours at NA gpm
Method of development Airlift
Was permanent pumping equipment installed? [ ] Yes [x] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Auger/Air Rotary
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? [ ] Yes [x] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3 Br. Sand & Cobbles
3-9 Br. Silty Sand & Gravels
9-18 Gr. Sand & Clay
18-48.5 Red Fine Grain Sandstone
TD 48.5

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John K Capozzola Date 12-18-89

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27958
Atlas Sheet Coordinates 26 : 03 : 551

OWNER IDENTIFICATION - Owner SWS REALTY ASSOCIATES
Address 500 ROUTE #17
City HASBROUK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #2
County Bergen Municipality MAYWOOD BORO Lot No. 1 Block No. 240
Address 87 Route #17

TYPE OF WELL (as per Well Permit Category) MONITORING Date well completed 12 / 23 / 91
Regulatory Program Requiring Well ECRA Case I.D. # 87838
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Tele. # (908) 739-6444

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2.5	2	Sch. 40 PVC
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	2.5	7.5	2	Sch.40PVC.020slot
Tail Piece	none			
Gravel Pack	2	7.5		#2 well gravel
Annular Seal/Grout	0	2		Bentonite/cement
Method of Grouting	Gravity Placement			

Static water level after drilling 13.6 ft.
Water level was measured using steel tape
Well was developed for ½ hours at 2 gpm
Method of development Centrifugal pump
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method Hollow stem auger
Drilling Fluid none Type of Rig D-50
Name of Driller Allen Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' Brown silty clay
4'-5' Gray silty clay
5'-10' Red silt
Wl @ 13!6"

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 12/23/91

D-1051

COPIES White & Canary DEP Green Enclosure

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 27959
Atlas Sheet Coordinates 26 : 03 : 551

OWNER IDENTIFICATION - Owner SWS REALTY ASSOCIATES
Address 500 ROUTE #17
City HASBROUK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #3
County Bergen Municipality MAYWOOD BORO Lot No. 1 Block No. 240
Address 87 Route #17

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 23 / 91
Regulatory Program Requiring Well ECRA Case I.D. # 87838
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Tele. # (908) 739-6444

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top . 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	4	Sch. 40 PVC
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	2	8	4	Sch. 40 PVC.020slot
Tail Piece	none			
Gravel Pack	1.5	8		#2 well gravel
Annular Seal/Grout	0	1.5		Bentonite/cement
Method of Grouting	Gravity Placement			

Static water level after drilling 13.6 ft.
Water level was measured using steel tape
Well was developed for ½ hours at 2 gpm
Method of development centrifugal pump
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method Hollow Stem auger
Drilling Fluid none Type of Rig D-50
Name of Driller Allen Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' z Brown silty clay
4'-5' Gray silty caly
5'-10' Red silty clay & gravel
WL @ 13.6"

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 12/23/91

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 27960
Atlas Sheet Coordinates 26 . 03 . 551

OWNER IDENTIFICATION - Owner SWS REALTY ASSOCIATES
Address 500 ROUTE #17
City HASBROUK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #4
County Bergen Municipality MAYWOOD BORO Lot No. 1 Block No. 240
Address 87 Route #17

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 23 / 91
Regulatory Program Requiring Well ECRA Case I.D. # 87838
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Tele. # (908) 739-6444

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch. 40 PVC
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	3	7	4	Sch. 40 PVC.020 slot
Tail Piece	none			
Gravel Pack	2.5	7		#2 well gravel
Annular Seal/Grout	0	2.5		Bentonite/cement
Method of Grouting	Gravity		Placement	

Static water level after drilling 13.6 ft.
Water level was measured using steel tape
Well was developed for ½ hours at 2 gpm
Method of development centrifugal pump
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method Hollow Stem Auger
Drilling Fluid none Type of Rig D-50
Name of Driller Allen Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' Brown silty clay
4'-5' gray silty clay
5'-10' red silt & sand
W1 @ 13.6'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 12.23/91

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26, 03, 5, 51
PERMIT NO. 26-11418
APPLICATION NO. _____
COUNTY Bergen

WELL RECORD

1. OWNER Borough of Lodi ADDRESS 1 Memorial Dr. Lodi N.J.
   Owner's Well No. B-1 SURFACE ELEVATION N/A Feet (Above mean sea level)
2. LOCATION Memorial Drive Fire House Main ST & Graham Ave. Lodi, N.J.
3. DATE COMPLETED 9-10-87 DRILLER Jersey Boring & Drilling Co., Inc.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 23.25 Feet
5. CASING: Type N/A Diameter N/A Inches Length N/A Feet
6. SCREEN: Type N/A Size of Opening N/A Diameter N/A Inches Length N/A Feet
   Range in Depth { Top N/A Feet; Bottom N/A Feet } Geologic Formation Brown Sand with silt and Gravel
   Tail Piece: Diameter N/A Inches Length N/A Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at N/A Feet above surface
   Water rises to N/A Feet above surface
8. RECORD OF TEST: Date N/A Yield N/A Gallons per minute
   Static water level before pumping N/A Feet below surface
   Pumping level N/A feet below surface after N/A hours pumping
   Drawdown N/A Feet Specific Capacity N/A Gals. per min. per ft. of drawdown
   How pumped N/A How measured N/A
   Observed effect on nearby wells N/A
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name N/A
   Capacity N/A G.P.M. How Driven N/A H.P. N/A R.P.M. N/A
   Depth of Pump in well N/A Feet Depth of Footpiece in well N/A Feet
   Depth of Air Line in well N/A Feet Type of Meter on Pump N/A Size N/A Inches
10. USED FOR Test Boring AMOUNT { Average N/A Gallons Daily; Maximum N/A Gallons Daily }
11. QUALITY OF WATER N/A Sample: Yes ____ No X
    Taste N/A Odor N/A Color N/A Temp. N/A °F.
12. LOG See Geologic Formation Are samples available? No
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Jersey Boring & Drilling Co., Inc.
14. DATA OBTAINED BY Jersey Boring & Drilling Co., Inc. Date 9-23-87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27957
Atlas Sheet Coordinates 26 : 03 : 551

OWNER IDENTIFICATION - Owner SWS REALTY ASSOCIATES
Address 500 ROUTE #17
City HASBROUK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #1
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~1~~ Block No. ~~240~~
Address 87 Route #17

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 23 / 91
Regulatory Program Requiring Well ECRA Case I.D. # 87838
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Tele. # (908) 739-6444

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2.5	2	Sch. 40 PVC
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	2.5	7.5	2	Sch. 40 PVC.020 slot
Tail Piece	none			
Gravel Pack	2	7.5		#2 well gravel
Annular Seal/Grout	0	2		bentonite/cement
Method of Grouting	Gravity Placement			

Static water level after drilling 13.6 ft.
Water level was measured using Steel tape
Well was developed for ½ hours at 2 gpm
Method of development centrifugal pump
Was permanent pumping equipment installed? ☒ Yes ☐ No
Pump capacity n/a gpm
Pump type: n/a
Drilling Method Hollow Stem Auger
Drilling Fluid none Type of Rig D-50
Name of Driller Allen Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' Brown silty clay
4'-5' Gray silty clay
5'-10' Red silt & sand
WL @ 13.6"

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 12/23/91

D-1055

COPIES: White & Green - DEP Canary - Driller Pink - Owner Gold - Consultant

11/83

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2611490

TEST Boring

26 03 551

WELL RECORD

APPLICATION NO. _____

COUNTY Bergen

1. OWNER Borough of Lodi ADDRESS Memorial Drive Lodi N.J.
Owner's Well No. B-1 thru B-4 SURFACE ELEVATION _____ Feet (Datum mean sea level)
2. LOCATION Same As Above Fire House, Main St & Graham Terr. Lot 1 Blk 81 C
3. DATE COMPLETED 8-25-87 DRILLER Jersey Boring
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top 0' Feet / Bottom 27' Feet Geologic Formation _____
Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
Static water level before pumping _____ Feet below surface
Pumping level _____ feet below surface after _____ hours pumping
Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped _____ How measured _____
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR TEST Boring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ✓ No _____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See back of well Record Are samples available? NO
(Give depths on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA JB&D
14. DATA OBTAINED BY Jersey Boring & Drilling Date 9-10-87

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17895
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner
Address U.S. DEPT. OF ENERGY
City 100 NORTH HUNTER AVENUE MAYWOOD State NJ Zip Code 07607

WELL LOCATION - *If not the same as owner please give address.* Owner's Well No. B 38G 19
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11 / 24 / 89
Regulatory Program Requiring Well BORING N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 7 Br. Silty Sand

7 - 16 Gr. Clay

16 - 21 Broken Red Fine Grained Sandstone

TD 21

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Capobianco Date 11-24-89

P-1057

Summit Drilling Company, Inc.

BORING LOG

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. HMW 9A Coordinate No. 26.03.5.37 Permit No. 26-17689-1
Date Drilled 10/05/89 County Bergen Use Monitor
Location United Technology, 200 Gregg St., Lodi, NJ 07644
Owner Fred C. Hart Assoc., 530 5th Ave., New York, NY 10036
Drilling Method Mud & air rotary Sampling Method core 17' - 25'
Hole Diameter 0'-21'=10" , 21'-42'=6" Total Depth 42'
Casing: Type 6" Steel Diameter 6" Length
Screen: Type rock well Slot Diameter Length
Gravel Pack Size Casing Seal 6" casing , grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design	Identification of Soils / Remarks
			0' - 21' GROUT SOLID PELLETS GRAVEL SCREEN 42' SET WELL	0' - 1' Asphalt, roadstone 1' - 17' Red/br. m/f sand, tr. silt, tr. m/f gravel, some cobbles
10'				Core # Run 1 17' - 25' Rec. 7.8
				17' - 42' Sandstone
20'				10" HOLE TO 21' 6" CASING TO 21'
				6" HOLE TO 42'
30'				
40'				

DWR-138 M
11/98

MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59009

Atlas Sheet Coordinates 26 03 533

OWNER IDENTIFICATION - Owner GZESNIEWSKI, R
Address 80 PARK PLAZA T-25
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-30
County BERGEN Municipality MAYWOOD BORO Lot No. 91 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 2/21/01
DATE WELL COMPLETED 2/23/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 55 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 12 ft.

Water level was measured using Tape

Well was developed for 16 hours
at .5 gpm

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	4	steel	Sch. 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	30	55	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	30	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0–2 Brown Silty Sand + Gravel
2–10 Red Brown Fine Silty Sand w Clay
Water @ 17
10–20 Red sandstone/shale Bedrock
30
40
50
55 EOH 55'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 3/5/01

COPIES: White - DEP Canary - Driller 1059 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59008

Atlas Sheet Coordinates 26 03 533

OWNER IDENTIFICATION - Owner GZESNIEWSKI, R
Address 80 PARK PLAZA T-25
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3S
County BERGEN Municipality MAYWOOD BORO Lot No. 91 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 27 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 17 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 12 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	7	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	7	17	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	5	20	6	Morie 00	700 lbs
Grout	0	5	6	Neat Cement Bentonite	200 lbs. 10 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 12 / 18 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med Fine Red Brown Silty Sand
5
10 Fine Silty Red Sand w/ Clay
15
20 Weathered Red Shale
EOH 20

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ -59108

Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~533~~

OWNER IDENTIFICATION - Owner ~~FENNO, NATHAN~~
Address ~~1 RAILROAD AVENUE~~
City ~~COOPERSTOWN~~ State ~~NY~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-20D
County ~~BERGEN~~ Municipality ~~MAYWOOD BORO~~ Lot No. ~~55~~ Block No. ~~124~~
Address ~~WEST CENTRAL AVE.~~

DATE WELL STARTED 2 / 23 / 01
DATE WELL COMPLETED 2 / 27 / 01

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 55 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 15 ft.

Water level was measured using Tape

Well was developed for 4 hours
at 2 gpm

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	30	55	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	30	8	Neat Cement Bentonite	800 lbs. 40 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 3 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Red Brown Silty Fine Sand + Gravel
10
20 Water 15'
Red Shale Bedrock
30
40
50
55 EOH 55

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59107

Atlas Sheet Coordinates 26 : 03 : 533

OWNER IDENTIFICATION - Owner FENNO, NATHAN
Address 1 RAILROAD AVENUE
City COOPERSTOWN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 20 S
County BERGEN Municipality MAYWOOD BORO Lot No. 55 Block No. 124
Address WEST CENTRAL AVE.

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 27 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 15 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	6	Morie 00	
Grout	0	3	6	Neat Cement Bentonite	74 lbs. 4 lbs.

Grouting Method Tremie
Drilling Method Drive & Wash Rotary.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Red Silty Sand w Clay
5
10 Med Fine Sand and Gravel
15
20 Red Shale
EOH 20

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61567

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-23 D
County BERGEN Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 6/25/01
DATE WELL COMPLETED 6/26/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 796-66

WELL CONSTRUCTION

Total depth drilled 71' ft.
Well finished to 71' ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 71' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 12' ft.

Water level was measured using Tape

Well was developed for 4 hours at 2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	51'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch
Open Hole or Screen (No. Used .010)	51'	71'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	49'	71'		#1 Morie	800 Lbs
Grout OUTER CASING	Grade	49'	10	Neat Cement	584/50 lbs.
Grout INNER CASING	Grade	42	6	Bentonite	36/48 lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill material. White To Black F-M Sand & silt
25'-33': Red/Brn M Sand & silt w/ Fx Shale.
33'-71': Fx Shale Fram Rock
Fx @ 42, 60' approx

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1063 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60718

ROCHELLE PARK TWP CLERK Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner _____
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-6
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 5/23/01
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 6/01/01
Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 120 ft.
Well finished to 120 ft.

Borehole diameter:
Top 10" TO 31' in.
Bottom 6" TO 120 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling APPROX 25 ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	31'	6"	Steel	19#/SCH40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
~~Open Hole~~ or Screen (No. Used)	31'	120'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	31'		Neat Cement Bentonite	150 lbs. 98 lbs.

Method of development SURGE, AIRLIFT, Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____

Grouting Method Tremie
Drilling Method AIR Rotary

Drilling Fluid _____ Type of Rig T-460

Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. TABOR
Driller's Signature Richard M. Tabor
Registration No. V-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White-Black + Sand & Silt.
25'-29': Red/Brn Sand & Silt w/fx Shale
29-31': fx Shale TGm Bedrock
31'-120': Bedrock FX @ 50 & 75'

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.___" LONGITUDE: ___° ___' ___.___"

D-1064

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61566

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 23 DD
County BERGEN Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 6/28/01
DATE WELL COMPLETED 6/29/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-66

WELL CONSTRUCTION

Total depth drilled 102 ft.
Well finished to 102 ft.

Borehole diameter:
Top 18" To 35' in.
Bottom 6" To 102' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 15' ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	82'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/ft Sch 40
Open Hole or Screen (No. Used .010)	82'	102'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	80	102'		#1 Morie	400 Lbs
Grout	Grade/6"	35'/80'		Neat Cement 58/546 lbs. Bentonite 36/56 lbs.	

Grouting Method Tremie
Drilling Method AIR ROTARY

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid ____ Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~

Well Driller (Print) Richard M Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material (Brick) Black f-M Sand + silt
25'-35': Red/Brn f-M Sand silt w/ fx Shale
35'-102': fx Shale + Clay Bedrock
fx @ 50', 75'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60704

Atlas Sheet Coordinates 26 : 03 : 53

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State N.J Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PW 1D

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 7/23/01

TYPE OF WELL (as per Well Permit Categories) RECOVERY DATE WELL COMPLETED 7/24/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-661

WELL CONSTRUCTION

Total depth drilled 110 ft.

Well finished to 110 ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 110 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 25 ft.

Water level was measured using tape

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	90'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	1946/Sch.
Open Hole or Screen (No. Used .010)	90'	110'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	86'	110'		#1 Morie	900lb.
Grout Outer Casing	Grade	40'		Neat Cement 750	846. lbs.
Inner Casing	6"	86'		Bentonite 44	54 lbs.

Method of development Surge, Airlift, pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Grouting Method Tremie

Drilling Method AIR Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1698 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White to BLACK f sand & silt

25'-38': Red/Brn f-m Sand & silt w/ fx Shale.

38'-40': fx Shale — Bedrock

40'-110': Bedrock

Fx @ approx 50' - 85'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' .

D-1066

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59051

Atlas Sheet Coordinates 26 : 03 536

OWNER IDENTIFICATION - Owner DeSAUSSAYRE, WILLIAM
Address 23 W. HOWCROFT ROAD
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12S
County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124
Address ROUTE 17 & MAYWOOD AVENUE

DATE WELL STARTED 11 / 29 / 00
DATE WELL COMPLETED 11 / 29 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 14 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 1.5 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	19	6	Morie 0	500 lbs
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med. Dark Brown Silty Sand
5 ↓
Med Fine Red Silty Sand and Gravel
10 ↓
15 Bedrock Red Shale
EOH 19'
20

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 19 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60358

Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner DESAUSSAURE, WILLIAM

Address 23 WEST HOWCROFT ROAD

City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12D (RD)

County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124

Address ROUTE 17 & MAYWOOD AVE.

DATE WELL STARTED 2/14/01

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 2/16/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 54 ft.
Well finished to 54 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for — hours at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	29	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	29	54	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	29	8	Neat Cement Bentonite	900 lbs. 32 lbs.

Grouting Method Tremmie

Drilling Method Drive + Wash Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 3/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Red Medium Fine Silty Sand
10 w/ Clay + Gravel
Water 7'
20 19'
Red Shale
30 Bedrock
40
50
54 EOH 54'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59044

Atlas Sheet Coordinates 26 :03 536

OWNER IDENTIFICATION - Owner MAYWOOD BOROUGH CLERK
Address 459 MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10S
County BERGEN Municipality MAYWOOD BORO Lot No. ROW Block No. ROW
Address WEST HUNTER AVE & MAYWOOD

DATE WELL STARTED 11 / 2 / 00
DATE WELL COMPLETED 11 / 2 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 10 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for — 2 hours
at —.5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	10	2	PVC	Sch 40
Blank Casings (No. Used ,)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	11	6	Morie 0	250 lbs
Grout	0	3	6	Neat Cement Bentonite	~~94~~ lbs. 5 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 19 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Fine Silty Sand + Gravel
5
10 Red Shale Bedrock
EOH 11'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59045

Atlas Sheet Coordinates 26 :03 536

OWNER IDENTIFICATION - Owner MAYWOOD BOROUGH CLERK
Address 459 MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10 D
County BERGEN Municipality MAYWOOD BORO Lot No. ROW Block No. ROW
Address WEST HUNTER AVE & MAYWOOD

DATE WELL STARTED 1 / 2 / 01
DATE WELL COMPLETED 1 / 5 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 46 ft.
Well finished to 46 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	21	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	21	8	Neat Cement Bentonite	500 lbs. 25 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium fine Red silty Sand + Gravel
10 ↓ Water 10'
Red Shale
20 Bedrock
30
40
46 EOH 46

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59046

Atlas Sheet Coordinates 26 : 03 539

OWNER IDENTIFICATION - Owner HELLER, HOWARD, ESQ.
Address 77 TARRYTOWN RD SUITE 100
City WHITE PLAINS State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11 S
County BERGEN Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address BEECH ST. & MAYWOOD AVE.

DATE WELL STARTED 11 / 28 / 00
DATE WELL COMPLETED 11 / 28 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 8.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4.3 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3.5	8.5	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	1.5	10.5	6	Morie 00	250 lbs
Grout	0	1.5	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med. Fine Dark Red Silty Sand + Gravel w/ cobbles
5
10 Red Shale
EOH 10.5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 19 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59050

Atlas Sheet Coordinates 26 : 03 539

OWNER IDENTIFICATION - Owner DeSAUSSAYRE, WILLIAM
Address 23 W. HOWCROFT ROAD
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12 D
County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124
Address ROUTE 17 & MAYWOOD AVENUE

DATE WELL STARTED 12/4/00
DATE WELL COMPLETED 12/11/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 54 ft.
Well finished to 54 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 6 hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	29	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	29	54	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	29	8	Neat Cement Bentonite	800 lbs. 50 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Block Top
Medium Fine Silty Red
10 Sand & Gravel
↓
19
20 Red Shale
Bedrock
30
Highly Fractured
40
↓
50
54 EOH 54'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59048

Atlas Sheet Coordinates 26 : 03 538

OWNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
Address 99 ESSEX STREET
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13 D
County BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
Address 100 W. HUNTER AVENUE

DATE WELL STARTED 12 / 4 / 00
DATE WELL COMPLETED 12 / 6 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 3 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	25	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	25	50	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	25	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
5 Fine Brown Silt — Water 6'
Fine Medium Red Silty
10 Sand + Gravel
13 ↓
20 Red Sandstone
Red Shale
30 Bedrock
40 ↓
50 EOH 50'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 .59052

Atlas Sheet Coordinates 26 : 03 538

OWNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
Address 99 ESSEX STREET
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 13 S
County BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
Address ESSEX STREET & ROUTE 17

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 12 / 5 / 00
DATE WELL COMPLETED 12 / 5 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 14.75 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 3 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	11	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	14.75	6	Morie 0	350 lbs
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 19 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Med. Fine Red Silty Sand w/ Gravel + Cobbles
5
10
15 Red Shale
EOH 14.75

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61750

Atlas Sheet Coordinates 26 : 03 : 641

OWNER IDENTIFICATION - Owner SCANEL, PETER
Address 111 ESSEX ST
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21RP
County BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 131
Address 100 W HUNTER AVE

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

DATE WELL STARTED 6/26/01
DATE WELL COMPLETED 6/26/01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-66[illegible]

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.

Borehole diameter:
Top 6" in.
Bottom 6" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 9 ft.

Water level was measured using TAPE

Well was developed for 1 hours
at 2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid - Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	4'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used, 010)	4'	14'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	14'		#1 Morie	~~500~~ Lbs
Grout	2"	2'		Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-14': Red/Brn f-M Sand & silt w/ fx shale
H2O @ 9'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company LEONARD REXRODE, JR.
Well Driller (Print) Richard M Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

LATITUDE: ___ ° ___ ' ___.___ " OR LONGITUDE: ___ ° ___ ' ___.___ "

COPIES: White - DEP Canary - Driller P-1075 Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60010

Atlas Sheet Coordinates 26 : 03 6:19

WNER IDENTIFICATION - Owner R.R. ASSOC./ACURA OF OCEA
ddress 320 RIVER STREET
ity HACKENSACK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1A
ounty BERGEN Municipality HACKENSACK CITY Lot No. 1-5,7,33 Block No. 402A
ddress 320-332 RIVER ST.

DATE WELL STARTED 1/9/01
DATE WELL COMPLETED 1/9/01

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) The Whitman Companies Tele. # 732/390-5858

WELL CONSTRUCTION

otal depth drilled 15 ft.
Vell finished to 15 ft.

:orehole diameter:
Top 10.25 in.
Bottom 10.25 in.

Vell was finished: ☐ above grade
☑ flush mounted

' finished above grade, casing height (stick up) above land surface ____ ft.

Vas steel protective casing installed?
☑ Yes ☐ No

Static water level after drilling 7 ft.

Vater level was measured using TAPE

Vell was developed for 1/2 hours
at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig Auger

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	4	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ Sand Filter	3	15		#1 SAND FILTER	
Gravel Pack	2	3		#00 SAND SEAL	
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method HS Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

1" Asphalt
1"-2' - Gravel
2'-8' - Moist & wet F-M SAND
8'-15' - Wet Silty, F-SAND, some clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.,
Well Driller (Print) ROGER LOGEL
Driller's Signature Roger Logel
Registration No. M1166 Date 2/5/01

COPIES. White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59043

Atlas Sheet Coordinates 26 : 03 614

WNER IDENTIFICATION - Owner FENNO, NATHAN
ddress 1 RAILROAD AVE.
ty COOPERSTOWN State NY Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9D
ounty BERGEN Municipality MAYWOOD BORO Lot No. 55 Block No. 124
ddress 100 W. HUNTER AVE.

DATE WELL STARTED 12/12/00
DATE WELL COMPLETED 12/18/00

/PE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

tal depth drilled 47 ft.
ell finished to 47 ft.

rehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
) e land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 13 ft.

ater level was measured using Tape

ell was developed for 4 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	22	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	22	47	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	22	8	Neat Cement Bentonite	750 lbs. 35 lbs.

ethod of development Submersible Pump

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME-75

ealth and Safety Plan submitted? ☒ Yes ☐ No

vel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

ell Driller (Print) Steve Wolf

iller's Signature Steve Wolf

egistration No. 1579 Date 2/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Red Silty Sand and Gravel Some Cobbles
10
12 ↓
Red Shale Bedrock
20
30
40
47 EOH 47

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 55121

Atlas Sheet Coordinates 26 : 03 565

OWNER IDENTIFICATION - Owner FLAG REALTY INC
Address 5 CENTRAL AVE
City CLIFTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 2 Block No. 224
Address 10 META LANE

DATE WELL STARTED 10 / 27 / 99
DATE WELL COMPLETED 10 / 27 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ESA Tele. # 732-469-8888

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 2 ft.

Water level was measured using m-scope

Well was developed for 1 hours
at 1-2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	1	11	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.75	13	6x2	#2 Gravel	
Grout	0	.75	6x2	Neat Cement Bentonite	94 lbs. ____ lbs.

Grouting Method Mixed and poured
Drilling Method Hollow stem auger

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid - Type of Rig Acker Soil Max

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SAMUEL STOTHOFF CO., INC.

Well Driller (Print) Paul Vrabel

Driller's Signature

Registration No. 1545J Date 10/29/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0' - 4" Blacktop
4" - 8' Fill
8' - 13' Red silty sand & gravel

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
:/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59042

Atlas Sheet Coordinates 26 :03 6I4

WNER IDENTIFICATION - Owner FENNO, NATHAN
ddress 1 RAILROAD AVE.
ity COOPERSTOWN State NY Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 9 S
ounty BERGEN Municipality MAYWOOD BORO Lot No. 55 Block No. 124
ddress 100 W. HUNTER AVE.

DATE WELL STARTED 11 / 3 / 00
YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 11 / 3 / 00
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556 0160

WELL CONSTRUCTION

otal depth drilled 13.5 ft.
'ell finished to 13 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

'ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) e land surface — ft.

'as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 12 ft.

'ater level was measured using Tape

'ell was developed for 2 hours
.5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	13	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	13.5	6	Morie 0	300 lbs
Grout	0	3	6	Neat Cement Bentonite	150 lbs. 10 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

lethod of development Submersible Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

)rilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company H. LEONARD REXRODE, JR.

Vell ler (Print) Steve Wolf

)riller's Signature Steve Wolf

-nistration No. 1579 Date 1 / 18 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Red Silty Sand w/ Gravel & Cobbles
5 ↓
10
13.5 Red Shale
EOH 13.5

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

VR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62159

Atlas Sheet Coordinates 26 : 03 : 61

WNER IDENTIFICATION - Owner R R ASSOCIATES/ACURA OF

ddress 320 RIVER ST

ty HACKENSACK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2R

ounty BERGEN Municipality HACKENSACK CITY Lot No. 1-5,7,34 Block No. 402A

ddress 320-332 RIVER ST

YPE OF WELL (as per Well Permit Categories) MONITORING

DATE WELL STARTED 8 / 6 / 01

DATE WELL COMPLETED 8 / 6 / 01

egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Co/Mike Percelay Tele. # 732-390-5858

WELL CONSTRUCTION

otal depth drilled 12 ft.

/ell finished to 12 ft.

orehole diameter:
Top 10 in.
Bottom 10 in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) above land surface --- ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 3 ft.

/ater level was measured using m scope

/ell was developed for .5 hours
at 1 gpm

Method of development sub pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	-3"	3	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 010)	3	12	4	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	12	10	#1 sand	
Grout	0	2	10	Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Gravity placement

Drilling Method Hollow stem auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ---- gpm

Pump type: ----

Drilling Fluid ---- Type of Rig Auger

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TALON DRILLING COMPANY

Well Driller (Print) Anthony Pressimone

Driller's Signature Anthony Pressimone

Registration No. ID0023177 Date 8 / 9 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-10 Gravel fill
10-12 Brown shilty pete

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

0216
012

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61564

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24D
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 20.01
Address 100 W HUNTER AVE

DATE WELL STARTED 8/20/01
DATE WELL COMPLETED 8/21/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # (201) 226-661

WELL CONSTRUCTION

Total depth drilled 68' ft.
Well finished to 68' ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 68' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface 3 ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 12 gpm

Method of development Surge, Airlift, Pump-

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid ~ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	48'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used .010)	48'	68'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	47'	~~68'~~		#1 Morie	800 lbs.
Grout OUTER CASING	Grade	35'		Neat Cement	82 / 584 lbs.
Grout INNER CASING	Grade	48'		Bentonite	8 / 36 lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. V-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White to Black f-m Sand & Silt
25'-28': Red/Brn f-m Sand & Silt w/ f-x Shale
28'-35': f-x Shale Trace Bedrock
35'-68': Bedrock
f-x 28' 48' approx

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.
email: info@summitdrilling.

WELL LOG

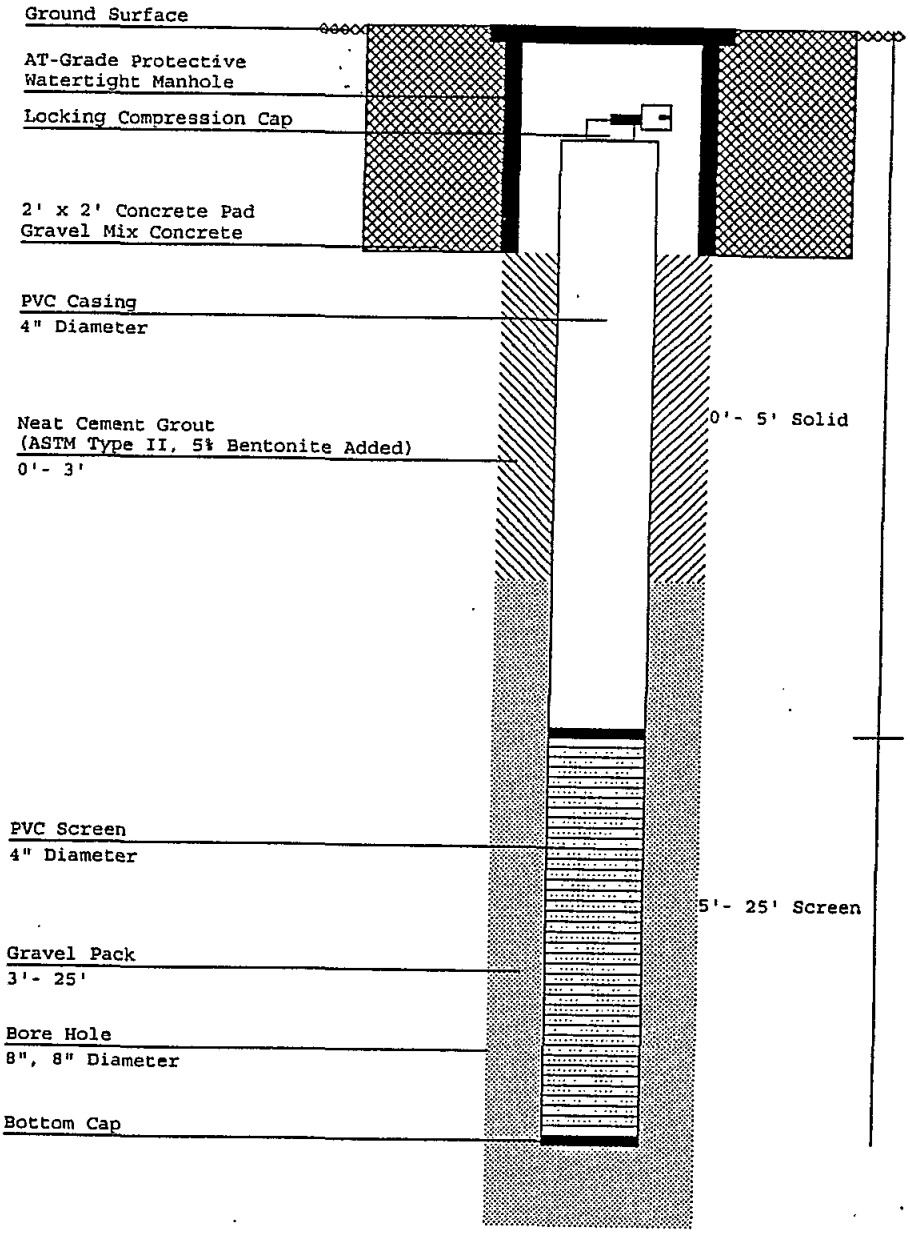
WELL: MW6 DATE DRILLED: 09/20/2001 COORD #1: 26.03.534 PERMIT #1: 26-62383
COORD #2: PERMIT #2:
SITE: Amoco Service Station #70, 80 Essex Street, , Lodi, NJ 07644 COUNTY: Bergen
OWNER: BP Amoco Oil Company, 300 Interpace Parkway, , Parsippany, NJ 07054 XSTREET:
USE: Monitor

INNER CASING: PVC	OUTER CASING:	SCREEN TYPE 1: PVC		DRILLING METHOD: Air Rotary
DIAMETER: 4"	DIAMETER:	SCREEN TYPE 2:		SAMPLING METHOD:
LENGTH: 5'	LENGTH:	DIAMETER: 4"		HOLE DIA: 8", 8"
		LENGTH 1: 20'		TOTAL DEPTH: 25'
SET WELL: 25'	GAL PER MIN: 1/2	LENGTH 2:		
GRAVEL PK SZ: Morie #2	STAT H2O LVL: 10'	SLOT SIZE: .020		
DRILLER: Todd Naugle	DEVELOPMENT METHOD: pump	CASING SEAL: Portland		
SURFACE COMPLETION: M	DEVELOPMENT TIME: 1/2	OPEN HOLE:		

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 12' Sand & silt some gravel.
12'- 25' Weathered sandstone.



)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59052

Atlas Sheet Coordinates 26 : 03 538

ER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
Address 99 ESSEX STREET
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 13 S
County BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
Address ESSEX STREET & ROUTE 17

DATE WELL STARTED 12 / 5 / 00
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 12 / 5 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 14.75 ft.
Well finished to 11 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Well protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 3 hours at 1 gpm

Method of development Submersible Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	11	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	14.75	6	Morie 0	350 lbs
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller Signature Steve Wolf

Registration No. 1579 Date 1 / 19 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Med. Fine Red Silty Sand w/ Gravel + Cobbles
5
10
15 Red Shale
EOH 14.75

COPIES: White - DEP Canary - Driller D-1083 Pink - Owner Goldenrod - Health Dept.

FORM 87

26-03-551 [D]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3526
Application No. _____
County _____

WELL RECORD

1. OWNER Andrew Zientek ADDRESS Garfield, N.J.
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 381 Semuel Ave., Garfiedl , N.J.
3. DATE COMPLETED Nov.20,1965 DRILLER John Lauritsen
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 115 Feet
5. CASING: Type Steel Drive Casing Diameter 6 Inches Length 36 Feet
6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Hardpan & Redshale
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Nov.20,1965 Yield 20 Gallons per minute
Static water level before pumping 30 Feet below surface
Pumping level 50 feet below surface after 5 hours pumping
Drawdown 50 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Submersible ~~Rxxxxx~~ Pump How measured 5 gallon pail
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Household AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. ____
Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG _____ Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

D-1084

(NOTE: Use other side of this form ...)

)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 61909

Atlas Sheet Coordinates 26 03 298

)WNER IDENTIFICATION - Owner TURLICK, MARK
\ddress 20 SUN FIRE AVE
City CAMP HILL State PA Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 10
County BERGEN Municipality MAYWOOD BORO Lot No. 52 Block No. 107
\ddress 9 BROOK AVE

DATE WELL STARTED 7/11/01
DATE WELL COMPLETED 7/11/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 90-06-15-1693

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ESA Tele. # (732)469-8888

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5.5 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at ____ gpm

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid NA Type of Rig MOBILE B57

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	.25	3	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3	13	4	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	13	4	Gravel	#0
Grout	0	2		Neat Cement Bentonite	150 lbs. ____ lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6" Asphalt & gravel
6"-7' Fill (gravel, sand & silt)
7'-11' Gray Sand
11'-12.5' Sandy Silt (Red)
12.5'-13' Weathered Rock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HORIZON ENVIRONMENTAL DRILLING
Driller (Print) BRIAN QUINN
Driller's Signature
Registration No. J1495 Date 7/26/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: __ ° __ ' __.__ " LONGITUDE: __ ° __ ' __.__ "

D-1085

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61910

Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner TURLICK, MARK
Address 20 SUN FIRE AVE
City CAMP HILL State PA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 11
County BERGEN Municipality MAYWOOD BORO Lot No. 52 Block No. 107
Address 9 BROOK AVE

DATE WELL STARTED 7/11/01
DATE WELL COMPLETED 7/11/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 90-06-15-1693

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ESA Tele. # (732) 469-5888

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 5.5 ft.

Water level was measured using Tape

Well was developed for 1/2 hours at ____ gpm

Method of development Submersible pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	.25	3.5	4	PVC	SCH 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3.5	13.5	4	PVC	SCH 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2	13.5		gravel	#0
Grout	0	2		Neat Cement / Bentonite	150 lbs. / ____ lbs.

Grouting Method GRAVITY
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid NA Type of Rig MOBILE B57

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HORIZON ENVIRONMENTAL DRILLING

Well Driller (Print) BRIAN QUINN

Driller's Signature

Registration No. J1495 Date 7/26/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-6" Asphalt & gravel
6"-7' Fill (gravel, sand, silt)
7-11' Gray Sand
11-13.5' Sandy Silt (Weathered)
Weathered rock @ 13.5'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Gold

OWR-138 M
3/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60719

Atlas Sheet Coordinates 26 03 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-7
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 5/10/01
DATE WELL COMPLETED 5/17/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 109 ft.
Well finished to 109 ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 109' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface) ft.

Was steel protective casing installed? ☐ Yes ☒ No APPROX

Static water level after drilling 25' ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	19#6/SchA
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	109'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement / Bentonite	92 lbs. / 18 lbs.

Method of development Surge, Pump, Airlift
Grouting Method TREMMIE
Drilling Method AIR ROTARY

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations,

0-25': fill Material white to Black f Sand + Silt
25'-29': Red Brn F-M Sand & silt
29-38': Same as above w/ Fx Shale
38'-109': Competent Shale
Fx @ 52' & 79'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60718

Atlas Sheet Coordinates 26 - 03 - 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-6
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 5/23/01
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 6/01/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 120 ft.
Well finished to 120 ft.

Borehole diameter:
Top 10" TO 31' in.
Bottom 6" TO 120 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling APPROX 25 ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Method of development SURGE, AIRLIFT, PUMP

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T-460

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	31'	6"	Steel	19#/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
~~Open Hole~~ or Screen (No. Used)	31'	120'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	31'		Neat Cement	152 lbs.
				Bentonite	48 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White-Black f sand & silt.
25'-29': Red/Brn sand & silt w/fx Shale
29-31': fx Shale Thin Bedrock
31'-120': Bedrock fx @ 50 & 75'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) RICHARD M. TABOR
Driller's Signature Richard M. Tabor
Registration No. T-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
3/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61566

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-0 RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 23 DD
County BERGEN Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 6/28/01
DATE WELL COMPLETED 6/29/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 102 ft.
Well finished to 102 ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 102' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 15' ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	82'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	1916/Sch 40
Open Hole or Screen (No. Used 010)	82'	102'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	80	102'		#1 Morie	900 Lbs
Grout	Grade/6"	35'/80'		Neat Cement 584/546 lbs.	
				Bentonite 36/56 lbs.	

Grouting Method Tremie
Drilling Method AIR ROTARY

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material (Brick, Blacktop, M Sand + silt
25'-35': Red/Brn f-M Sand, Silt w/ fx Shale
35'-102': fx Shale, Clay, Redrock
fx @ 50', 78'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller 1089 Pink - Owner Goldenrod - Health Dept.

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61565

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24 DD
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 20.01
Address 100 W HUNTER AVE

DATE WELL STARTED 8/12/01
DATE WELL COMPLETED 8/13/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 105 ft.
Well finished to 105 ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 105' in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 18 gpm

Method of development Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	80'	4"	Steel	19#/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)	80'	105'	4"		
Tail Piece					
Gravel Pack					
Grout — Outer Casing	Grade	35'		Neat Cement	584/44 lbs.
Inner Casing	Grade	80'		Bentonite	36/56 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material - White To Black f-m Sand & silt
25'-33': Red/Brn f-m Sand w/ fx Shale
33'-105': Fx Shale then Bedrock
Fx @ 50' & 80' approx

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. T-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60716

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-4

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 5/14/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 6/17/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 61 ft.

Well finished to 61 ft.

Borehole diameter:
Top 10" to 40' ~~61'~~ in.
Bottom 6" to 61 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 25' ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	1946/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (~~largest diameter~~)					
Open Hole or Screen (No. Used)	40'	61'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement Bentonite	~~252~~ lbs. 48 lbs.

Grouting Method Tremmie

Drilling Method AIR ROTARY

Method of development air lift, surge, pump.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1698 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-~~25~~': Fill material white & Black silty sand

25'-~~35~~': Red/Brn M Sand & fx Shale

~~35~~'-~~40~~': Bedrock Competent

40'-61': Bedrock Competent fx @ 50'

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60704

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

.ddress 194-D RT 17 NORTH

;ity ROCHELLE PARK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. PW 1D

;ounty BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

.ddress 100 W HUNTER AVE

YPE OF WELL (as per Well Permit Categories) RECOVERY

DATE WELL STARTED 7/23/01

DATE WELL COMPLETED 7/24/01

legulatory Program Requiring Well Case I.D.#

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-6618

WELL CONSTRUCTION

otal depth drilled 110 ft.

/ell finished to 110 ft.

orehole diameter:
Top 10" To 40' in.
Bottom 6" To 110 in.

/ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick ip) above land surface ____ ft.

/as steel protective casing installed? ☐ Yes ☒ No

tatic water level after drilling approx 25 ft.

/ater level was measured using Tape

/ell was developed for 4 hours

t 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	90'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used .010)	90'	110'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	86'	110'		#1 Morie	900 lbs
Grout Outer Casing	Grade	40'		Neat Cement	753/846 lbs.
Inner Casing	6"	86'		Bentonite	49/54 lbs.

Method of development Surge, Airlift, pump

Grouting Method Tremie

Drilling Method AIR ROTARY

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White to BLACK f Sand & Silt

25'-38': Red/Brn f-M Sand & silt w/ f-x Shale.

38'-40': f-x Shale — Bedrock

40'-110': Bedrock f-x @ approx 50' - 85'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61564

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24D
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 20.01
Address 100 W HUNTER AVE

DATE WELL STARTED 8/20/01
DATE WELL COMPLETED 8/21/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6

WELL CONSTRUCTION

Total depth drilled 68' ft.
Well finished to 68' ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 68' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 12 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	48'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch
Open Hole or Screen (No. Used .010)	48'	68'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	47'	~~68'~~		#1 Morie	800 lbs.
Grout - OUTER CASING	Grade	35'		Neat Cement ~~72~~ 584	lbs.
Grout - INNER CASING	Grade	48'		Bentonite ~~48~~ 36	lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

Method of development Surge, Airlift, Pump-

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid ~ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. D-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White to Black f-m Sand & silt
25'-28': Red/brn f-m sand & silt w/f-x Shale
28'-35': f-x Shale Then Bedrock
35'-68': Bedrock
Fx 28' 48' approx

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___ ° ___ ' ___.__ " LONGITUDE: ___ ° ___ ' ___.__

COPIES: White - DEP Canary - Driller D-1093 Pink - Owner Goldenrod - Health Dept.

)WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60717

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-5

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 8/6/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 8/7/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-6618

WELL CONSTRUCTION

Total depth drilled 62' ft.

Well finished to 62' ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 62' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 43 ft.

Water level was measured using Tape

Well was developed for 4 hours at 62 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	42'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used 018)	42'	62'	2"	PVC	Sch [redacted]
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	40	62		#1 Morie	700 Lbs
Grout	6"/Grade	40'/42'		Neat Cement 384/732 lbs. Bentonite 36/48 lbs.	

Grouting Method Tremmie

Drilling Method AIR ROTARY

Method of development Surge, airlift, pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. T-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material/ White To Black f Sand & Silt
25'-37': Red/Brn Sand & Silt & fx Shale
37'-40': fx Shale — Bedrock
40'-62': Competent Shale

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

D-109

COPIES: White - DEP Canary - Driller

DWR-138 M
3/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. _____ - 26 - 60712

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ17

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 11 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 11 / 01

Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 4 hours at 1/2 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150
Grout	0	2	3	Neat Cement Bentonite	~~94~~ lbs. 6 lbs.

Grouting Method Trommie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
Process Waste
8 Black Gray Med Fine
10 Silty Sand
18 EOH 18' Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller 1095 Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

ENTERED

Well Permit No. 26 - 61154

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D RT. 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. P2-17A
County BERGEN Municipality ROCHELLE PARK Lot No. 1 Block No. 12B
Address 100 W. HUNTER AVE.

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
DATE WELL STARTED 4/20/01
DATE WELL COMPLETED 4/20/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-6618

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 13' ft.

Borehole diameter:
Top 2¼ in.
Bottom 2¼ in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1 hours at ½ gpm

Method of development Whale Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	3'	1"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3'	13'	1"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2½	13'		#0 Sand	100
Grout Portland	Grade	2½		Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method DIRECT PUSH

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geo-Probe

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADT-MIDATLANTIC INC.
Well Driller (Print) Richard M TABOR
Driller's Signature Richard M. Tabor
Registration No. D-1598 Date 5/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-½': Grass + Topsoil
½'-6': White silt process waste
6'-10': Black F Sand & silt
10'-12½': Gray F Sand + Fx Shale
12½-13': Fx Shale Then Bedrock
End drilling @ 13'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.__" LONGITUDE: ___° ___' ___.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60711

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 16
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 11 / 01
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 11 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	24	3	Morie #0	150 lbs
Grout	0	3	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Direct push

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt Process Waste
8
10 Medium fine grey silty Sand
20
28
24 EOH 24' Red Shale

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40896.0 EASTING: 74,070.2
OR
LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60710

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 15
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 10 / 01
DATE WELL COMPLETED 4 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	6	21	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	21	3	Morie #0	150
Grout	0	3	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
5 ↓ Grey Black Silty Sand
10 ↓
18 Red Brown Sand + Gr
20 Bedrock 21'
21 EOH 21'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET
NORTHING: 408960 EASTING: 740702
OR
LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. _____ - 26 60709

Atlas Sheet Coordinates 26 03 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 14

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

Address 100 W HUNTER AVE

DATE WELL STARTED 4/12/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4/12/01

Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	6	21	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	4	21	3	Morie #0	150
Grout	0	4	3	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt Process Waste
10 ↓ Black Grey Medium Fine Silty Sand
19 ↓
20 Red Med sand + Gravel
21 Red Shale Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6/6/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40.896Q EASTING: 74.070Z

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60708

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 13

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 10 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours
at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150 lbs
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt Process Waste
10
14 Black Grey Medium Fine Silty Sand
18
20 Red Shale Bedrock EOH 18'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40896.0 EASTING: 74.0702

LATITUDE: ° ' . " OR LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller D-1100 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
3/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60707

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 17

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 10 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150
Grout	0	2	3	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Fill-White Silt (Process Waste)
10
12 Med Fine Black Grey Sand + Silt.
18 Weathered Bedrock
20 EOH 18'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 408960 EASTING: 740702

OR

LATITUDE: __ ° __ ' __ . __ " LONGITUDE: __ ° __ ' __ . __ "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60706

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 11

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 9 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 9 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	24	3	Morie #0	200 lbs
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Fill - White Silt
8 Process Waste
10 Black Grey Med Fine Silty Sand
20 Red Brown Med Fine Sand + Gravel
24 Bedrock Red Shale
EOH 24'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40860 EASTING: 74.0702

LATITUDE: ° ' " OR LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1102 Pink - Owner Goldenrod - Health Dept.

)WR-138 M
/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60705

Atlas Sheet Coordinates 26 : 03 : 534

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State N.J Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 10

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 9 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 9 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 2. in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at 1/2 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	24	3	Morie #0	200
Grout	0	3	3	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill
White Silt (Process Paste)
8
10 Grey Black Medium Fine
Sand + Silt.
↓
20
24 Red Brown Medium Sand + Gr.
Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60703

Atlas Sheet Coordinates 26 : 03 : 534

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
ddress 194-D RT 17 NORTH
ty ROCHELLE PARK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. PW 1 S
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
ddress 100 W HUNTER AVE

DATE WELL STARTED 4 / 3 / 01
DATE WELL COMPLETED 4 / 6 / 01

'PE OF WELL (as per Well Permit Categories) RECOVERY
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

tal depth drilled 23.5 ft.
ell finished to 23.5 ft.

rehole diameter:
Top 8 in.
Bottom 8 in.

ell was finished: ☐ above grade ☒ flush mounted

inished above grade, casing height (stick) above land surface — ft.

as steel protective casing installed? ☐ Yes ☒ No

atic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 4 hours
2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	4	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3.5	23.5	4	PVC	Sch 40 Wire Wrap
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	23.5	8	Morie #0	900 lbs
Grout	0	3	8	Neat Cement	188 lbs.
				Bentonite	12 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive & Wash Rotary

ethod of development Submersible Pump

'as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid — Type of Rig Mobile B-61

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE JR

/ell Driller (Print) Steve Wolf

riller's Signature Steve Wolf

egistration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Grass + Topsoil
Fill - White silt
↓
10
Black/Gray Fine Medium Sand + Silt
↓
20 Red Brown Sand + Gravel
23.5 EOH 23.5 Bedrock

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,8960 EASTING: 74,0702

OR

LATITUDE: 74° 04' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61567

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-23 D
County BERGEN Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address 100 W HUNTER AVE

DATE WELL STARTED 6/25/01
DATE WELL COMPLETED 6/26/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 71' ft.
Well finished to 71' ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 71' in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 12' ft.

Water level was measured using Tape

Well was developed for 4 hours
at 2 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	51'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used 10)	51'	71'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	49'	71'		#1 Morie	500 Lbs.
Grout OUTER CASING	GRADE	49'	10	Neat Cement	584/52 lbs.
INNER CASING	GRADE	42	6	Bentonite	36/48 lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill material White To Black F-M Sand & Silt
25'-33': Red/Brn M Sand & Silt w/ Fx Shale
33'-71': Fx Shale Plan Bedding
Fx @ 42, 60' approx

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1105 Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59008

Atlas Sheet Coordinates 26 03 533

OWNER IDENTIFICATION - Owner GZESNIEWSKI, R
Address 80 PARK PLAZA T-25
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3S
County BERGEN Municipality MAYWOOD BORO Lot No. 91 Block No. 124
Address 100 W HUNTER AVE

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 27 / 00

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 17 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 12 ft.

Water level was measured using Tape

Well was developed for 1 hours
@ 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	7	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	7	17	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	5	20	6	Morie 00	700 lbs
Grout	0	5	6	Neat Cement Bentonite	200 lbs. 10 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med Fine Red Brown Silty Sand
5
10 Fine Silty Red Sand w/ Clay
15
20 Weathered Red Shale
EOH 20'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 12 / 18 / 00

D-1106

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59107

Atlas Sheet Coordinates 26 : 03 : 533

OWNER IDENTIFICATION - Owner FENNO, NATHAN
Address 1 RAILROAD AVENUE
City COOPERSTOWN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 20 S
County ~~BERGEN~~ Municipality MAYWOOD BORO Lot No. 55 Block No. 124
Address ~~WEST CENTRAL AVE.~~

DATE WELL STARTED 11 / 27 / 00
DATE WELL COMPLETED 11 / 27 / 00

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 15 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	6	Morie 00	
Grout	0	3	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremie
Drilling Method Drive + Wash Rotary.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~
Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Red Silty Sand w Clay
5 ↓
10 Med Fine Sand and Gravel
15 ↓
20 Red Shale
EOH 20

D-1107

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59009

Atlas Sheet Coordinates 26 03 533

WNER IDENTIFICATION - Owner GZESNIEWSKI, R
ddress 80 PARK PLAZA T-25
ity NEWARK State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-30
ounty BERGEN Municipality MAYWOOD BORO Lot No. 91 Block No. 124
ddress 100 W HUNTER AVE

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

DATE WELL STARTED 2/21/01
DATE WELL COMPLETED 2/23/01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

otal depth drilled 55 ft.
ell finished to 55 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 12 ft.

ater level was measured using Tape

ell was developed for 16 hours
.5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	4	steel	Sch. 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	30	55	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	30	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie

lethod of development Submersible

Drilling Method Drive + Wash Rotary

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME-75

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

/ell Driller (Print) Steve Wolf

riller's Signature Steve Wolf

egistration No. 1579 Date 3/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0–2 Brown Silty Sand + Gravel
2–10 Red Brown Fine Silty Sand w Clay — water 12'
10–20 Red sandstone/shale Bedrock
20–30
30–40
40–50
50–55
55 EOH 55'

D-1108

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59108

Atlas Sheet Coordinates 26 : 03 533

OWNER IDENTIFICATION - Owner FENNO, NATHAN
Address 1 RAILROAD AVENUE
City COOPERSTOWN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-20D
County BERGEN Municipality HAYWOOD BORO Lot No. 55 Block No. 124
Address WEST CENTRAL AVE.

DATE WELL STARTED 2 / 23 / 01
DATE WELL COMPLETED 2 / 27 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 55 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 15 ft.

Water level was measured using Tape

Well was developed for 4 hours at 2 gpm

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	30	55	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	30	8	Neat Cement Bentonite	800 lbs. 40 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Brown Silty Fine Sand + Gravel
10
20 Water 15'
Red Shale Bedrock
30
40
50
55 EOH 55

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 3 / 5 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

)WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59012

Atlas Sheet Coordinates 26 03 532

)WNER IDENTIFICATION - Owner STAVOLA, GUSSIE & THOMAS
\ddress PO BOX 1058
City HAYWOOD State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8S
County BERGEN Municipality ROCHELLE PARK T Lot No. 35 Block No. 24.02
\ddress 100 W HUNTER AVE

DATE WELL STARTED 11 / 30 / 00
DATE WELL COMPLETED 11 / 30 / 00

'YPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

otal depth drilled 20 ft.
Vell finished to 15 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

Vell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) above land surface — ft.

Vas steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 11 ft.

Vater level was measured using Tape

Vell was developed for 2 hours
t 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	6	Morie 00	450 lbs
Grout	0	3	6	Neat Cement Bentonite	150 lbs. 10 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 18 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fine Red Silty Sand
5
10
+2 Med Fine Dk Red Sand + Gravel
15 Weathered Red Shale
20 Bedrock
EOH 20'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

OWR-138 M
1/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61468

Atlas Sheet Coordinates 26 : 03 535

OWNER IDENTIFICATION - Owner ~~ROCHELLE PARK TWP. CLERK~~
Address ~~194-D ROUTE 17 NORTH~~
City ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-8
County ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. 1 Block No. ~~128~~
Address ~~100 W. HUNTER AVE.~~

DATE WELL STARTED 5/22/01
DATE WELL COMPLETED 6/05/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-665

WELL CONSTRUCTION

Total depth drilled 115' ft.
Well finished to 115' ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 115' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ~~35~~ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 25 gpm

Method of development Airlift, Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40	6"	Steel	19 lbs/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	115'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement ~~150~~ lbs. Bentonite ~~18~~ lbs.	

Grouting Method Tremmie
Drilling Method Air Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~Mr LEONARD REXRODE, JR.~~
Well Driller (Print) Richard M. Taboe
Driller's Signature Richard M. Taboe
Registration No. T-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White To Black F Sand & Silt
25-38': Red/Brown F-M Sand & Fx Shale
38-104': Bedrock Fx approx 57' & 81'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

D-1111

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61467

Atlas Sheet Coordinates 26 03 535

WNER IDENTIFICATION - Owner ~~ROCHELLE PARK TWP. CLERK~~
ddress ~~194-D ROUTE 17 NORTH~~
ty ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-3
ounty ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~1~~ Block No. ~~128~~
ddress ~~100 W. HUNTER AVE.~~

DATE WELL STARTED 7/23/01
DATE WELL COMPLETED 7/24/01

YPE OF WELL (as per Well Permit Categories) PIEZOMETER
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

otal depth drilled 57 ft.
ell finished to 57 ft.

orehole diameter:
Top 10" To 35' in.
Bottom 6" To 57' in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface ____ ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling approx 20 ft.

ater level was measured using Tape

ell was developed for 4 hours
12 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	37'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used 010)	37'	57'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	35'	57'		#1 Morie	~~700 Lbs~~ 65#/bg
Grout OUTER CASING	GRADE	35'	10	Neat Cement	65 1/2 50 lbs.
INNER CASING	GRADE	37'	6	Bentonite	42 1/2 35 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

Method of development Surge & pump.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White To Black f-M Sand & Silt

25-33': Red/Brn M Sand & Silt w/Fx Shale

33'-37': Fx Shale To 35' T.D. Auger Refusal.

Fx approx 40'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61464

Atlas Sheet Coordinates 26 03 535

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
ddress 194-D RT. 17 NORTH
ity ROCHELLE PARK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-22
ounty BERGEN Municipality ROCHELLE PARK T. Lot No. ROW Block No. ROW
ddress 100 W. HUNTER AVE.

DATE WELL STARTED 6/20/01
DATE WELL COMPLETED 6/20/01

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

otal depth drilled 10 ft.
/ell finished to 10 ft.

orehole diameter:
Top 6" in.
Bottom 6" in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up ve land surface — ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 4½' ft.

/ater level was measured using Tape

/ell was developed for 1 hours
t 2 gpm

Method of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	2'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	2'	10'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	10'		#0 Morie	50 Lbs
Grout	Grade	1'		Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Trumpie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-10': fill sand, f-m sand w/ cobbles & fx shale
H2O @ 4½'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. T-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

D-1113

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60358

Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner DESAUSSAURE, WILLIAM
Address 23 WEST HOWCROFT ROAD
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12D (RD)
County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124
Address ROUTE 17 & MAYWOOD AVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

DATE WELL STARTED 2/14/01
DATE WELL COMPLETED 2/16/01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 54 ft.
Well finished to 54 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for — hours
— gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	29	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	29	54	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	29	8	Neat Cement Bentonite	700 lbs. 32 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 3/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Medium Fine Silty Sand
10 w/ Clay + Gravel
19' Water @ 19'
20 Red Shale
30 Bedrock
40
50
54 EOH 54'

COPIES: White - DEP Canary - Driller Pink - Owner

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59051

Atlas Sheet Coordinates 26 : 03 536

OWNER IDENTIFICATION - Owner DeSAUSSAVRE, WILLIAM
Address 23 W. HOWCROFT ROAD
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12S
County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124
Address ROUTE 17 & MAYWOOD AVENUE

DATE WELL STARTED 11/29/00
DATE WELL COMPLETED 11/29/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 14 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick pipe above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 1.5 hours
1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	14	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	19	6	Morie 0	500 lbs
Grout	0	2	6	Neat Cement	94 lbs.
				Bentonite	4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1/19/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med. Dark Brown Silty Sand
5 ↓
Med Fine Red Silty Sand and Gravel
10 ↓
15 Bedrock Red Shale EOH 19'
20

COPIES: White - DEP Canary - Driller Pink - Owner

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59045

Atlas Sheet Coordinates 26 :03 536

OWNER IDENTIFICATION - Owner MAYWOOD BOROUGH CLERK
Address 459 MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10 D
County BERGEN Municipality MAYWOOD BORO Lot No. ROW Block No. ROW
Address WEST HUNTER AVE & MAYWOOD

DATE WELL STARTED 1 / 2 / 01
DATE WELL COMPLETED 1 / 5 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 46 ft.
Well finished to 46 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 3 hours
2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	21	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	21	8	Neat Cement Bentonite	500 lbs. 25 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium fine Red Silty Sand + Gravel
10 ↓ Water 10'
Red Shale
20 Bedrock
30
40
46 EOH 46

D-1116

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59174

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner EXXON MOBIL CORP.
Address 1900 E LINDEN AVE
City LINDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County BERGEN Municipality LODI BORO Lot No. ROW Block No. ROW
Address OUTWATER LA & MAIN ST

DATE WELL STARTED 12/22/00
DATE WELL COMPETED 12/22/00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Tele. # 732 536 8500

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 12 ft.

Water level was measured using Probe

Well was developed for 1/2 hours at — gpm

Method of development Pump & Surge

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geo Probe

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	3/4	PVC	Sch 40
Middle Casing (for triple cased wells only)	—		—	—	
Outer Casing (largest diameter)	—		—	—	
Open Hole or Screen (No. Used 1)	5	17	3/4	PVC	10 Slot
Blank Casings (No. Used —)	—		—	—	
Tail Piece	—		—	—	
Gravel Pack	3	17	3	Sand	#1
Grout	0	3	3	Neat Cement Bentonite	10 lbs. 1 lbs.

Grouting Method PRESSURE
Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-17' Brown silty sand to bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HANDEX CORP./CHRIS O'SHAUGHNESSY
Well Driller (Print) Chris O'Shaughnessy
Driller's Signature
Registration No. J1419 Date 12/22/00

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59052

Atlas Sheet Coordinates 26 : 03 538

WNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
ddress 99 ESSEX STREET
ity MAYWOOD State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 13 S
ounty BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
ddress ESSEX STREET & ROUTE 17

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

DATE WELL STARTED 12 / 5 / 00
DATE WELL COMPLETED 12 / 5 / 00

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

otal depth drilled 14.75 ft.
ell finished to 11 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for 3 hours
1 gpm

ethod of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid — Type of Rig CME 75

ealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	11	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	14.75	6	Morie 0	35016s
Grout	0	2	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Med. Fine Red Silty Sand w/ Gravel + Cobbles
5
10
15 Red Shale
EOH 14.75

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.
ell Driller (Print) Steve Wolf
riller's Signature Steve Wolf
egistration No. 1579 Date 1 / 19 / 01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

)WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59050

Atlas Sheet Coordinates 26 : 03 539

)WNER IDENTIFICATION - Owner DeSAUSSAVRE, WILLIAM
\ddress 23 W. HOWCROFT ROAD
City MAYWOOD State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-12 D
County BERGEN Municipality MAYWOOD BORO Lot No. 17 Block No. 124
\ddress ROUTE 17 & MAYWOOD AVENUE

DATE WELL STARTED 12/4/00
'YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 12/11/00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 54 ft.
Well finished to 54 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 6 hours at 2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	29	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	29	54	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	29	8	Neat Cement Bentonite	800 lbs. 50 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Block Top
Medium Fine Silty Red
10 Sand & Gravel
↓
19
20 Red Shale
Bedrock
30
Highly Fractured
40
↓
50
54 EOH 54'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2/6/01

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59048

Atlas Sheet Coordinates 26 : 03 538

OWNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH JR.
Address 99 ESSEX STREET
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-13 D
County BERGEN Municipality MAYWOOD BORO Lot No. 1 Block No. 125
Address 100 W. HUNTER AVENUE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 12 / 4 / 00
DATE WELL COMPLETED 12 / 6 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 3 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	25	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
(Open Hole) or Screen (No. Used)	25	50	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	25	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Black Top
5	Fine Brown Silt — Water 6'
	Fine Medium Red Silty Sand + Gravel
10	
13	↓
20	Red Sandstone
	Red Shale
30	Bedrock
	↓
40	
50	EOH 50'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59043

Atlas Sheet Coordinates 26 :03 6:4

OWNER IDENTIFICATION - Owner FENNO, NATHAN
Address 1 RAILROAD AVE.
City COOPERSTOWN State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-9D
County BERGEN Municipality MAYWOOD BORO Lot No. 55 Block No. 124
Address 100 W. HUNTER AVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 12/12/00
DATE WELL COMPLETED 12/18/00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 47 ft.
Well finished to 47 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 13 ft.

Water level was measured using Tape

Well was developed for 4 hours
1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	22	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	22	47	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	22	8	Neat Cement Bentonite	750 lbs. 35 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Red Silty Sand and Gravel Some Cobbles
10
12 ↓
Red Shale Bedrock
20
30
40
47 EOH 47

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1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -59046

Atlas Sheet Coordinates 26 03 539

OWNER IDENTIFICATION - Owner HELLER, HOWARD, ESQ.
Address 77 TARRYTOWN RD SUITE 100
City WHITE PLAINS State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11 S
County BERGEN Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address BEECH ST. & MAYWOOD AVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 11 / 28 / 00
DATE WELL COMPLETED 11 / 28 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 8.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4.3 ft.

Water level was measured using Tape

Well was developed for 1 hours
1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3.5	8.5	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	1.5	10.5	6	Morie 00	250 lbs
Grout	0	1.5	6	Neat Cement Bentonite	94 lbs. 4 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med. Fine Dark Red Silty Sand + Gravel w/ Cobbles
5
10 Red Shale
EOH 10.5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1 / 19 / 01

D-1122

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

J#1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48628

Atlas Sheet Coordinates 26 : 03 : 539

OWNER IDENTIFICATION - Owner ~~STEPAN COMPANY~~
Address
City ~~100 WEST HUNTER AVE.~~ MAYWOOD State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-2
County ~~BERGEN~~ Municipality ~~MAYWOOD BORO~~ Lot No. 32 Block No. 124
Address ~~100 WEST HUNTER AVE.~~

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well ~~OWNER INVESTIGATION~~ Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 1.5 gpm

Method of development Sub Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5	15	2	PVC	Sch. 40 .10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	15	8	#2 & #1	Morie
Grout	0	3	8	Neat Cement Bentonite	50 lbs. lbs.

Grouting Method Poured in place
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.

Well Driller (Print) Charles Hitzelberger

Driller's Signature Charles Hitzelberger

Registration No. 10166 Date 9/5/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-8' Black Fill
8'-11' Dark Brown Clay
11-15' Soft Shale

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WELREC 151 0482

J-1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48629

Atlas Sheet Coordinates 26 : 03 : 539

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 100 WEST HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-5
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 WEST HUNTER AVE.

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 1 gpm

Method of development Sub Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5	15	2	PVC	Sch. 40 #10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3	15	8	#2 & #1	Morie
Grout	0	3	8	Neat Cement Bentonite	50 lbs. ___ lbs.

Grouting Method Pumped in place
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.

Well Driller (Print) Charles Kitzenberger

Driller's Signature

Registration No. MD 1066 Date 9/5/97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-7' Soft Black Fill
7'-13' Dark Brown clay
13'-15' Hard Shale

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59044

OWNER IDENTIFICATION - Owner MAYWOOD BOROUGH CLERK
Address 459 MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

Atlas Sheet Coordinates 26 :03

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10S
County BERGEN Municipality MAYWOOD BORO Lot No. ROW Block No.
Address WEST HUNTER AVE & MAYWOOD

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well MONITORING
DATE WELL STARTED 11/
DATE WELL COMPLETED 11/2
Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 10 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 2 hours at .5 gpm

Method of development Submersible

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt. (lbs/s
Single/Inner Casing	0	5	2	PVC	Sch
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	10	2	PVC	Sch 4
Blank Casings (No. Used ,)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	11	6	Morie 0	250 lb
Grout	0	3	6	Neat Cement / Bentonite	94 lb / 5 lb

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Fine Silty Sand + Gravel
5
10 Red Shale Bedrock
EOH 11'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 1/19/01

COPIES: White - DEP Canary - Driller Pink - Owner

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 56953

OWNER IDENTIFICATION - Owner GRACIE CLEANERS
Address 42 ESSEX ST
City LODI State NJ Zip Code

Atlas Sheet Coordinates 26 03

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County BERGEN Municipality LODI BORO Lot No. 2 Block No.
Address 42 ESSEX ST

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 4 / 2
Regulatory Program Requiring Well UST DATE WELL COMPLETED 4 / 2
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Emcon Case I.D.# 0150941
Tele. #

WELL CONSTRUCTION

Total depth drilled 40 ft.
Well finished to 40 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: [x] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 1 ft.

Was steel protective casing installed? [x] Yes [ ] No

Static water level after drilling 30 ft.

Water level was measured using M-Scope

Well was developed for 1 hours at 5 gpm

Method of development sub pump

Was permanent pumping equipment installed? [ ] Yes [x] No

Pump capacity 0 gpm

Pump type: none

Drilling Fluid none Type of Rig T3W

Health and Safety Plan submitted? [x] Yes [ ] No

Level of Protection used on site (circle one) None(D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./ (lbs/sc
Single/Inner Casing	+1'	19'	6"	steel	19
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	19'	40'	6"	open hole	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	19'		Neat Cement	5 64 lb
				Bentonite	36 lb

Grouting Method pump & tremie
Drilling Method air rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 1' grass and top soil
1' - 8' red brown medium clayey sand and gravel
8' - 40' red shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SBI ENVIRONMENTAL INC.
Well Driller (Print) William Ellefsen
Driller's Signature
Registration No. 1173 Date 5 / 11 / 00

COPIES: White - DEP Canary - Driller Pink - Owner

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 34594
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner SEARS & ROEBUCK
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT-3 D
County BERGEN Municipality MAYWOOD BORO Lot No. 12 & 30 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) PACKER TESTING MONITORING Date well completed 10 / 11 / 93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 62 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	16	8"	CASING STEEL COUPLED
Screen (Note slot size)				
Tail Piece	16	62	8"	OPEN HOLE BEDROCK
Gravel Pack				
Annular Seal/Grout	0	16	12"	PORTLAND CEMENT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 6' ft.
Water level was measured using ELECTRIC TAPE
Well was developed for ✓ hours at ✓ gpm
Method of development ✓
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ✓ gpm
Pump type: ✓
Drilling Method AIR ROTARY THEN WATER ROTARY
Drilling Fluid WATER Type of Rig IR-TH60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 5' MISC FILL SAND GRAVEL SILT ETC
5' - 9'-6" GREY SILTY FINE TO MED SAND.
9'-6" - 11' REDDISH FINE TO MED SILTY SAND & GRAVEL.
11' - 13' BROKEN SAND STONE SHALE ROCK
13' - 16' MED HARD ROCK SET CASING TO 16'
16' - 62' OPEN HOLE IN BEDROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

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New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

WELL SEALED 10-19-93

MONITORING WELL RECORD

Well Permit No. 26 - 34345
Atlas Sheet Coordinates 26 - 03 - 538

OWNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH L. EST
Address ~~130 - 136 ESSEX STREET~~
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 18-22
Address SAME AS ABOVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8 / 16 / 93
Regulatory Program Requiring Well UST Case I.D. # ~~93-03-23-0900~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Associates, Inc. Tele. # 564-6006

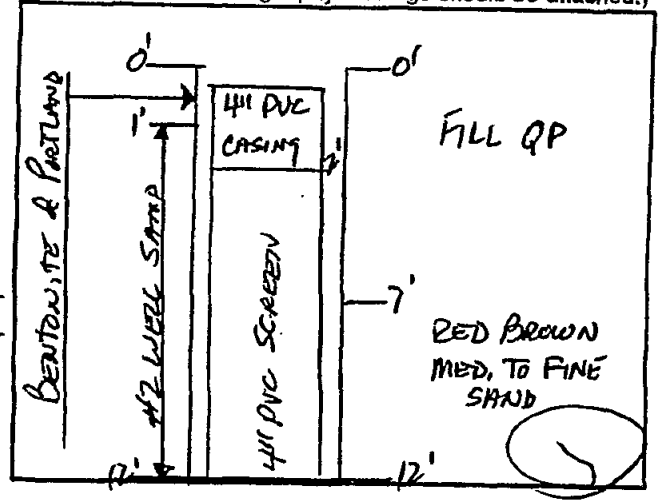
WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	3"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	1'	12'		#2 Well Sand
Annular Seal/Grout	3"	1'		Bentonite & Portland
Method of Grouting	Gravity			

Static water level after drilling 8 ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig TH-60
Name of Driller William Ellefsen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1173
Name of Drilling Company SBI ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature ____ Date 9/22/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0467

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 48863

Atlas Sheet Coordinates 26 : 03 : 611

OWNER IDENTIFICATION - Owner ZECHMEISTER, WILLIAM
Address 100 W. MAGNOLIA AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County BERGEN Municipality MAYWOOD BORO Lot No. 2 Block No. 122
Address 100 W. MAGNOLIA AVE.

DATE WELL STARTED 10 / 20 / 97
DATE WELL COMPETED 10/20/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well SPILLFUND SITE Case I.D.# 96-11-13-105606

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tank Tite Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: [X] above grade [ ] flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? [X] Yes [ ] No

Static water level after drilling 4 ft.

Water level was measured using M-Scope

Well was developed for 1 hours at 5 gpm

Method of development sub pump

Was permanent pumping equipment installed? [ ] Yes [X] No

Pump capacity 0 gpm

Pump type: none

Drilling Fluid none Type of Rig TH60

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5'	2'	4"	PVC	SCH 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	2'	11'	4"	PVC	SCH 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	11'		#2 well sand	
Grout	0	1'		Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method gravity
Drilling Method augers

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 7' fill brown medium clayey sand and gravel
7' - 11' red medium to coarse sand and weathered shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SBI ENVIRONMENTAL INC.
Well Driller (Print) William Elefsen
Driller's Signature
Registration No. 1173 Date 11 / 3 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0857

VR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59042

Atlas Sheet Coordinates 26 :03 614

WNER IDENTIFICATION - Owner FENNO, NATHAN
ddress 1 RAILROAD AVE.
ty COOPERSTOWN State NY Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 9 S
ounty BERGEN Municipality MAYWOOD BORO Lot No. 55 Block No. 124
ddress 100 W. HUNTER AVE.

DATE WELL STARTED 11 / 3 / 00
DATE WELL COMPLETED 11 / 3 / 00

/PE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

tal depth drilled 13.5 ft.
ell finished to 13 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 12 ft.

ater level was measured using Tape

ell was developed for 2 hours
.5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	13	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	13.5	6	Morie 0	300 lbs
Grout	0	3	6	Neat Cement Bentonite	150 lbs. 10 lbs.

lethod of development Submersible Pump

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

)rilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

)rilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

)riller's Signature Steve Wolf

-nistration No. 1579 Date 1 / 18 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Medium Fine Red Silty Sand w/ Gravel + Cobbles
5
10
13.5 Red Shale
EOH 13.5

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1130

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60951

Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner NJDEP, BEMQA

Address PO BOX 407

City TRENTON State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5

County BERGEN Municipality HAWWOOD BORO Lot No. 51 Block No. 107

Address 219 HARGESELL AVE

DATE WELL STARTED 4/12/01

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 4/12/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 23' ft.

Well finished to 23' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	18'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	18'	23'	4"	PVC	.010 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	16'	23'		Morie #2	
Grout	0'	16'		Neat Cement Bentonite	~~282~~ lbs. ~~15~~ lbs.

Grouting Method tremie

Drilling Method Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~SUMMIT WELL DRILLING CO INC~~

Driller (Print) Rich Gurczynski

Driller's Signature Rich Gurczynski

Registration No. J1570 Date 5/3/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Permittee

Summit® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6
FAX: (732) 356-1
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

LL: MW5 DATE DRILLED: 04/12/2001 COORD #1: 26.03.298 PERMIT #1: 26-60951
COORD #2: PERMIT #2:
TE: Circut Reproducstions, 219 Hargesell Avenue, , maywood, NJ COUNTY: Bergen
NER: NJ DEP, PO Box 413, 401 State Street, Trenton, NJ 08625 XSTREET:
USE: Monitor

NER CASING: PVC
AMETER: 4"
NGTH: 18'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 5'
LENGTH 2:
SLOT SIZE: .010

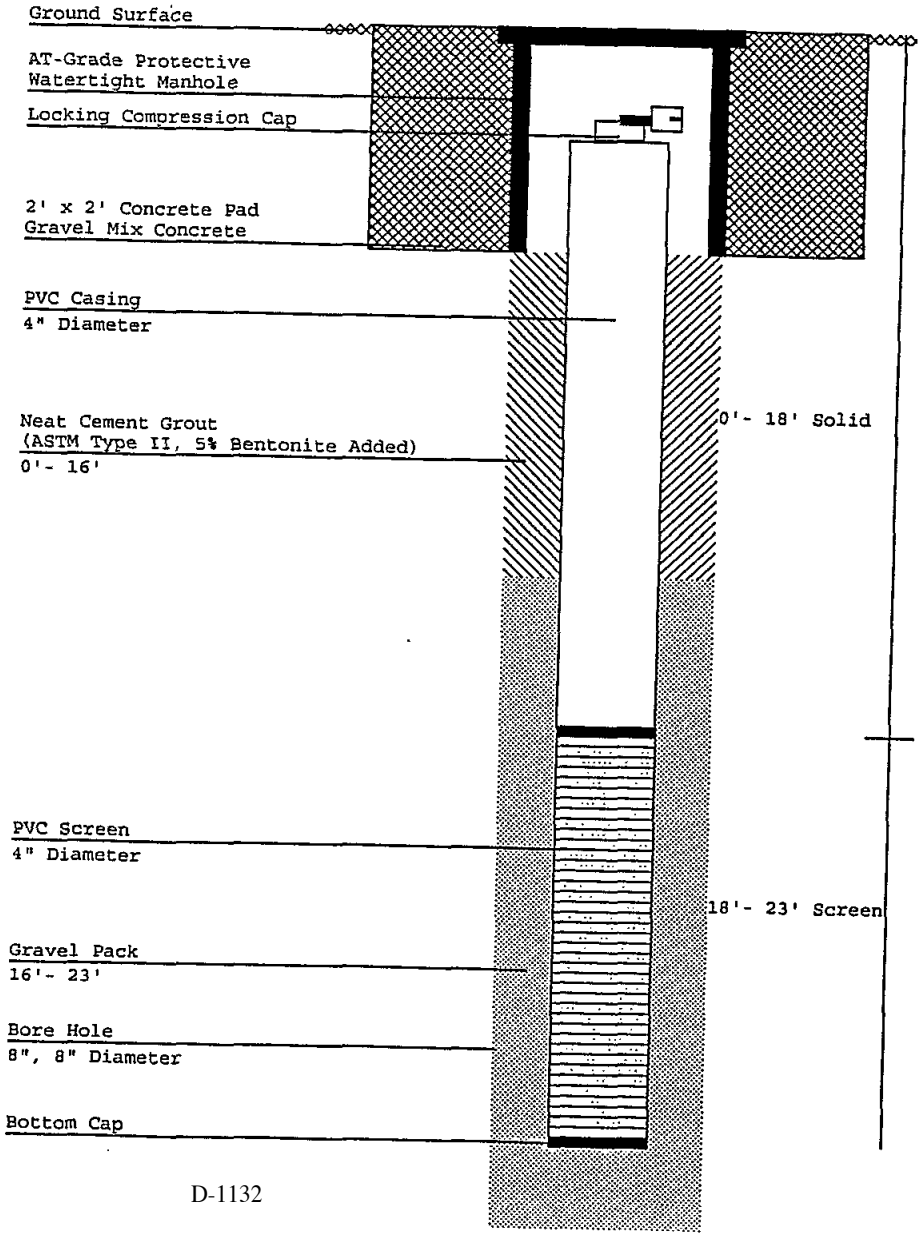
DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 23'

T WELL: 23'
AVEL PK SZ: Morie #2
ILLER: Rich Gurczynski
RFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 10'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 23'		Medium sand.



WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60114

Atlas Sheet Coordinates 26 : 03 298

OWNER IDENTIFICATION - Owner NJDEP, BEMQA
Address PO BOX 407
City TRENTON State NJ Zip Code 08625-0407

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MWM
County BERGEN Municipality MAYWOOD BORO Lot No. 51 Block No. 107
Address 219 BERGESELL AVE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 4/10/01
DATE WELL COMPLETED 4/12/01
Regulatory Program Requiring Well NJDEP, DPESR, BEMQA Case I.D.# NJD982273583

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accu Tech Environmental Services, Inc. Tele. # 732-739-6444

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up above land surface _____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 10 ft.

Water level was measured using well depth indicator

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig _____

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	39	6	steel	19 lbs/ft.
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	30	10"	steel	19 lbs/ft.
Open Hole or Screen (No. Used)	39'	50'	6"	open hole	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	39		~~Neat Cement~~ / ~~Bentonite~~ grout / bensea l	1,125 lbs. / 3cc lbs.

Grouting Method tremie
Drilling Method air rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company NJDEP/EMSA/BEMQA
Driller (Print) Richard Gurczynski
Driller's Signature Richard Gurczynski
Registration No. I1570 Date 5/22/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

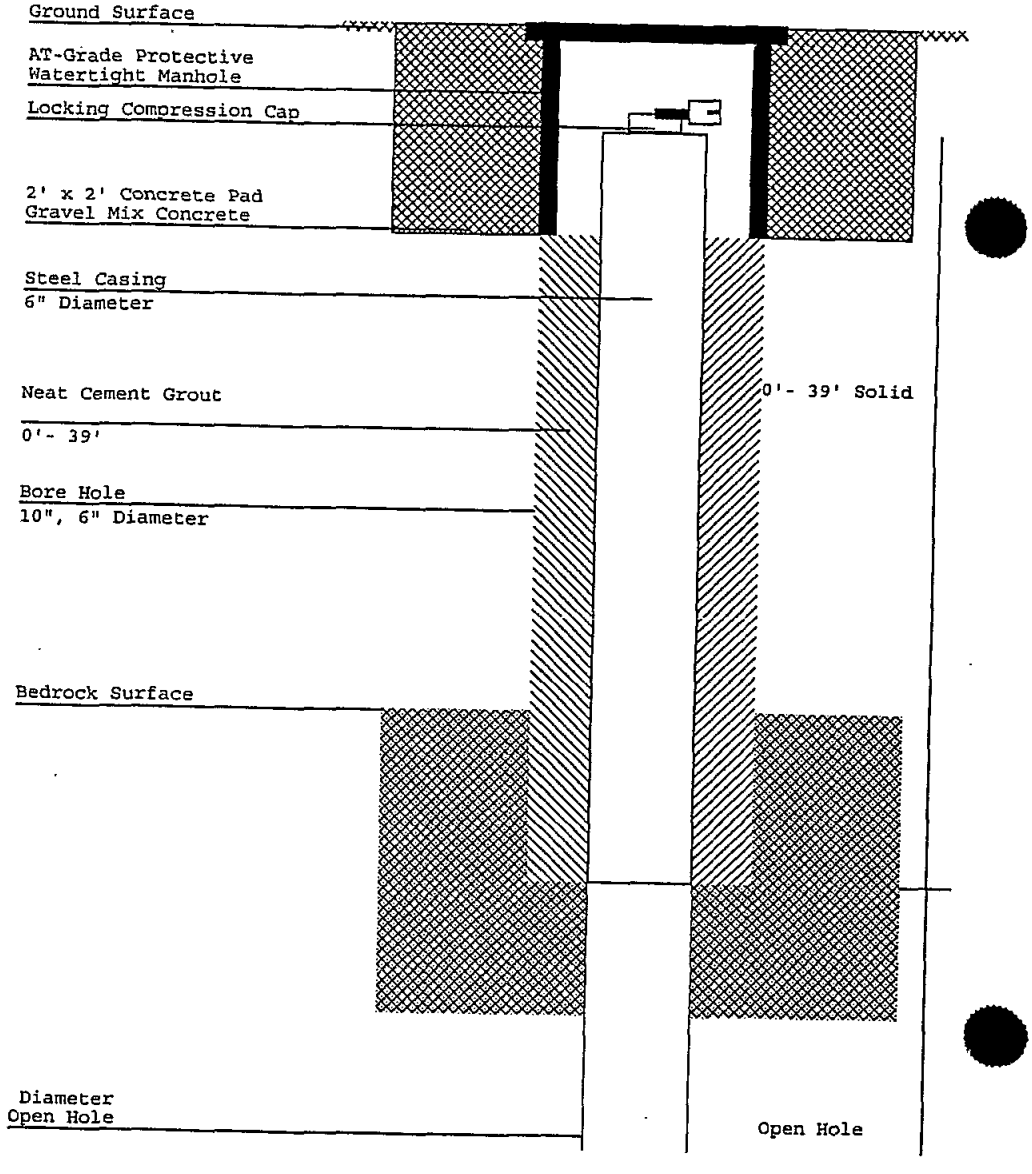
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1
http://www.summitdrilling.
email: info@summitdrilling.com

WELL LOG

:LL: MWM DATE DRILLED: 04/10/2001 COORD #1: 26.03.298 PERMIT #1: MWM
COORD #2: PERMIT #2: 26-60114 COUNTY: Bergen
TE: Circut Reproducstions, 219 Hargesell Avenue, , maywood, NJ XSTREET:
NER: NJ DEP, PO Box 413, 401 State Street, Trenton, NJ 08625 USE: Monitor

NER CASING: Steel OUTER CASING: SCREEN TYPE 1: open hole DRILLING METHOD: Air Rotary
AMETER: 6" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
NGTH: 39' LENGTH: DIAMETER: HOLE DIA: 10", 6"
LENGTH 1: TOTAL DEPTH: 50'
T WELL: 50' GAL PER MIN: 1/2 LENGTH 2:
AVEL PK SZ: STAT H2O LVL: 10' SLOT SIZE:
ILLER: Rich Gurczynski DEVELOPMENT METHOD: pump CASING SEAL: Portland
RFACE COMPLETION: M DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 50'		Medium sand.



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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60113

Atlas Sheet Coordinates 26 : 03 298

)WNER IDENTIFICATION - Owner NJDEP, BEMQA
Address PO BOX 407
City TRENTON State NJ Zip Code 08625-0407

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MWD
County BERGEN Municipality MAYWOOD BORO Lot No. 51 Block No. 107
Address 219 HERGESELL AVE

DATE WELL STARTED 4/10/01
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 4/11/01
Regulatory Program Requiring Well NJDEP, DPFSR, BEMQA Case I.D.# NJD982273583

)ONSULTING FIRM/FIELD SUPERVISOR (if applicable) AccuTech Environmental Services Tele. # 732-739-6444

WELL CONSTRUCTION

Total depth drilled 85 ft.
Well finished to 85 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade ☑ flush mounted

If [redacted]ed above grade, casing height (stick up [redacted]ove land surface _____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 10 ft.

Water level was measured using H_2O indicator

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	60'	6"	steel	19 lbs/ft.
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	32'	10"	steel	19 lbs/ft.
Open Hole or Screen (No. Used)	60'	85'	6"	open hole	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	60'		grout Neat ~~Cement~~ 1,692 lbs. ~~Bentonite~~ bentonite 400 lbs.	

Grouting Method Tremie
Drilling Method air rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company NJDEP/EMSA/BEMQA

W[redacted]riller (Print) Richard Gurczynski

Driller's Signature Richard Gurczynski

Registration No. 51570 Date 5/22/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

see attached

COPIES: White - DEP Canary - Driller Pink - Co[redacted]

Summit® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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FAX: (732) 356-1
http://www.summitdrilling.com
email: info@summitdrilling.com

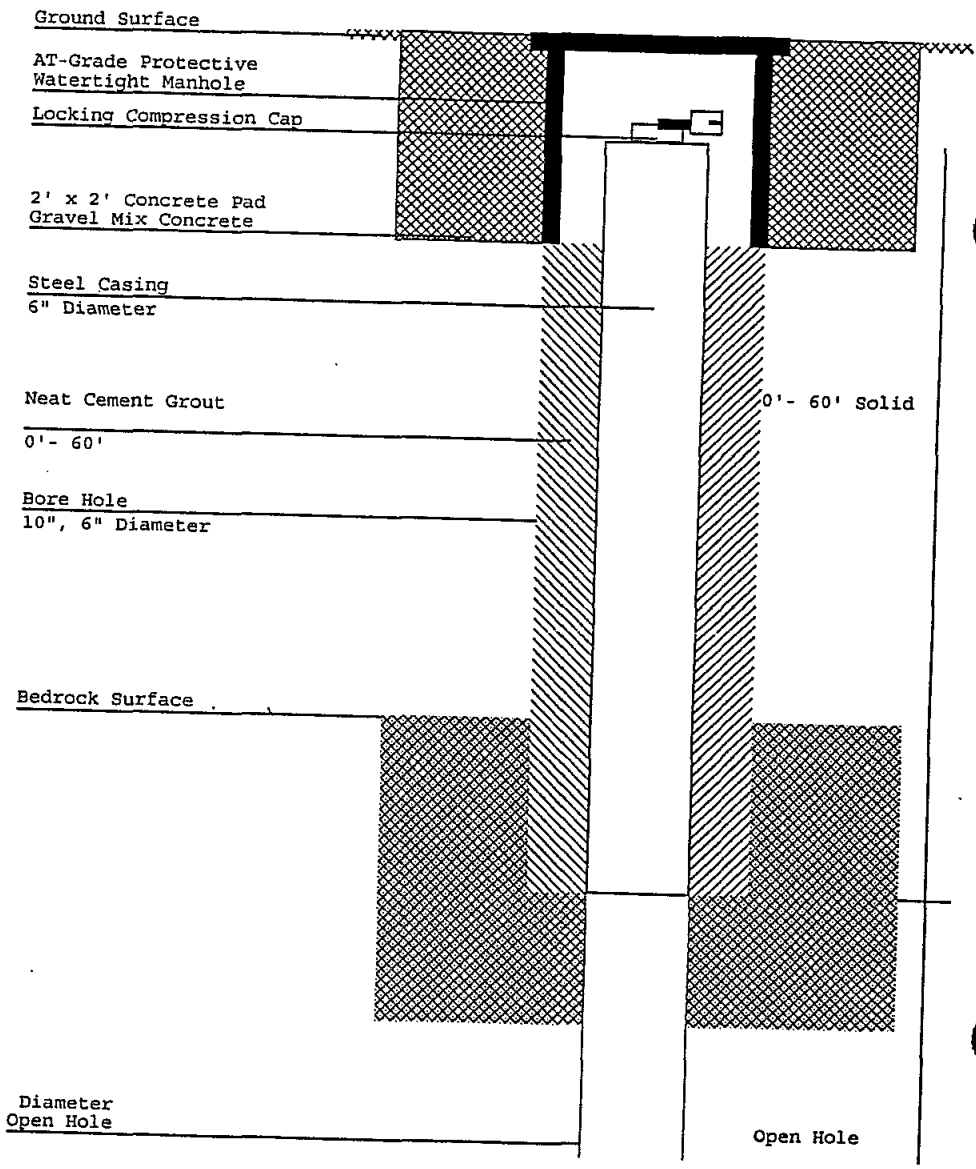
WELL LOG

LL: MWD
DATE DRILLED: 04/10/2001
COORD #1: 26.03.298
COORD #2:
PERMIT #1: MWD 26-60113
PERMIT #2:
TE: Circut Reproducstions, 219 Hargesell Avenue, , maywood, NJ
NER: NJ DEP, PO Box 413, 401 State Street, Trenton, NJ 08625
COUNTY: Bergen
XSTREET:
USE: Monitor

NER CASING: Steel
AMETER: 6"
NGTH: 60'
OUTER CASING:
DIAMETER:
LENGTH:
SCREEN TYPE 1: open hole
SCREEN TYPE 2:
DIAMETER:
LENGTH 1:
LENGTH 2:
SLOT SIZE:
DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 10", 6"
TOTAL DEPTH: 85'

T WELL: 85'
AVEL PK SZ:
ILLER: Rich Gurczynski
RFACE COMPLETION: M
GAL PER MIN: 1/2
STAT H2O LVL: 10'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2
CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 85'		Medium sand.



DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 34596
Atlas Sheet Coordinates 26: 03: 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address HAYWOOD AVE.
City HAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OB MW-18
County BERGEN Municipality HAYWOOD BORO Lot No. 32 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/22/93
Regulatory Program Requiring Well CERCLA Case I.D. # 78184
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 10-9" ft.
Borehole diameter:
Top 7 in.
Bottom 7 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2'-4 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	+ 2	5'-9"	2	STAINLESS STEEL
Screen (Note slot size)	5'-9"	10'-9"	2	.010 STAINLESS STEEL
Tail Piece				
Gravel Pack	4'-3"	11	7	#1 MORIE SAND PACK
Annular Seal/Grout	2'-3" 0	4'-3" 2'-3"	7	BENTONITE GROUT & CONCRETE
Method of Grouting	PLACED & TAMPED			

Static water level after drilling 10'-6" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for ✓ hours at ✓ gpm
Method of development ✓
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ✓ gpm
Pump type: ✓
Drilling Method H-S-A
Drilling Fluid ✓ Type of Rig MOBIL B-61
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6' REDDISH BROWN FINE TO MED SAND & SILT TRC FINE TO MED GRAVEL
6' - 10' REDDISH BRN SILTY SAND SOME MED TO FINE GRAVEL.
10' - 11' WEATHERED REDDISH BROWN SHALE & SANDSTONE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

V

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34595
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner SEARS & ROEBUCK
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT-4 BRTW-2
County BERGEN Municipality HAYWOOD BORO Lot No. 12 & 30 Block No. 124
Address SAME AS ABOVE

TYPE OF WELL (as per Well Permit Categories) [redacted] MONITORING Date well completed 10/13/93
Regulatory Program Requiring Well CERCLA Case I.D. # 701194
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH 2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 62 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	16'	8"	STEEL COUPLED CASING
Screen (Note slot size)				
Tail Piece	16'	62'	8"	OPEN HOLE BEDROCK
Gravel Pack	~			
Annular Seal/Grout	0	16'	12"	PORTLAND CEMENT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 5.1 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for --- hours at --- gpm
Method of development ---
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity --- gpm
Pump type: ---
Drilling Method AIR ROTARY THEN WATER ROTARY
Drilling Fluid WATER Type of Rig IR TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3"	MACADAM
3"-6"	STONE
6"-6'	SILTY SAND SOME GRAVEL
6'-9'	REDDISH BRN SILTY GRAVELLY SAND
9'-11'	BROKEN SHALE SAND STONE ROCK
11'-62'	BEDROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0418

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 34597
Atlas Sheet Coordinates 26: 03: 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-19
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/20/93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 7 in.
Bottom 7 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2'4" ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	+ 2	8	2	STAINLESS STEEL
Screen (Note slot size)	8	15	2	STAINLESS STEEL .010
Tail Piece	—	—		
Gravel Pack	6'	15'	7	#1 MORIE SAND PACK.
Annular Seal/Grout	4 0	6 4	7	BENTONITE PORTLAND GROUT
Method of Grouting	TREMIE PIPE.			

Static water level after drilling 11'9" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Method H-S-A
Drilling Fluid — Type of Rig MOBIL B-61
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 4'	REDDISH BROWN SAND CINDERS BRICK WOOD ETC FILL.
4' - 8'	GRAY SILTY SAND & CLAY.
8' 10	REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL TR SILT TR CLAY.
10' - 12'	REDDISH BROWN SILTY SAND TR CLAY.
12' - 15'	WEATHERED RED SHALE & SANDSTONE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10·15·93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0427

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

4

Well Permit No. 26 - 34598
Atlas Sheet Coordinates 26: 03: 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT 1 S
County BERGEN Municipality Same MAYWOOD BORO Lot No. 32 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/21/93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 11'6 ft.
Well finished to 11'6 ft.
Borehole diameter:
Top 7 in.
Bottom 7 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	4'6	2	SCH 40 PVC
Screen (Note slot size)	4'6"	11'6	2	SCH 40 PVC .010
Tail Piece	/	/	/	
Gravel Pack	3'6	11'6	7	#1 MORIE SAND PACK
Annular Seal/Grout	1'6 0	3'6 1'6	7	BENTONITE CONCRETE
Method of Grouting	PLACED & TAMPED			

Static water level after drilling 10'6" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for / hours at / gpm
Method of development /
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity / gpm
Pump type: /
Drilling Method H-S-A
Drilling Fluid / Type of Rig MOBIL B-61
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8'	GRAY REDDISH BROWN FINE TO MED SAND & GRAVEL (FILL)
8'-10'	REDDISH BAM FINE TO MED SAND & MED TO FINE GRAVEL TRC SILT
10'-11'6"	WEATHERED REDDISH BROWN SHALE & SAND STONE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34599
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address HAYWOOD AVE.
City HAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT 2 S
County BERGEN Municipality HAYWOOD BORO Lot No. 32 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/21/93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 7 in.
Bottom 7 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	5	2	SCH 40 PVC
Screen (Note slot size)	5	15	2	.010 SCH 40 PVC
Tail Piece	/	/		
Gravel Pack	3'-6"	15	7	#1 MORIE SAND PACK
Annular Seal/Grout	1'-6" 0	3'-6" 1'-6"	7	BENTONITE CONCRETE
Method of Grouting	PLACED & TAMPED.			

Static water level after drilling 10'-6" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for / hours at / gpm
Method of development /
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity / gpm
Pump type: /
Drilling Method H-S-A
Drilling Fluid / Type of Rig MOBIL 61
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 12'	REDDISH BROWN FINE TO MED SAND & GRAVEL. TRC SILT
12' 15'	WEATHERED REDDISH BROWN SHALE & SAND STONE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34600
Atlas Sheet Coordinates 26 : 06 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT-1D
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address SAME

TYPE OF WELL (as per Well Permit Categories) PACKER TESTING MONITORING Date well completed 10/1/93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 62 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	20.5'	8"	STEEL COUPLED CASING
Screen (Note slot size)				
Tail Piece	20.5'	62	8"	OPEN HOLE BED ROCK
Gravel Pack				
Annular Seal/Grout	0	20.5	12"	PORTLAND CEMENT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 9' 8" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for 1/4 hours at 20 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity / gpm
Pump type: /
Drilling Method AIR ROTARY
Drilling Fluid AIR Type of Rig IR TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-8'	GRAY BROWN TO REDDISH BROWN FINE TO MED SAND & GRAVEL (FILL MATERIAL)
8'-10'	REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL. TRC SILT
10'-12'	WEATHERED REDDISH BROWN SHALE & SANDSTONE.
12'-62'	SHALE & SANDSTONE BED ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 34601
Atlas Sheet Coordinates 26: 03: 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT-2 D
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) PACKER TESTING / MONITORING Date well completed 10 / 1 / 93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) C H 2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62' ft.
Well finished to 62 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	25-5'	8"	STEEL COUPLE CASING
Screen (Note slot size)				
Tail Piece	25-5'	62'	8"	OPEN HOLE IN ROCK
Gravel Pack				
Annular Seal/Grout	0	25-5	12"	PORTLAND CEMENT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 9' 5" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for / hours at / gpm
Method of development /
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity / gpm
Pump type: /
Drilling Method AIR ROTARY
Drilling Fluid AIR Type of Rig IR TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 12' REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL
12' - 15' WEATHERED SHALE & SANDSTONE
15' - 62' SANDSTONE & SHALE ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0441

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 - 34738
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRTW-1
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address SAME AS ABOVE

TYPE OF WELL (as per Well Permit Categories) [redacted] Date well completed 10 / 1 / 93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 62 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	15.5'	8	STEEL COUPLED CASING
Screen (Note slot size)	/	/	/	
Tail Piece	15.5'	62'	8	OPEN HOLE IN ROCK
Gravel Pack	/	/	/	
Annular Seal/Grout	0	15.5	12	PORTLAND GROUT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 9.5 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for 1/4 hours at APROX 20 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity / gpm
Pump type: /
Drilling Method AIR ROTARY
Drilling Fluid AIR Type of Rig IR-TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 71202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4' CRUSHED STONE & MISC FILL TO 4'
4'-12' REDDISH BRN SILTY SAND & GRAVEL.
12'-62' SAND STONE SHALE ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

V

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0445

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34739
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBTW-1
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address SAME AS ABOVE

TYPE OF WELL (as per Well Permit Categories) [redacted] test well Date well completed 9/28/93
Regulatory Program Requiring Well CERCLA. Case I.D. # 70124
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 15'6 ft.
Well finished to 15'6 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)	0	3'9"	6"	SCH 80 PVC
Screen (Note slot size)	3'9"	15'6	6	.010 SCH 80 PVC
Tail Piece	—	—	—	
Gravel Pack	2'8	15'6	12	#1 MOLIE SAND
Annular Seal/Grout	1'9 0	2'8 1'9	12	BENTONITE CONCRETE
Method of Grouting	PLACED & TAMPED CONCRETE.			

Static water level after drilling 7'9" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Method AIR ROTARY
Drilling Fluid AIR Type of Rig IR TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-4 STONE & MISC FILL
4'-12' REDDISH BROWN SICTY SAND SOME GRAVEL
12'-15'6 BROKEN BED ROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-14-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0447

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD ORIGINAL PERMIT # 26-34590
ALSO SEE PERMIT # 26-34881

Well Permit No. 26 - 34880
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner SEARS ROEBUCK
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT3D - A SHALLOW
County BERGEN Municipality MAYWOOD BORO Lot No. 12-30 Block No. 124
Address Same

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10 / 14 / 93
Regulatory Program Requiring Well CERCLA Case I.D. # 78104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62' ft.
Well finished to 29' ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	16	2"	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	16	8"	COUPLED STEEL [redacted]
Screen (Note slot size)	16'	29'	2"	.010 SCH 40 PVC
Tail Piece				
Gravel Pack	14'	29'	8"	#1 MORIE SAND PACK
Annular Seal/Grout	8' 0	14' 8'	8"	BENTONITE PORTLAND GROUT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 6 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Method AIR ROTARY THEN WATER ROTARY
Drilling Fluid AIR THEN WATER Type of Rig IR-TH-60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 5'	MISC FILL
5' - 9'6"	GREY SILTY FINE TO MED SAND.
9'6 - 11'	REDDISH FINE TO MED SILTY SAND & GRAVEL
11' - 13'	BROKEN SANDSTONE & SHALE ROCK
13' - 16'	MED HARD ROCK SET CASING TO 16'
16' - 62'	OPEN HOLE IN ROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10 - 15 - 93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

YP

WELREC 151 0446

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD ORIGINAL PERMIT # 26-34601

ALSO SEE PERMIT # 26-34883

Well Permit No. 26 - 34882

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY

Address MAYWOOD AVE.

City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT 2D - A SHALLOW

County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124

Address Same

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10 / 13 / 93

Regulatory Program Requiring Well CERCLA Case I.D. # 70104

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) C H 2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62' ft.

Well finished to 32' ft.

Borehole diameter:
Top 12 in.
Bottom 8 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	25	2"	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	25.5'	8"	STEEL COUPLED CASING
Screen (Note slot size)	25'	32'	2"	.010 SCH 40 PVC
Tail Piece				
Gravel Pack	23'	33'	8"	#1 MORIE SAND PACK
Annular Seal/Grout	17.3" 0	23 17.3"	8	BENTONITE PORTLAND GROUT
Method of Grouting	TREMIE PIPE.			

Static water level after drilling 9'.5 ft.

Water level was measured using ELECTRIC TAPE

Well was developed for 4 hours at 20 gpm

Method of development AIR

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity _____ gpm

Pump type: _____

Drilling Method AIR ROTARY

Drilling Fluid AIR Type of Rig IR-TH-60

Name of Driller TERENCE KENDRICK

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

N.J. License No. 5.1202

Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 12'	REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL.
12' - 15'	WEATHERED SHALE & SANDSTONE ROCK
15' - 62'	SANDSTONE SHALE ROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10.15.93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

ORIGINAL PERMIT # 26-34594
ALSO SEE PERMIT # 26-34880

Well Permit No. 26 - 34881
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner SEARS ROEBUCK
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT3D - B DEEP
County BERGEN Municipality MAYWOOD BORO Lot No. 12-30 Block No. 124
Address Same As Above

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10 / 14 / 93
Regulatory Program Requiring Well CERCLA Case I.D. # 70104
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2 M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 51 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	41'	2"	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	16'	8"	COUPLED STEEL CASING
Screen (Note slot size)	41'	51'	2"	.010 SCH 40 PVC
Tail Piece	[redacted]	[redacted]	8"	[redacted]
Gravel Pack	39	53'	8"	#1 MORIE SAND PACK
Annular Seal/Grout	30 53	39 62	8"	BENTONITE SEAL BENTONITE PELLETS
Method of Grouting	PLACED BENTONITE PELLETS & TAMED			

Static water level after drilling 6 ft.
Water level was measured using ELECTRIC TAPE
Well was developed for ___ hours at ___ gpm
Method of development ___
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ___ gpm
Pump type: ___
Drilling Method AIR ROTARY THEN WATER ROTARY
Drilling Fluid AIR WATER Type of Rig IR-THGO
Name of Driller TEREMLE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-5'	MISC FILL SAND GRAVEL SILT ETC
5'-9'6	GREY SILTY FINE TO MED SAND.
9'6"-11'	REDDISH FINE TO MED SILTY SAND & GRAVEL.
11'-13'	BROKEN SANDSTONE & SHALE ROCK.
13'-16'	MED HARD ROCK SET CASING TO 16'
16'-62'	OPEN HOLE IN RED ROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

JR

WELREC 151 0444

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

ORIGINAL PERMIT # 2634601
ALSO SEE PERMIT # 2634582

Well Permit No. 28 - 34883
Atlas Sheet Coordinates 25 : 03 : 534

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address MAYWOOD AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PT 2D-B DEEP
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address SAME AS ABOVE

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10/13/93
Regulatory Program Requiring Well CERCLA Case I.D. # 701094
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.
Well finished to 50 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	40	2"	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	25.5'	8"	STEEL COUPLED CASING
Screen (Note slot size)	40'	50'	2"	.010 SCH 40 PVC
Tail Piece	[redacted]	[redacted]	8"	[redacted]
Gravel Pack	38'	52'	8"	#1 MORIE SAND PACK
Annular Seal/Grout	33' 52'	38' 62'	8"	BENTONITE PELLETS
Method of Grouting	PLACED BENTONITE PELLETS & TAMPED			

Static water level after drilling 9'5" ft.
Water level was measured using ELECTRIC TAPE
Well was developed for 1/4 hours at 20 gpm
Method of development AIR
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AIR ROTARY
Drilling Fluid AIR Type of Rig IRTH60
Name of Driller TERENCE KENDRICK
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1202
Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 12'	REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL
12' - 15'	WEATHERED ROCK
15' - 62'	SANDSTONE SHALE ROCK

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0449

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD ORIGINAL PERMIT # 26-34604

ALSO SEE PERMIT # 2634885

Well Permit No. 26 - 34884

Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner STEPAN COMPANY

Address MAYWOOD AVE.

City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PTID - A SHALLOW

County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124

Address Same

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10 / 14 / 93

Regulatory Program Requiring Well CERCLA Case I.D. # 70104

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EH2M HILL Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 62 ft.

Well finished to 39' ft.

Borehole diameter:
Top 12 in.
Bottom 8 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	29'	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	20'6"	8	STEEL COUPLED CASING
Screen (Note slot size)	29'	39'	2	.010 SCH 40 PVC
Tail Piece	[redacted]			
Gravel Pack	27'	40'[redacted]'	8	#1 MORIE SAND PACK
Annular Seal/Grout	21.6" 0	27 21.6"	8	BENTONITE PORTLAND GROUT
Method of Grouting	TREMIE PIPE			

Static water level after drilling 9' 8" ft.

Water level was measured using ELECTRIC TAPE.

Well was developed for ___ hours at ___ gpm

Method of development ___

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ___ gpm

Pump type: ___

Drilling Method AIR ROTARY

Drilling Fluid AIR Type of Rig IR-TH-60

Name of Driller TERENCE KENDRICK

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

N.J. License No. 71202

Name of Drilling Company KENDRICK DRILLING, INC.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

0-8	GREY BROWN REDDISH BROWN FINE TO MED SAND & GRAVEL FILL MATERIAL
8'-10'	REDDISH BROWN FINE TO MED SAND & MED TO FINE GRAVEL.
10'-12'	WEATHERED SHALE & SAND STONE
12'-62'	SHALE & SANDSTONE ROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Terence Kendrick Date 10-15-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WEI REC 151 0461

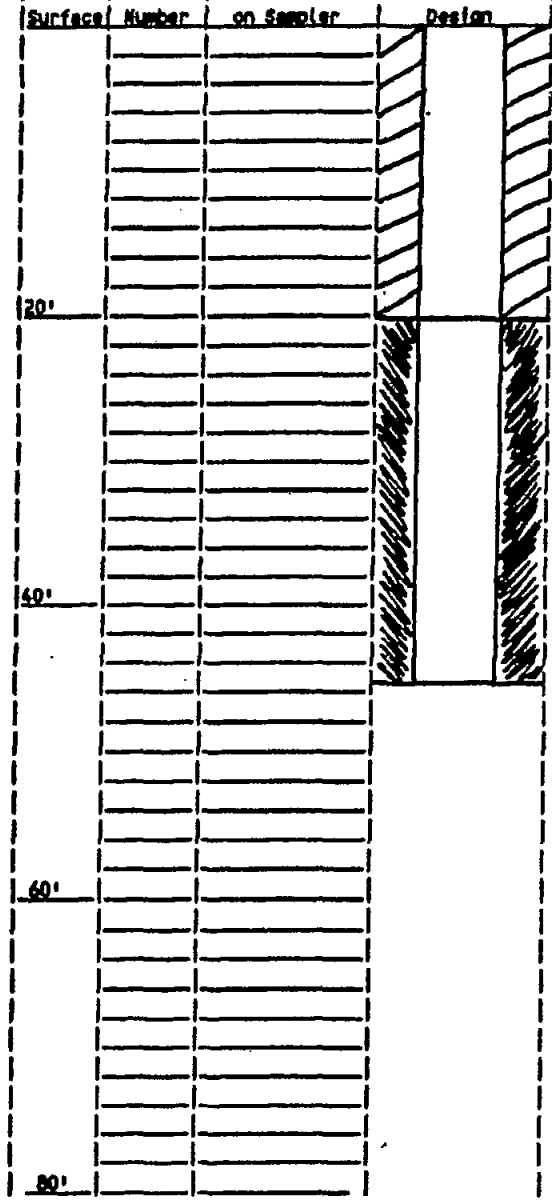
SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW - 8 Coordinate No. 26.03.536 Permit No. 26-30712
Date Drilled 09/10/92 County Bergen Use Monitor
Site Hunter, Inc., 87 Route 17 North, Maywood, New Jersey
Owner SWS Realty Associates, Inc., 500 Route 17, Hasbrook Heights, New Jersey
Drilling Method Air Sampling Method
Hole Diameter 0'-20'=12', 20'-45'=8" Total Depth 45'
Casing: Type steel Diameter 8" Length 20'
Screen: Type open hole Slot Diameter 8" Length 20' - 45'
Gravel Pack Size Casing Seal grout and casing
Static Water Level Geologic Formation sand stone



	GROUT	0' - 1'	Asphalt and road stone
0' - 20'	SOLID	1' - 14'	Red brn. clay, silt tr. m/f
	PELLETS		sand, tr. f/gravel
	GRAVEL		
	SCREEN		
	OPEN HOLE		
45'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
	DEV.	14' - 45'	Red sandstone

WELREC 085 1382

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 32806
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner U.S. DEPT OF ENERGY
Address 100 NORTH HUNTER AVE.
City HAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County SAME Municipality ROCHELLE PARK T Lot No. 1 Block No. 19.02
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/8/93
Regulatory Program Requiring Well [illegible] Case I.D. # 14501
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15.6 ft.
Well finished to 15.6 ft.
Borehole diameter:
Top 8¼ in.
Bottom 8¼ in.
Well was finished: ☑ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GL	10.4	2	316 Stainless
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10.4	15.2	2	wire wrap Stainless
Tail Piece	15.2	15.6	2	316 Stainless
Gravel Pack	8.0	15.6		20/40 Best sand
Annular Seal/Grout	GL	8.0		Portland Slurry
Method of Grouting	Pressure Remie			

Static water level after drilling 8 ft.
Water level was measured using M Scope
Well was developed for 4 hours at 2 gpm
Method of development Surge & Bail
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type:
Drilling Method Auger
Drilling Fluid ____ Type of Rig mobil
Name of Driller Ron Guerra
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. M1313
Name of Drilling Company HYDRO GROUP, INC./LINDEN

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 0.5' - Fill
0.5 - 2.8' - silty sand & gravel
2.8 - 6.7' silty sand
6.7 - 9.5' - sand & gravel.
9.5 - 15.6' sandy clay

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Ron Guerra Date 5/13/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0410

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD 26 30712

Well Permit No. _____ - 26 03 534
Atlas Sheet Coordinates _____ : _____ : _____

OWNER IDENTIFICATION - Owner SNS REALTY ASSOCIATES, INC
Address 500 ROUTE 17
City HASBROOK HEIGHTS State NJ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8
County Bergen Municipality HAWOOD BORO Lot No. 1 Block No. 240
Address 87 Route 17 North

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/10/92
Regulatory Program Requiring Well ECRA Case I.D. # 87838

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION
Total depth drilled 45 ft.
Well finished to 45 ft.
Borehole diameter:
Top 12 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	20	8	Steel
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)		Open hole		
Tail Piece				
Gravel Pack	↓			
Annular Seal/Grout	0	20		Pellets/Portland
Method of Grouting	Tremie			

Static water level after drilling N/A ft.
Water level was measured using _____
Well was developed for N/A hours at _____ gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Gus Pech
Name of Driller Carmine DeLorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeLorso Date 9-29-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1381

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

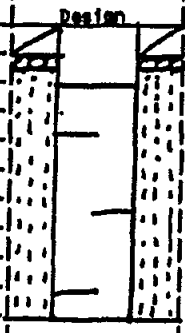
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW - 7 | Coordinate No. 26.03.534 | Permit No. 26-30711
Date Drilled 09/08/92 | County Bergen | Use Monitor
Site Hunter, Inc., 87 Route 17 North, Maywood, New Jersey
Owner SVB Realty Associates, Inc., 500 Route 17, Hasbrook Heights, New Jersey
Drilling Method Air | Sampling Method
Hole Diameter 8" | Total Depth 10'
Casing: Type PVC | Diameter 4" | Length 2'
Screen: Type PVC | Slot .020 | Diameter 4" | Length 8'
Gravel Pack Size Morie #2 | Casing Seal pellets and grout
Static Water Level 3' | Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT	0' - 1'	Asphalt and road stone
0' - 2'	SOLID	1' - 9'	Red brn. clay, silt tr. m/f sand, tr. f/gravel
1' - 1.5'	PELLETS		
1.5'-10'	GRAVEL		
2' - 10'	SCREEN		
	OPEN HOLE		
10'	SET WELL		
	GPN		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
bail	DEV.		

WELREC 085 1380

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

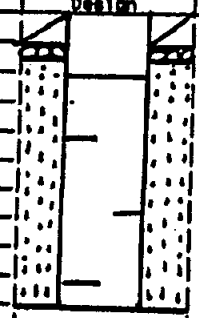
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW - 6 Coordinate No. 26.03.534 Permit No. 26-30710
Date Drilled 09/08/92 County Bergen Use Monitor
Site Hunter, Inc., 87 Route 17 North, Maywood, New Jersey
Owner SWS Realty Associates, Inc., 500 Route 17, Hasbrook Heights, New Jersey
Drilling Method Air Sampling Method
Hole Diameter 8" Total Depth 10'
Casing: Type PVC Diameter 4" Length 2'
Screen: Type PVC Slot .020 Diameter 4" Length 8'
Gravel Pack Size Morie #2 Casing Seal pellets and grout
Static Water Level 3' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT	0' - 1'	Asphalt and road stone
0' - 2'	SOLID	1' - 9'	Red brn. clay, silt tr. m/f sand, tr. f/gravel
1' - 1.5'	PELLETS		
1.5'-10'	GRAVEL		
2' - 10'	SCREEN		
	OPEN HOLE		
10'	SET WELL		
	GPM		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
bail	DEV.		

Identification of Soils / Remarks

WELREC 085 1378

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 28 - 30711
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner SMS REALTY ASSOCIATES, INC
Address 500 ROUTE 17
City HASBROOK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. 1 Block No. ~~240~~
Address 87 Route 17 North

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9/08/92
Regulatory Program Requiring Well ~~ECRA~~ Case I.D. # ~~87838~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accuteen Tele. #

WELL CONSTRUCTION
Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	2	10	4	PVC .020
Tail Piece	N/A			
Gravel Pack	1½	10		Morie #2
Annular Seal/Grout	0	1½		B. Pellets/Portland.
Method of Grouting	Gravity			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for ½ hours at ____ gpm
Method of development Bail
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Gus Pech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 31210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please See the attached Log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 9-29-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

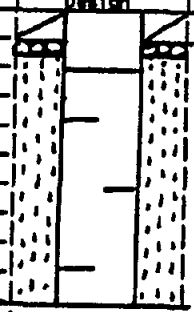
469 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW - 5 Coordinate No. 26.03,536 Permit No. 26-30709
Date Drilled 09/08/92 County Bergen Use Monitor
Site Hunter, Inc., 87 Route 17 North, Maywood, New Jersey
Owner SWS Realty Associates, Inc., 500 Route 17, Hasbrook Heights, New Jersey
Drilling Method Air Sampling Method
Hole Diameter 8" Total Depth 10'
Casing: Type PVC Diameter 4" Length 2'
Screen: Type PVC Slot .020 Diameter 4" Length 8'
Gravel Pack Size Morie #2 Casing Seal pellets and grout
Static Water Level 3' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
10'		
20'		
30'		
40'		



0' - 1'	GROUT
0' - 2'	SOLID
1' - 1.5'	PELLETS
1.5'-10'	GRAVEL
2' - 10'	SCREEN
	OPEN HOLE
10'	SET WELL
	GPM
	STMDP.
X	MANHOLE
	VAULT
	GRIPPER
	NONE
bail	DEV.

Identification of Soils / Remarks

0' - 1'	Asphalt and road stone
1' - 9'	Red brn. clay, silt tr. m/f sand, tr. f/gravel

WELREC 085 1376

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30710
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ~~SNG REALTY ASSOCIATES, INC~~
Address 500 ROUTE 17
City HASBROOK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10
County Bergen Municipality ~~HAYWOOD BORO~~ Lot No. 1 Block No. 240
Address 87 Rt. 17 North

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/08/92
Regulatory Program Requiring Well ~~RCRA~~ Case I.D. # ~~87836~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Tele. #

WELL CONSTRUCTION
Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	2	10	4	PVC .020
Tail Piece	N/A			
Gravel Pack	1½	10		Morie #2
Annular Seal/Grout	0	1½		B. Pellets/Portland
Method of Grouting	gravity			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for ½ hours at ____ gpm
Method of development Bail
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Gus Rech
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 31210
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached Logs.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 9-29-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1377

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28451
Atlas Sheet Coordinates 28 : 09 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-4
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 239 N/S Rt. 17, Maywood, NJ

DEVELOPED 4/28/92 (COMPLETED)

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4 / 02 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	4'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	4'	14'	2"	Stainless Steel slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	2'	14'	8"	#1 Gravel
Annular Seal/Grout	0'	2'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2± gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow stem auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-5' silty sand
5'-9' sand
9'-14' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 095 1209

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28450
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-1
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Maywood Ave., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) DEVELOPED 4/27/92 (COMPLETED)
Regulatory Program Requiring Well MONITORING Date well completed 4 / 01 / 92
CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	3'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	3'	10'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	1'	10'	8"	# 1 Gravel
Annular Seal/Grout	0'	1'	8"	cement
Method of Grouting	gravity			

Static water level after drilling 4 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem AUger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-4' glacial till
4'-10' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1389

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28448
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner SUN OIL CORPORATION
Address 1801 MARKET STREET
City PHILADELPHIA State PA Zip Code 19103

WELL LOCATION - *If not the same as owner please give address.* Owner's Well No. OBMW-5
County Bergen Municipality MAYWOOD BORO Lot No. 2 Block No. 124
Address 167 N/S Rt. 17, Maywood, NJ

DEVELOPED 4/29/92 (COMPLETED)

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3 / 09 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	4'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	4'	10'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	2'	10'	8"	# 1 Gravel
Annular Seal/Grout	0'	2'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Arkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' fill
8'-10' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1388

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28449
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner SUN OIL CORPORATION
Address 1801 MARKET STREET
City PHILADELPHIA State PA Zip Code 19103

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-5
County Bergen Municipality MAYWOOD BORO Lot No. 2 Block No. 134
Address 167 N/S Rt. 17, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 15 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 908 316-9300

WELL CONSTRUCTION

Total depth drilled 47 ft.
Well finished to 40 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	30'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	17'	6"	Steel Casing
Screen (Note slot size)	30'	40'	2"	Stainless steel Slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	28'	40'	6"	# 1 Gravel
Annular Seal/Grout	0'	28'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80 & B-61
Name of Driller Thomas Lynch & Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1499 and J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' fill
8'-10' silt and clay
10'-17' sandstone & Shale
17'-47' sandstone & Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28447
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner CUMBERLAND FARMS, INC.
Address 777 DEDHAM STREET
City CANTON State MA Zip Code 02021

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-3
County Bergen Municipality HAYWOOD BORO Lot No. 1 Block No. 124
Address 239 N/S Rt. 17, Mayswood, NJ

DEVELOPED 4/28/92 (COMPLETED)

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3 / 9 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M HILL Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	4'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	4'	12'	2"	Stainless steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	2'	12'	8"	# 1 Gravel
Annular Seal/Grout	0'	2'	8"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 6 ft.
Water level was measured using M Scope
Well was developed for 1¼ hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' fill
8'-13' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1387

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28302
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner CUMBERLAND FARMS, INC.
Address 777 DEDHAM STREET
City CANTON State MA Zip Code 02021

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW 3
County Bergen Municipality HAYWOOD BORO Lot No. 1 Block No. 124
Address 239 N/S Rt 17, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 18 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 51 ft.
Well finished to 30 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	20'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	18'	6"	Steel Casing
Screen (Note slot size)	20'	30'	2"	stainless steel Slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	18'	4 30'	6"	# 1 Gravel
Annular Seal/Grout	0'	18'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 4 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller THomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-6' fill
6'-8' clay
8'-13½' cobbles & boulders
13½'-18' sandstone
18'-25' sandstone
25'-51' rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1386

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26r - 26665
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner AMERADA HESS CORPORATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. S
County Municipality MAYWOOD BORO Lot No. 4 Block No. 125
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 9 / 91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	~~6"~~	~~10'~~		
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6"	10'	4	20 SLOT
Tail Piece				
Gravel Pack	2'	10'		#2
Annular Seal/Grout	0"	2'		
Method of Grouting	Tremmie			

Static water level after drilling 5 ft.
Water level was measured using Tape
Well was developed for 0 hours at 0 gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig mobil
Name of Driller Mike Rock
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

PEA GRAVEL
IN TANK FIELD

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 10/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1370

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26666
Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner AMERADA HESS CORP
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 4
County Municipality MAYWOOD BORO Lot No. 4 Block No. 125
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/4/91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6"	10'	4"	20 SLOT
Tail Piece				
Gravel Pack	2'	10'		#2
Annular Seal/Grout	6"	2'		
Method of Grouting	Tremie			

Static water level after drilling 5 ft.
Water level was measured using Tape
Well was developed for 0 hours at 0 gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig Mobil
Name of Driller M Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

PEA GRAVEL
IN TANK FIELD

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael E Beck Date 10/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 137J

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26667
Atlas Sheet Coordinates [redacted]12 : [redacted] : 534

OWNER IDENTIFICATION - Owner AMERADA HESS CORPORATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 1
County Municipality MAYWOOD BORO Lot No. 4 Block No. 125
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/4/96
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6"	10'	4"	.20 Slot
Tail Piece				
Gravel Pack	2'	10'		#2
Annular Seal/Grout	6"	2'		
Method of Grouting	Tremmie			

Static water level after drilling 5 ft.
Water level was measured using TAPE
Well was developed for 0 hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig mobil
Name of Driller M Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

PEA GRAVEL
TANK FIELD

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 10-4-96

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1372

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26668
Atlas Sheet Coordinates [redacted] : 03 : 534

OWNER IDENTIFICATION - Owner AMERADA HESS CORPORATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 2
County Municipality MAYWOOD BORO Lot No. 4 Block No. 125
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/4/91
Regulatory Program Requiring Well LUST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6"	10'	4	#0 Slot
Tail Piece				
Gravel Pack	2'	10'		#2
Annular Seal/Grout	6"	2'		
Method of Grouting	Tremie			

Static water level after drilling 5 ft.
Water level was measured using Tape
Well was developed for 0 hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig Mobil
Name of Driller M Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. [illegible]
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Pea Gravel -
IN TANK Field

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 10/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1373

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26669
Atlas Sheet 12 Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner AMERADA HESS CORPORATION
Address 1 HESS PLAZA
City WOODBRIDGE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. 3
County Municipality HAYWOOD BORO Lot No. 4 Block No. 125
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10/4/91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6"	10'	4"	20 SLOT
Tail Piece				
Gravel Pack	2'	10'		#2
Annular Seal/Grout	0"	2'		
Method of Grouting	Termie			

Static water level after drilling 5 ft.
Water level was measured using TAPE
Well was developed for 0 hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig MOBIL
Name of Driller M Beck
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 14421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGI

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Pea Gravel
Tank Field

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 10/4/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1374

DWR-138 M
6/89

#532

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 -27717
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner [redacted]
Address 100 W. [redacted] AVE.
City HAWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County Municipality [redacted] Lot No. 1 Block No. [redacted]
Address

TYPE OF WELL (as per Well Permit Categories) [redacted] Date well completed 1/9/92
Regulatory Program Requiring Well [redacted] Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	10	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20	4	PVC
Tail Piece				
Gravel Pack	8	20	8	#1 Morie
Annular Seal/Grout	0	8	8	portland
Method of Grouting	Tremmie			

Static water level after drilling 13 ft.
Water level was measured using Tape
Well was developed for ½ hours at 3 gpm
Method of development pumping
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Air Rotary
Drilling Fluid — Type of Rig F-7
Name of Driller Chris Warren
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1546
Name of Drilling Company M & R SOIL INVESTIGATIONS, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2 Asphalt - Fill
2-4 F-M dk red sand
4-20 red shale with dk red silty fine sand damp

SC' El.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1493

Received

DWR-139 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30709
Atlas Sheet Coordinates 26 : 03 : 594

OWNER IDENTIFICATION - Owner SNS REALTY ASSOCIATES, INC
Address 500 ROUTE 17
City HASBROOK HEIGHTS State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality ~~HAWOOD BORO~~ Lot No. 1 Block No. ~~240~~
Address 57 Route 17 North

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 9.08.92
Regulatory Program Requiring Well ECRA Case I.D. # ~~87838~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION
Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	2	10	4	PVC .020
Tail Piece	N/A			
Gravel Pack	1½	10		Morie #2
Annular Seal/Grout	0	1½		B. Pellets / Portland.
Method of Grouting	gravity			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for ½ hours at ____ gpm
Method of development Bail
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Air Rotary
Drilling Fluid N/A Type of Rig Gus Tech.
Name of Driller Carmine DeCorso
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No 21210
Name of Drilling Company ~~SUMMIT WELL DRILLING~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see the attached log.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Carmine DeCorso Date 9-29-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1375

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30250
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner DEPARTMENT OF ENERGY
Address 100 WEST HUNTER AVENUE
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MISS-1AA
County Municipality Lot No. Block No.
Address MAYWOOD BORO 31 124

TYPE OF WELL (as per Well Permit Categories) REPLACE MONITOR Date well completed 7 / 31 / 92
Regulatory Program Requiring Well RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: [x] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2' 6" ft.
Was steel protective casing installed? [x] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	11	2	FLUSH THREAD S.S.
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	11	16	2	FLUSH THREAD S.S. 10 SLOT
Tail Piece	16	17	2	FLUSH THREAD S.S. 10 SLOT
Gravel Pack	9	19	8	00 GRAVEL
Annular Seal/Grout	GRADE	9	8	BENTONITE PELLET'S & NEAT CEMENT
Method of Grouting	TREMIE			

Static water level after drilling ft.
Water level was measured using TAPE
Well was developed for 1 hours at gpm
Method of development Air
Was permanent pumping equipment installed? [ ] Yes [x] No
Pump capacity gpm
Pump type:
Drilling Method Augers
Drilling Fluid Type of Rig MOBIL
Name of Driller Fullerton R.W.
Health and Safety Plan submitted? [x] Yes [ ] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1108
Name of Drilling Company HYDRO GROUP, INC. /LINDEN

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' - 2' Top Soil
2' - 12' Fill
12' - 17' Silty Sand Red Brown to Med. Brown

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Fullerton R.W. Date 9-5-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1335

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED 5/12/93

Well Permit No. 26 . 29007
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner ESSEX STREET PROPERTY
Address 130 - 136 ESSEX STREET
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ROCHELLE PARK T Lot No. 1 Block No. 18 - 22
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3 / 24 / 92
Regulatory Program Requiring Well UST Case I.D. # 93-3-12-10420
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Associates Tele. # 564-6006

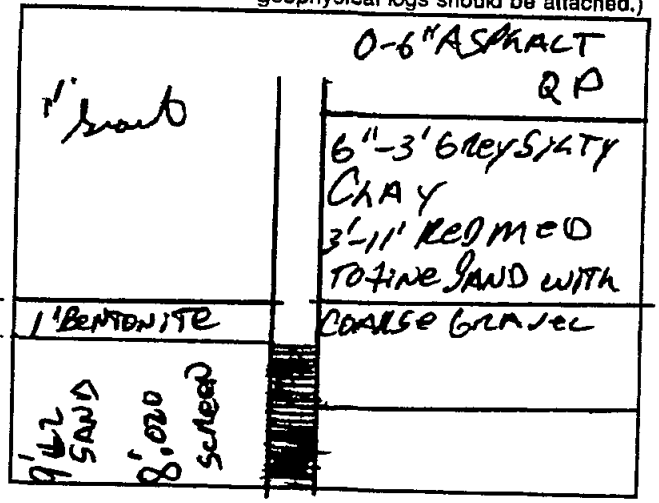
WELL CONSTRUCTION

Total depth drilled 11' ft.
Well finished to 11' ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	6'	3'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3'	11'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	2'	11'		#2 Well Sand
Annular Seal/Grout	6'	2'		Portland & Bentonite Pellets
Method of Grouting	Pump			

Static water level after drilling 4' ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development Sub Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig TH60
Name of Driller William Ellefsen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1173
Name of Drilling Company SBI ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Date 5/12/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 28976
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7R
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~40~~ Block No. ~~124~~
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING DEVELOPED 4/30/92 (COMPLETED)
Date well completed 3 / 26 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # ~~10105~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ~~CH2M Hill~~ Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	10'	2"	PVC
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	10'	20'	2"	PVC Slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	8'	20'	6"	# 1 Gravel
Annular Seal/Grout	0'	8'	6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 13 ft.
Water level was measured using M Scope
Well was developed for 2 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-6' sand
6'-20' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 6/18/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1418

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28894
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPHAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-17
County Bergen Municipality MAYWOOD BORO Lot No. 40 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING DEVELOPED 5/19/92 (COMPLETED)
Date well completed 5/11/92
Regulatory Program Requiring Well ECRU Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2'	5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5'	15'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	3'	15'	8"	# 1 Gravel
Annular Seal/Grout	0'	3'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? [ ] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-9' sand
9'-15' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28893
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPHAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code

DEVELOPED 4/30/92 (COMPLETED)

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-15
County Bergen Municipality MAYWOOD BORO Lot No. 40 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) Date well completed 3 / 11 / 92
Regulatory Program Requiring Well MONITORING CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ch2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2'	12'	2"	stainless steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	12'	17'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	10'	17'	8"	# 1 Gravel
Annular Seal/Grout	0'	10'	8"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 13 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? [ ] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 11478
Name of Drilling Company ENVIRONMENTAL DRILLING INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' fill
8'-17' rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1416

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28892
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPHAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State ILL Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-15
County Bergen Municipality MAYWOOD BORO Lot No. 40 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 01 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 48 ft.
Well finished to 35 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2'	25'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	0'	18'	6"	Steel
Screen (Note slot size)	25'	35'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	23'	35'	6"	# 1 Gravel
Annular Seal/Grout	0'	23'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 8½' ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development AIR
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud rotary
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? [ ] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J-1478
Name of Drilling Company ENVIRONMENTAL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-9' sand
9'-11' weathered rock
11'-18' competent rock
18'48' comp. rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/10/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1415

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28475
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner S. W. S. REALTY
Address 500 RT. 17 S
City HASBROUCK HEIGHTS State NJ Zip Code 07604

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-8
County Bergen Municipality MAYWOOD BORO Lot No. 4 Block No. 124
Address 87 Rt 17 N., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 5 / 29 / 92
Regulatory Program Requiring Well MONITORING CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 60 ft.
Well finished to 42 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	32'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	0'	30'	6"	steel
Screen (Note slot size)	32'	42'	2"	stainless steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	30'	42'	6"	# 1 Gravel
Annular Seal/Grout	0'	30'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development air
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud rotary
Drilling Fluid na Type of Rig Mobile B ... 61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' sand
8'-25' weathered rock
25'-28' competent rock
28'-30' rock

30'-60' sandstone & shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/10/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1399

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28474
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner S. W. S. REALTY
Address 500 RT. 17S
City HASBROUCK HEIGHTS State NJ Zip Code 07604

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-8
County Bergen Municipality MAYWOOD BORO Lot No. 4 Block No. 124
Address 87 & Rt 17 NMaywood, NJ

DEVELOPED 4/29/92 (COMPLETED)

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 3/14/92
Regulatory Program Requiring Well MONITORING Case I.D. # CERCLA 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 12.5 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5.5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5.5'	12.5'	2"	Stainless Steel slot.010
Tail Piece	NA	NA	NA	
Gravel Pack	3.5'	12.5'	8"	# 1 Gravel
Annular Seal/Grout	0'	3.5'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method hollow stem auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-8' sand
8'-13' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1398

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28473
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner M. H HEIL, TRUSTEE
Address 51 COMMERCE ST.
City SPRINGFIELD State NJ Zip Code 07081

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-12
County Bergen Municipality MAYWOOD BORO Lot No. 5 Block No. 124
Address 239 N/S RT 17, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) Date well completed 5 / 28 / 92
Regulatory Program Requiring Well MONITORING Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 3169300

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 48 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	38'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	0'	20'	6"	Steel Casing
Screen (Note slot size)	38'	48'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	36'	48'	6"	# 1 Gravel
Annular Seal/Grout	0'	36'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 5 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Air
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-7' sand
7'-13' weathered rock
13'-20' rock
20'-50' bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1414

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28472
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner M.M. Weil , Trustee
Address 51 Commerce Street
City Springfield State NJ Zip Code 07081

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-9
County Bergen Municipality MAYWOOD BORO Lot No. 5 Block No. 124
Address 239 N/S RT 17, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 12 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 25ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	15'	2"	stainless steel
Outer Casing (Not Protective Casing)	0'	10'	6"	steel casing
Screen (Note slot size)	15'	25'	2"	stainless steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	13'	25'	6"	#1 Gravel
Annular Seal/Grout	0'	13'	10/6"	Cement
Method of Grouting				

Static water level after drilling 14 ft.
Water level was measured using M Scope
Well was developed for 2 hours at 2+ gpm
Method of development air
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile 61
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1499
Name of Drilling Company ENVIRONMENTAL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'--2' top soil
2'-14' rock
14'-30' bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/10/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28471
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner M. H HEIL, TRUSTEE
Address 51 COMMERCE ST.
City SPRINGFIELD State NJ Zip Code

DEVELOPED 4/29/92 (COMPLETED)

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-12
County Bergen Municipality MAYWOOD BORO Lot No. 5 Block No. 124
Address 29 Essex St., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3 / 5 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5'	15'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	3'	15'	' 8"	# 1 Gravel
Annular Seal/Grout	0'	3'	' 8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Augers
Drilling Fluid NA Type of Rig Mobile B- 61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-13' sand, medium and fine
13'-15' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1412

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28469
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-2
County Bergen Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) DEVELOPED 4/22/92 (COMPLETED)
Date well completed 3 / 02 / 92
Regulatory Program Requiring Well MONITORING
Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 609 795-6800

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	3'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	3'	13'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	1'	13'	8"	# 1 Gravel
Annular Seal/Grout	0'	1'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 10 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1478
Name of Drilling Company ENVIRONMENTAL DRILLING INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-10' fill
10'-13' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1397

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28468
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State Ill Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-10
County Bergen Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 04/ 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2mhill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 53 ft.
Well finished to 29 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (Inches)	Type and Material
Inner Casing	0'	19'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	25'	6"	Steel Casing
Screen (Note slot size)	19'	29'	2"	Stainless steel Slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	17'	29'	6"	# 1 Gravel
Annular Seal/Grout	0'	17'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 10 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development SubmersiblePump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-12' sand, fine and medium
12'-17' weathered rock
17'-23' competent rock
23'-53' competent rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1411

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28467
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-2
County Bergen Municipality _____ Lot No. 32 Block No. 124
Address 100 West Hunter Avenue, Maywood, MAYWOOD BORO

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 6 / 08 / 92
Regulatory Program Requiring Well MONITORING CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 48.5 ft.
Well finished to 41.5 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	31.5'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	20'	6"	Steel casing
Screen (Note slot size)	31.5	41.5	2"	S.S. Slot .010
Tail Piece	NA	NA	NA	
Gravel Pack	29.5	41.5	6"	#1 Gravel
Annular Seal/Grout	0'	29.5	19/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 8 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid nA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-5' fill
5'-8' clay
8'-13' silty sand and clays
13' -18' sandstone
18'-48.5 sandstone and shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1410

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28466
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-17
County Bergen Municipality MAYWOOD BORO Lot No. 40 Block No. 124
Address 100 West Hunter Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 9 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 908 316-9300

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 35' ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2'	25'	2"	Stainless steel
Outer Casing (Not Protective Casing)	+2'	20'	6"	Steel Casing
Screen (Note slot size)	25'	35'	2"	.SLot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	23'	35'	6"	# 1 Gravel
Annular Seal/Grout	0'	23'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 4 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller Robert Atkinson & Thomas Lynch
Health and Safety Plan submitted? [ ] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478 & J1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-4' fill
4'- 15' silt and clay
15'-20' sandstone & Shale
20'-50' rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28465
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 22 WEST FRONTAGE ROAD
City NORTHFIELD State IL Zip Code 60093

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-16
County Bergen Municipality Lot No. 40 Block No. 184
Address 100 West Hunter Avenue, Maywood, NJ MAYWOOD BORO

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 09 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 908 316-9300

WELL CONSTRUCTION

Total depth drilled 30 47 ft.
Well finished to 30 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? [X] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2'	20'	2"	Stainless steel
Outer Casing (Not Protective Casing)	+2'	18'	6"	Steel Casing
Screen (Note slot size)	20'	30'	2"	Slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	18'	30'	6"	# 1 Gravel
Annular Seal/Grout	0'	18'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 8 ft.
Water level was measured using M Scope
Well was developed for 2½ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid nA Type of Rig mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? [ ] Yes [ ] No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-13' sand
13'-18' rock
18'-50' rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 72 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1408

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28464
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-14
County 149-151 Maywood Ave. Municipality Lot No. Block No.
Address Maywood, NJ Bergen Co. MAYWOOD BORO 30 124

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 /10 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ch2M Hill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 37 ft.
Borehole diameter: 10
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	27'	2"	stainless steel
Outer Casing (Not Protective Casing)	0'	27'6"	6"	Steel Casing
Screen (Note slot size)	27'	37'	2"	Slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	25'	37'	6"	# 1 Gravel
Annular Seal/Grout	0'	25'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 4 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-7' fill
7'-11' clay
11'-12' sand & cobbles
12'-20' sand, silt with cobbles
20'-25' sandstone
25'-35' sandstone & Shale
35'-55' sandstone & Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas D Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1407

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28463
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-13
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Maywood Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 10 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. #908 316-9300

WELL CONSTRUCTION

Total depth drilled 51 ft.
Well finished to 33 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade
X ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	23'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	23'	6"	Steel casing
Screen (Note slot size)	23'	33'	2"	slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	21'	33'	6"	# 1 Gravel
Annular Seal/Grout	0'	21'	10/6"	cement
Method of Grouting	tremie pressure			

Static water level after drilling 4½' ft.
Water level was measured using m Scope
Well was developed for 1½ hours at 2+ gpm
Method of development submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: na
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80 B-61
Name of Driller Thomas Lynch & Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1499 J1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-9' fill
9'-15' sand & gravels
15'-16' sandstone & Shale
16'-21' sandstone
21=51' sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1189

WELREC 085 1406

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28462
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-11
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Maywood Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 11 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 908 316-9300

WELL CONSTRUCTION

Total depth drilled 47 m / 33 ft.
Well finished to _____ ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2 ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2'	23'	2"	Stainless steel
Outer Casing (Not Protective Casing)	+2'	17'	6"	steel casing
Screen (Note slot size)	23'	33'	2"	SLot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	21'	33'	6"	# 1 Gravel
Annular Seal/Grout	0'	21'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 1 ft.
Water level was measured using MScope
Well was developed for 1½ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid na Type of Rig Mobile B-53
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-4' fill
4'-9' sand & Gravel
9'-10' weathered rock
10'-17' rock
17'-33' bed rock
33'-47' bedrock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1405

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28461
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code XXXX 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-7
County Bergen Municipality MAYWOOD BORO Lot No. 12,30 Block No. 184
Address 149-151 Maywood Ave., Maywood,NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 10 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. #

WELL CONSTRUCTION

Total depth drilled 56 ft.
Well finished to 38 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	28'	2"	stainless steel
Outer Casing (Not Protective Casing)	0'	28'	6"	Steel casing
Screen (Note slot size)	28'	38'	2"	Slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	26'	38'	6"	# 1 Gravel
Annular Seal/Grout	0'	26'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 1 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-6' fill
6'-17' sandstone
17'26' sandstone some shale
26'-56' sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1404

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28460
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-6
County Bergen Municipality MAYWOOD BORO Lot No. 12,30 Block No. 124
Address 149-151 Maywood Ave., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 11 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 908 316-9300

WELL CONSTRUCTION
Total depth drilled 45 ft.
Well finished to 27 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	17'	2"	stainless steel
Outer Casing (Not Protective Casing)	0'	15'	6"	Steel casing
Screen (Note slot size)	17'	27'	2"	Slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	15'	27'	6"	# 1 Gravel
Annular Seal/Grout	0'	15'	10/6"	Cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 2½ ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2± gpm
Method of development SUbmersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Moible b-80
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 11499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-0'-5' fill
5'-15' red sandstone
15'-45' red sandstone/some red shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas G Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1403

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28459
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-4
County Bergen Municipality MAYWOOD BORO Lot No. 12,30 Block No. 124
Address 149-151 Maywood Avenue, Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6 / 03 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele 908 316-9300

WELL CONSTRUCTION

Total depth drilled 56½ ft.
Well finished to 35 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	26'	2"	stainless steel
Outer Casing (Not Protective Casing)	0'	26	6"	steel
Screen (Note slot size)	26'	36'	2"	stainless steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	24'	36'	6"	# 1 Gravel
Annular Seal/Grout	0'	34'	10/6"	cement
Method of Grouting	tremie pressure			

Static water level after drilling 2½ ft.
Water level was measured using M scope
Well was developed for 2 hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-11' fill
11'-19.5' sand, cobbles & Boulders
19.5'-24½' sandstone & shale
24½'-54½' sandstone & Shale
54½'-56½' sandston & shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/24/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28458
Atlas Sheet Coordinates 26 : 03 : 536

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRMW-1
County Bergen Municipality Lot No. Block No.
Address 149-151 Maywood Ave., Maywood, NJ MAYWOOD BORO 12,30 124

TYPE OF WELL (as per Well Permit Categories) Date well completed 6 / 21 / 92
Regulatory Program Requiring Well MONITORING Case I.D. # 10105
CERCLA
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. #908 316-9300

WELL CONSTRUCTION

Total depth drilled 47/5 ft.
Well finished to 37 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	27'	2"	Stainless steel
Outer Casing (Not Protective Casing)	0'	17½'	6"	steel casing
Screen (Note slot size)	27'	37'	2"	.Slot .010 S.S.
Tail Piece	NA	NA	NA	
Gravel Pack	25'	37'	6"	# 1 Gravel
Annular Seal/Grout	0'	25'	10/6"	cement
Method of Grouting	Tremie Pressure			

Static water level after drilling 4 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Mud Rotary
Drilling Fluid NA Type of Rig Mobile b-80
Name of Driller Thomas Lynch & Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1499 & J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-6' fill
6'-12' weathered sandstone
12'-17½' sandstone & Shale
17½'-47.5 sandstone & Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 7/23/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1401

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~28457~~
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : ~~535~~

OWNER IDENTIFICATION - Owner ~~KIN PROPERTIES~~
Address ~~77 TARRYTOWN RD. SUITE 100~~
City ~~WHITE PLAINS~~ State ~~NY~~ Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-14
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. 30 Block No. 124
Address 149-151 Tarrytown Rd., Maywood, NJ
DEVELOPED 4/27/92(COMPLETED)
TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 4 / 06 92
Regulatory Program Requiring Well ~~MONITORING~~ ~~CERCLA~~ Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 1 201 316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5'	15'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	3'	15'	8"	# 1 Gravel
Annular Seal/Grout	0'	3'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using M Scope
Well was developed for 2½ hours at 2+ gpm
Method of development submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-5' fill
5'-14' sand and gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1396

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28456
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KEN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-13 DEVELOPED 4/24/92 COMPLETED
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Tarrytown Rd., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4 / 6 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. #201 316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	3'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	3'	13'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	1'	13'	8"	#1 Gravel
Annular Seal/Grout	0'	1'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using M Scope
Well was developed for 2 hours at 2+ gpm
Method of development SUbmersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-3' fill
3'-14' sand and gravel
14'-15' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1395

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28455
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-11
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Tarrytown Rd., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed DEVELOPED 5/01/92 COMPLETED 4 / 15 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201-316-9300

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5'	10'	2"	Stainless Steel
Tail Piece	NA	NA	NA	
Gravel Pack	3'	10'	8"	# 1 Gravel
Annular Seal/Grout	0'	3'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile b-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-4' fill
4'-9' sand and gravel
9'-10' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1197

WELREC 085 1394

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28454
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-10
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 149-151 Tarrytown Rd., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4 / 15 / 92 COMPLETION DATE 4/30/92 DEVELOPE
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	5'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	5'	15'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	3'	15'	8"	# 1 Gravel
Annular Seal/Grout	0'	3'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using M Scope
Well was developed for 1 hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow stem auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-4' fill
4'-9' sand and gravel
9'-10' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1393

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28453
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-7
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address Sears - 149-151 Maywood Ave., Maywood, N.J DEVELOPED 4/30/92 (COMPLETED)

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 4 / 15 / 92
Regulatory Program Requiring Well MONITORING Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # _____

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	5'	2"	PVC Stain.Steel
Outer Casing (Not Protective Casing)	NA	NA NA		
Screen (Note slot size)	5'	15'	2"	Stain. Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	3'	15'	6"	#1 Gravel
Annular Seal/Grout	0'	3'	6"	Cement
Method of Grouting	Gravity			

Static water level after drilling 7 ft.
Water level was measured using M Scope
Well was developed for 1½ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity na gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-80
Name of Driller Thomas Lynch
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1499
Name of Drilling Company ENVIRONMENTAL DRILLING, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-5' fill
5'-11' clay
11'-15' silt sand and gravels

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Thomas J. Lynch Date 6/18/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1302

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 28452
Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner KIN PROPERTIES
Address 77 TARRYTOWN RD. SUITE 100
City WHITE PLAINS State NY Zip Code 10607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. OBMW-6
County Bergen Municipality MAYWOOD BORO Lot No. 30 Block No. 124
Address 239 N/S Rt 17, Maywood, NJ

DEVELOPED 4/30/92

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4 / 02 / 92
Regulatory Program Requiring Well CERCLA Case I.D. # 10105
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) CH2M Hill Tele. # 201 316-9300

WELL CONSTRUCTION

Total depth drilled 8 ft.
Well finished to 8 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0'	3'	2"	Stainless Steel
Outer Casing (Not Protective Casing)	NA	NA	NA	
Screen (Note slot size)	3'	8'	2"	Stainless Steel .010
Tail Piece	NA	NA	NA	
Gravel Pack	1'	8'	8"	# 1 Gravel
Annular Seal/Grout	0'	1'	8"	Cement
Method of Grouting	Gravity			

Static water level after drilling 3 ft.
Water level was measured using M Scope
Well was developed for 2¼ hours at 2+ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method Hollow Stem Auger
Drilling Fluid NA Type of Rig Mobile B-61
Name of Driller Robert Atkinson
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. J 1478
Name of Drilling Company ENVIRONMENTAL DRILLING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-7' fine sand
7'-8' weathered rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/17/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1391

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21717
Atlas Sheet Coordinates 26 : 03 : 296

OWNER IDENTIFICATION - Owner RANKIN, MATTHEW TRUST OFF
Address 716 BROAD STREET
City NEWARK State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~52~~ Block No. ~~107~~
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 7/9/90
Regulatory Program Requiring Well UST Case I.D. # ~~90-06-15-1793~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcolSciences Inc. Tele. # 627-5726

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	14	4	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	14	9 5/8	#2 well gravel
Annular Seal/Grout	0.5	3	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 5 ft.
Water level was measured using Tape drop line
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig Acker Soil Max
Name of Driller Frank Sipple
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. J1489
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0.0 to 0.3 Blk Top
0.3 to 3 md Brn Silt
3 to 5 Rd Brn Silt
5' to 12' Gry f/c Sd
12' to 14' Rd Till

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Frank Sipple Date 9/8/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21718
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner RANKIN, MATTHEW TRUST OFF
Address 716 BROAD STREET
City NEWARK State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County Bergen Municipality ~~HAYWOOD BORO~~ Lot No. ~~52~~ Block No. ~~107~~
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/10/90
Regulatory Program Requiring Well UST Case I.D. # ~~90-06-15-1793~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcoSciences INC Tele. # 627-5726

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 9 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	4	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	9	4	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	10	9 5/8	#2 well gravel
Annular Seal/Grout	0.5	3	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 5 ft.
Water level was measured using Tape drop line
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid NA Type of Rig Acker Soil Max
Name of Driller Frank Sipos
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 11489
Name of Driller Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0.0 to 0.3 Blk Top
0.3 to 3 Brn f/m cinders & f/Gravel
3 to 5' Brn f/sd with silt
5' to 8 Gry f/sd
8 to 10 Rd Till

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Frank Sipos Date 9/8/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 0471

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26185
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner MATTHEW BANKIN TRUST CO'T
Address 785 BROAD ST./FIRST FIDELITY
City NEWARK State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County Bergen Municipality MAYWOOD BORO Lot No. 52 Block No. 107
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/6/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-15-1793
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ecolsciense INC. Tele. # 366-9500

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	3	12	4	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	12	9 5/8	#2 well gravel
Annular Seal/Grout	0	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6.5 ft.
Water level was measured using Tape drop line
Well was developed for 1.5 hours at _____ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

6" Asphalt
6" to 2' Brn sdy ST.
2' to 3'6" Black Sandy ST.
3'6" to 4' Blk organic ST.
4' to 6' TAN ST
6' to 8'2" Rd Brn Sty Sd
8'2" to 12' Rd Brn SandStone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 8/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26186
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner [redacted]
Address 785 BROAD ST./FIRST FIDELITY
City [redacted] State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality [redacted] Lot No. 52 Block No. 107
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) [redacted] Date well completed 8/2/91
Regulatory Program Requiring Well UST Case I.D. # 90-06-15-1793
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Ecolscience Inc. Tele. # 366-9500

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	3	13	4	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	2	13	9 5/8	#2 well gravel
Annular Seal/Grout	0	2	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 8 ft.
Water level was measured using Tape drop line
Well was developed for 1.5 hours at _____ gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 13306
Name of Drilling Company [redacted]

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 3" Asphalt
3" to 6' Blk ST & gry f ST Sd
6' to 7' Gry f STy Sd
7' to 8' Gry Brn f/m Sd Tr ST
8' to 11' Brn gry f/m Sd Tr ST
11' to 13' Rd Brn Sd & Gravel

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 8/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 0473

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 28 - 28187
Atlas Sheet Coordinates 28 : 03 : 298

OWNER IDENTIFICATION - Owner [redacted]
Address 785 BROAD ST./FIRST FIDELITY
City [redacted] State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County Bergen Municipality [redacted] Lot No. 52 Block No. 107
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/6/91
Regulatory Program Requiring Well UST Case I.D. # 90-06-15-1783
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcolScience INC. Tele. # 366-9500

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	16	4	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	16	9 5/8	#2 well Gravel
Annular Seal/Grout	0	3	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6'4" ft.
Water level was measured using Tape drop line
Well was developed for 1.5 hours at ____ gpm
Method of development Submersible pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Augr
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 1306
Name of Drilling Company [redacted] BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to 3" Asphalt
3"to 3' Tan sdy St.
3'to 5'6" Blk Sty sd
5'6"to 6'6" DK gray Sty f/m sd
6'6"to 13' Red f/c sd Tr grawel
13'to 16' Red f/c sd
12" OS aug

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 8/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 035 0474

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26188
Atlas Sheet Coordinates 25 : 03 : 296

OWNER IDENTIFICATION - Owner [redacted]
Address 766 BROAD ST./FIRST FIDELITY
City [redacted] State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County Bergen Municipality [redacted] Lot No. 52 Block No. 107
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/2/91
Regulatory Program Requiring Well UST Case I.D. # 90-08-15-1783
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) EcolScience INC. Tele. # 366-9500

WELL CONSTRUCTION

Total depth drilled 19 ft.
Well finished to 19 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	4	19	4	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	19	9 5/8	#2 well gravel
Annular Seal/Grout	0	3	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 5.5 ft.
Water level was measured using Tape drop line
Well was developed for 1.5 hours at ____ gpm
Method of development Submersible Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 3" Asphalt
3" to 4'6" Brn gry Sty f/sd Tr Rd Brick Tr gravel (Fill)
4'6" to 6' Gry Sdy Clay
6' to 10' gry f/sd Tr silt
10' to 13' Brn f/sd Tr Silt
13' to 19' Rd Brn Sdy Silt Tr gravel

12" OS and

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 8/17/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1206

WELREC 085 0475

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2611400-3 E
APPLICATION NO. —
COUNTY Bergen
COORD. 26.03.5.34

WELL RECORD

1. OWNER KIN Properties ADDRESS Suite 210 200 Central Park Ave. Hartsdale, N.
Owner's Well No. B38W12A SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION Sears Warehouse, 151 MAYWOOD AVE, MAYWOOD, NJ
3. DATE COMPLETED 10-14-87 DRILLER DOUG MYERCHIN
4. DIAMETER: Top 8 Inches Bottom 8 Inches TOTAL DEPTH 14.8 Feet
5. CASING: Type SS Diameter 2" Inches Length 9.8 Feet
6. SCREEN: Type S.S. Size of Opening .010 Diameter 2" Inches Length 5 Feet
Range in Depth { Top — Feet / Bottom 14.8 Feet Geologic Formation —
Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
Static water level before pumping — Feet below surface
Pumping level — feet below surface after — hours pumping
Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
How pumped — How measured —
Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name —
Capacity — G.P.M. How Driven — H.P. — R.P.M. —
Depth of Pump in well — Feet Depth of Footpiece in well — Feet
Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR MONITORING AMOUNT { Average — Gallons Daily / Maximum — Gallons Daily
11. QUALITY OF WATER — Sample: Yes — No —
Taste — Odor — Color — Temp. — °F.
12. LOG See reverse Are samples available? NO
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well Log
14. DATA OBTAINED BY MORETRENCH AMERICAN CORP Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151 0430

0-4' Black silt + clay

4'-4.5' White gray silt & clay

4.5-8' Brown silt, some clay

8'-14.8' Weathered DB

DWR-138A
1/90

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 261401-1
APPLICATION NO. —
COUNTY BERGAN
COORD. 26.03.5.34

WELL RECORD

1. OWNER Kin Properties ADDRESS Suite 210 200 Central Park Ave, Hartsdale, NY 1053
Owner's Well No. B38W12B SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION Sears Warehouse, 151 MAYWOOD AVE, MAYWOOD, NJ
3. DATE COMPLETED 10-21-88 DRILLER DOUG MYERCHIN
4. DIAMETER: Top 14 inches PVC (Protective Casing) Bottom 6 inches 10" TOTAL DEPTH 50.2 Feet
5. CASING: Type SS Diameter 2" Inches Length 48.4 1.2 Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 10 Feet
Range in Depth { Top +2.2 Feet, Bottom 50.2 Feet
*NOTE 2" SUMP CAP
Geologic Formation —
Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
Static water level before pumping — Feet below surface
Pumping level — feet below surface after — hours pumping
Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
How pumped — How measured —
Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name —
Capacity — G.P.M. How Driven — H.P. — R.P.M. —
Depth of Pump in well — Feet Depth of Footpiece in well — Feet
Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR MONITORING AMOUNT { Average — Gallons Daily, Maximum — Gallons Daily
11. QUALITY OF WATER N/A Sample: Yes — No —
Taste — Odor — Color — Temp. — °F.
12. LOG See reverse Are samples available? NO
(Give depths on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well log
14. DATA OBTAINED BY Moretrench American Corp Date 3-10-93

NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151 0432

0'-20' Fine Medium Brn Sand, Some Silt

20'-30' Competent Brn Sandstone

30'-42' Red Brown Silty Sand

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-11402
APPLICATION NO.
COUNTY Bergen
COORD. 26.035.34

WELL RECORD

1. OWNER U.S. Dept of Energy ADDRESS PO Bx E Oak Ridge TN 3783
Owner's Well No. B38WTB SURFACE ELEVATION Feet (Above mean sea level)
2. LOCATION Maywood Interim Storage Site Off Rt 17 Maywood NJ
3. DATE COMPLETED 9-30-87 DRILLER Doug-Migerchin
4. DIAMETER: Top 14" Inches Bottom 12" Inches TOTAL DEPTH 39.2 Feet
5. CASING: Type PVC (Protective casing) Steel Diameter 10" 2" Inches Length 31.2 7.2 Feet
6. SCREEN: Type Steel Size of Opening .010 Diameter 2" Inches Length 10' Feet
Range in Depth: Top + 2 Feet Bottom 39.2 Feet
2" Sump Cap
Geologic Formation
Tail Pipe: Diameter Inches Length Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at Feet above surface
Water rises to Feet above surface
8. RECORD OF TEST: Date Yield Gallons per minute
Static water level before pumping Feet below surface
Pumping level feet below surface after hours pumping
Drawdown Feet Specific Capacity Gals. per min. per ft. of drawdown
How pumped How measured
Observed effect on nearby wells
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name N/A
Capacity G.P.M. How Driven H.P. R.P.M.
Depth of Pump in well Feet Depth of Footpiece in well Feet
Depth of Air Line in well Feet Type of Meter on Pump Size Inches
10. USED FOR Monitoring AMOUNT Average Gallons Daily Maximum Gallons Daily
11. QUALITY OF WATER Sample: Yes No X
Taste Odor Color Temp. °F.
12. LOG See Reverse Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Driller's Well Log
14. DATA OBTAINED BY Maretrench American Date 3-10-93

NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151 0434

0 - 1.5 Top Soil - Grass Roots

1.5 - 3' Lt. Brown Fine. Medium Sand. Some Silt.

3' - 5' Weathered Rock

5' - 8'5" Weathered N/B Sandstone

8'5" - 15' " " " Redish/Brown Sand. Some Silt.

15' - 20' Dark Brown Sand

20 - 35' " " "

35' - 39'2" Dark. Brown Sand w/ Lt. GRAY Sand.

Water Level - 8'.6"

WELREC 151.0125

E

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26 | 1404-6
APPLICATION NO. —
COUNTY BERGEN
COORD. 26.03.5.26

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St. Haywood, NJ
   Owner's Well No. B38W5A SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION Same
3. DATE COMPLETED 10-13-87 DRILLER Doug Myerchin
4. DIAMETER: Top 8 Inches Bottom 8 Inches TOTAL DEPTH 11.2 Feet
5. CASING: Type Stainless Steel Diameter 2" Inches Length 6.2 Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 5 Feet
   Range in Depth { Top — Feet / Bottom 11.2 Feet } Geologic Formation —
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
   Static water level before pumping — Feet below surface
   Pumping level — feet below surface after — hours pumping
   Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped — How measured —
   Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
   Type — Mfrs. Name —
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR MONITORING AMOUNT { Average — Gallons Daily / Maximum — Gallons Daily }
11. QUALITY OF WATER — Sample: Yes — No —
    Taste — Odor — Color — Temp. — °F.
12. LOG See reverse Are samples available? NO
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well LOG
14. DATA OBTAINED BY MoreTrench American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

0-6" Topsoil

6"-3' Tan+medium brown sand, some silt

3'-11.2' Weathered RB

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

2

MONITORING WELL RECORD

Well Permit No. 26 32907
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 122 NORTH HUNTER AVE.
City HAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County SAME Municipality ROCHELLE PARK T Lot No. 1 Block No. 19.02
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 4/8/93
Regulatory Program Requiring Well MONITORING Case I.D. # 14501
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 28.7 ft.
Well finished to 28 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	GL	22	2"	~~Sch 40 PVC~~ 316 Stainless
Outer Casing (Not Protective Casing)	GL	17	6"	Sch 40 PVC
Screen (Note slot size)	22	27	2	Wire WRAP Stainless
Tail Piece	27	28	2	316 Stainless
Gravel Pack	19.7	28.7		0-20 Best sand
Annular Seal/Grout	GL	19.7		Portland slurry
Method of Grouting	Pressure Remie			

Static water level after drilling 8 ft.
Water level was measured using measure
Well was developed for 4 hours at 4 gpm
Method of development Surge & Bail
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig mobil
Name of Driller Ron Guerra
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. M1313
Name of Drilling Company HYDRO GROUP, INC./LINDEN

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-0.5' - fill
0.5-2.8 - silty sand & gravel
2.8-6.7' - silty sand
6.7-9.5' sand & Gravel
9.5-12' sandy clay
12-28.7 Sand stone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Ron Guerra Date 5/13/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0411

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 32908
Atlas Sheet Coordinates 26 : 08 : 532

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County SAME Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 4/6/93
Regulatory Program Requiring Well DEPENF Case I.D. # 14501
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 12.7 ft.
Well finished to 12.7 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	+2'	6.7	2	316 Stainless
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	6.7	11.7	2	Wire wrap Stainless
Tail Piece	11.7	12.7	2	316 Stainless
Gravel Pack	4.7	12.7		20/40 Best sand
Annular Seal/Grout	GL	12.7		Portland Slurry
Method of Grouting	Pressure Tremie			

Static water level after drilling 8 ft.
Water level was measured using measure
Well was developed for 4 hours at 2 gpm
Method of development Bail & Surge
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig Mobil
Name of Driller Ron Guerra
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. M1313
Name of Drilling Company HYDRO GROUP, INC./LINDEN

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-0.5' top soil
0.5-3.5 — sandy clay with gravel
3.5-4.5' — sandy gravel
4.5-8.5' — silty sand
8.5-9.0 — silty gravel
9.0-11' — sandy clay
11'-12.7 med sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Ron Guerra Date 5/13/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1368

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26|4081-1
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.32

WELL RECORD

1. OWNER NY Susquehanna & West Railroad ADDRESS 1 Railroad Way, Cooperstown, NY
   Owner's Well No. 2D SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot---- Block 253
3. DATE COMPLETED 11/7/88 DRILLER Empire Soils Investigations, Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 43.0 Feet
5. CASING: Type STAINLESS STEEL Diameter 2 Inches Length 43.0 Feet
6. SCREEN: Type NONE Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA #
14. DATA OBTAINED BY Chris O'Shaunnessy #1419 Date 2/22/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1360

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26 14050-1
APPLICATION NO. _____
COUNTY Bergen
COORD. 26. 03.5 32

WELL RECORD

1. OWNER Stephan Chemical ADDRESS 100 W. Hunter, Maywood, NJ
   Owner's Well No. MW 18D SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot – Block 184
3. DATE COMPLETED 10/12/88 DRILLER Empire Soils Investigations Inc.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH _____ Feet
5. CASING: Type Stainless Diameter 2 Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY Jeff Jaworski #1315 Date 2/22/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1358

2614081

26·03·532

JS-1

DATE	DRILLED FROM	DRILLED TO	WEATHER	TEMP.	TIME
11/17/88	0	13			
11/18/88	13	43			

ESI FIELD LOG

HOLE NO. _____
GRD. ELEV. 20
G.W. DEPTH _____

SHEET 1 OF 1

PROJECT _____
LOCATION _____

Depth of Sample	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	CLASSIFICATION OF MATERIAL DRILLED	OTHER DATA
0-2	1	P	U	S	Hand		Dry	Br	SILTY, f sandy	
2-3	2	P	U	S	Hand		Dry	Br	f sand, SILT	
5-7	3	23	83	50/5	38		Dry	Br	f sand SILT some GRAVEL	(Tight formation)
									Auger to 13 FT grout in 10" casing	
									13 FT NX Rock core	water level 13 FT
									RUN #1 — DRILLED 9 FT — REC 97%	
									RUN #2 — 6 FT — 100%	BED ROCK 10 FT
									RUN #3 — 5 FT — 92%	
									RUN #4 — 10 FT — 99	
									43 FT	

DRILLERS CLASSIFICATION

NOTATION: SIZE CORE _____
SIZE SHELBY TUBE _____
SIZE AUGER 6" / 8" water ROTARY
N = No. blows to drive ___" spoon ___" with ___ lb. pin wt. falling ___" per blow.
C = No. blows to drive ___" casing ___" with ___ lb. weight falling ___" per blow.

SOIL CLASSIFICATIONS BY: _____
IF OTHER SPECIAL EQUIPMENT HAS BEEN EMPLOYED PLEASE NOTE: _____

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 1361

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
11/18/89	11:00 AM	0	14	cool clear	43°

EMPIRE

FIELD LOG

HOLE NO. S-1
GRD. ELEV. 26 15317
26-03-526

PROJECT FINE ORGANICS
LOCATION LODI NJ.

Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										AUGER TO 8.0'		
											H_2O @ 6.0'	
8-10	1	1	2									
			2	1	4		WET	BR	4"	Brown fine to medium SAND, some silt		
10-12	2	2	2									
			2	2	4		WET			same.		
12-14	3	1	2							Brown Peat		
			5	7	7					Brown SILT AND CLAY	13.5'	
										END OF BORING @	14.0'	
										½ BACKFILL		

NOTATION: SIZE AUGERS / CASING 4¼ I.D. SIZE SPOON 2"
SIZE THIN-WALLED TUBE _____ SIZE CORE _____
N = NO. OF BLOWS TO DRIVE 2 "SPOON 6 "WITH 140 lb. WEIGHT FALLING 30 PER BLOW
C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 1299

Form DER-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.03.5.26
PERMIT NO. 2611380-5
APPLICATION NO. —
COUNTY BERGEN

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St. Maywood NJ
Owner's Well No. B38W4B SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION SAME
3. DATE COMPLETED 9-15-87 DRILLER Doug Hyerchin
4. DIAMETER: Top 14 inches Bottom 8½ inches 14" TOTAL DEPTH 36.3 Feet
5. CASING: Type SS PVC (Protective Casing) Diameter 2" Inches Length 33.3 8' Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 5' Feet
Range in Depth { Top +2 Feet / Bottom 36.3 Feet
* NOTE 2" Sump Cap
Geologic Formation —
Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
Static water level before pumping — Feet below surface
Pumping level — feet below surface after — hours pumping
Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
How pumped — How measured —
Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name —
Capacity — G.P.M. How Driven — H.P. — R.P.M. —
Depth of Pump in well — Feet Depth of Footpiece in well — Feet
Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR Monitoring AMOUNT { Average — Gallons Daily / Maximum — Gallons Daily
11. QUALITY OF WATER N/A Sample: Yes — No —
Taste — Odor — Color — Temp. — °F.
12. LOG See Reverse Are samples available? NO
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well Log
14. DATA OBTAINED BY Moretrench American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

0-2' Topsoil, grass roots, Fine Med Sand

2-10' Fine Med tan sandy, some Silt

10-20' Competent N.B Sandstone

20-33' Red Brown Silty Sand

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

C

COORD: 26.03.5.26

PERMIT NO. 26113813

APPLICATION NO. —

COUNTY BERGEN

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St. Maywood, NJ
   Owner's Well No. B38W3A SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION SAME
3. DATE COMPLETED 10-13-87 DRILLER DOUG MYERCHIN
4. DIAMETER: Top 8 inches Bottom 8 inches TOTAL DEPTH 10.10 Feet
5. CASING: Type SS Diameter 2" Inches Length 5.6 Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 5 Feet
   Range in Depth: Top — Feet; Bottom 10.6 Feet Geologic Formation —
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
   Static water level before pumping — Feet below surface
   Pumping level — feet below surface after — hours pumping
   Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped — How measured —
   Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name —
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR MONITORING AMOUNT: Average — Gallons Daily; Maximum — Gallons Daily
11. QUALITY OF WATER N/A Sample: Yes — No —
    Taste — Odor — Color — Temp. — °F.
12. LOG See reverse Are samples available? NO
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well Log
14. DATA OBTAINED BY Moretrench American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151 039

0 – 1.5' - Fill: Red silty sand, some small gravel

1.5 – 4' Tan brown silt & sand

4' – 7' Black silt, some fine sand

7' – 10.6' Weathered N.B. Red brown sand and silt

DWR-138A
1/98

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2611389-9
APPLICATION NO. —
COUNTY BERGEN
COORD. 26.03.5.26

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St. Maywood NJ
   Owner's Well No. B38W5B SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION SAME
3. DATE COMPLETED 9-21-87 DRILLER Doug Myerchin
4. DIAMETER: Top 14" inches PVC (Protective Casing) Bottom 6 inches -10' TOTAL DEPTH 44.5 Feet
5. CASING: Type Stainless Steel Diameter 2" Inches Length 32.8 Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 10 Feet
   Range in Depth { Top 33 Feet / Bottom 44.5 Feet } * NOTE: 2" Sump Cap Geologic Formation —
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
   Static water level before pumping — Feet below surface
   Pumping level — feet below surface after — hours pumping
   Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped — How measured —
   Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name —
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR MONITORING AMOUNT { Average — Gallons Daily / Maximum — Gallons Daily }
11. QUALITY OF WATER N/A Sample: Yes — No —
    Taste — Odor — Color — Temp. — °F.
12. LOG See reverse Are samples available? NO
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers LOG
14. DATA OBTAINED BY MORETRENCH American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151 0398

0'-2' Topsoil, grass roots, soil

Fine medium SAND

2-4.5' fine medium tan sand, some silt trace small medium gravel

4.5-13.5' Weathered rock

13.5'-16.2' Competent NB Sandstone

16.2'-44.5' Red brown sticky sand

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2611328-3
APPLICATION NO. —
COUNTY BERGEN
COORD. 26.03.5.26

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St, Maywood NJ
   Owner's Well No. B38W3B-1 SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION Same
3. DATE COMPLETED 8-31-87 DRILLER Doug Myerchin
4. DIAMETER: Top 14" inches Bottom 8½ inches 10" TOTAL DEPTH 40.5 (12.5') Feet
5. CASING: Type SS (PVC Protective Casing) Diameter 2" Inches Length 32.5 Feet
6. SCREEN: Type SS Size of Opening .010 Diameter 2" Inches Length 10 Feet
   Range in Depth { Top +2 Feet / Bottom 40.5 Feet } Geologic Formation —
   Tail Pipe: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY — Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date N/A Yield — Gallons per minute
   Static water level before pumping — Feet below surface
   Pumping level — feet below surface after — hours pumping
   Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped — How measured —
   Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name —
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR Monitoring AMOUNT { Average — Gallons Daily / Maximum — Gallons Daily }
11. QUALITY OF WATER: N/A Sample? Yes — No —
    Taste — Odor — Color — Temp. — °F.
12. LOG SEE REVERSE Are samples available? NO
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Drillers Well Log
14. DATA OBTAINED BY MORETRENCH American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151.0100

0 - 15 Topsoil, grass roots
15 - 22 Fine med tan sand
22 - 30 Competent NB SANDSTONE
30 - 40.5 Red Brown Silty Sand

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

E

PERMIT NO. 2611379-1
APPLICATION NO. —
COUNTY BERGEN
COORD. 26.03.5.26

WELL RECORD

1. OWNER Stephan Chemical Plant ADDRESS 100 West Hunter St, Maywood NJ
   Owner's Well No. B38W6B SURFACE ELEVATION — Feet (Above mean sea level)
2. LOCATION Same as above
3. DATE COMPLETED 9-10-87 DRILLER Doug Myerchin
4. DIAMETER: Top 14" Inches Bottom 6" Inches (Protective casing) TOTAL DEPTH 37.6 Feet
5. CASING: Type PVC Steel Diameter 10" 2" Inches Length 12' 34.6 Feet
6. SCREEN: Type Steel Size of Opening .010 Diameter 2" Inches Length 5' Feet
   Range in Depth { Top +2' Feet; Bottom 37.6 Feet } Note: 2" Sump Cap. Geologic Formation —
   Tail Piece: Diameter — Inches Length — Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at — Feet above surface
   Water rises to — Feet above surface
8. RECORD OF TEST: Date — Yield — Gallons per minute
   Static water level before pumping — Feet below surface
   Pumping level — feet below surface after — hours pumping
   Drawdown — Feet Specific Capacity — Gals. per min. per ft. of drawdown
   How pumped — How measured —
   Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name N/A
   Capacity — G.P.M. How Driven — H.P. — R.P.M. —
   Depth of Pump in well — Feet Depth of Footpiece in well — Feet
   Depth of Air Line in well — Feet Type of Meter on Pump — Size — Inches
10. USED FOR Monitoring AMOUNT { Average — Gallons Daily; Maximum — Gallons Daily }
11. QUALITY OF WATER — Sample: Yes — No X
    Taste — Odor — Color — Temp. — °F.
12. LOG See Reverse Are samples available? No
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Driller's Well Log
14. DATA OBTAINED BY Moretrench American Corp Date 3-10-93

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 151.0402

0 - .5 - Top Soil, Grass Roots

.5 - 3' Light Brown, Fine - Medium Sand, Some Silt

3 - 5 - Weathered Rock

5' - 8'5" Weathered N/B - Sand Stone

8'5 - 15' Same

15' - 35' Dark brown Sand

35' - 37'6" Dark brown Sand with Traces of Light Grey Sand

FORM 87

26-03-532

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3936
Application No. _____
County _____

WELL RECORD

1. OWNER Snappy Car Wash T/A Jax Car Wash ADDRESS 107 Essex St., Maywood, N.J.
   Owner's Well No. 3221 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 107 Essex St., Maywood, N.J.
3. DATE COMPLETED 6/14/66 DRILLER D.F. Well Drilling Co., Inc., Netcong, N.J.
4. DIAMETER: top 6 Inches Bottom _____ Inches TOTAL DEPTH 196 Feet
5. CASING: Type solid steel Diameter 6 Inches Length 40 Feet
6. SCREEN: Type _____ Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY NO Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 6/22/66 Yield 20+ Gallons per minute
   Static water level before pumping 14 Feet below surface
   Pumping level 45 feet below surface after 2 hours pumping
   Drawdown 31 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type JBO Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No. ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 1336

26-03-532
26-3936

Log

0-12' - overburden, water, gravel
12'-14' - red rock
14'-120' - red rock
120'-160' - red rock
160'-164' - water seam
164'-196' - red rock

Total depth 196'

RECEIVED
JUL 17 9 34 AM '96
GEOLOGY
&
TOPOGRAPHY

WELREC 085 1337

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17906
Atlas Sheet Coordinates 26 : 03 : 526

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B38W19S
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 12 / 89
Regulatory Program Requiring Well N/A Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 15.79 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: [x] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 2.26 ft.
Was steel protective casing installed? [x] Yes [ ] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	+2.26	15.79	2"	
Outer Casing (Not Protective Casing)	N/A	N/A		
Screen (Note slot size)	12.92	14.92		
Tail Piece				
Gravel Pack	11.8	16		
Annular Seal/Grout	10.0	11.8		
Method of Grouting	Trimmie			

Static water level after drilling 13.4 ft.
Water level was measured using M-Scope
Well was developed for N/A hours at N/A gpm
Method of development Air lift
Was permanent pumping equipment installed? [ ] Yes [x] No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? [ ] Yes [x] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 3 Br. Sand & Cobbles
3 - 9 Br. Silty Sand & Gravels
9 - 16 Gr. Sand & Clay
TD 16'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature John L Cappeccola Date 12-12-89

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1304

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15911
APPLICATION NO. _____
COUNTY _____
COORD. 26,03,532

WELL RECORD

1. OWNER Farm Road Reality ADDRESS 207 West Central Ave., Maywood, NJ
   Owner's Well No. MW 3 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Same
3. DATE COMPLETED 3-19-89 DRILLER Allen Wilson-1278
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 20 Feet
5. CASING: Type PVC Diameter 4 Inches Length 5 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 15 Feet
   Range in Depth { Top 5 Feet / Bottom 20 Feet } Geologic Formation Large gravel, gray clay, silt, sand
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See Back Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Wilson Drilling Co.
14. DATA OBTAINED BY Allen Wilson Date 3-27-89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1366

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15909
APPLICATION NO. _____
COUNTY _____
COORD. 26,03,532

WELL RECORD

1. OWNER Farm Road Reality ADDRESS 207 West Central Ave. Maywood, NJ
   Owner's Well No. MW 1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Same
3. DATE COMPLETED 3-18-89 DRILLER Allen Wilson - 1278
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 20 Feet
5. CASING: Type PVC Diameter 4 Inches Length 5 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 15 Feet
   Range in Depth { Top 5 Feet / Bottom 20 Feet
   Geologic Formation Large gravel, gray clay, silt, sand
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See Back
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.) Are samples available? _____
13. SOURCE OF DATA Wilson Drilling Co.
14. DATA OBTAINED BY Allen Wilson Date 3-27-89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1362

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 2615319-0
APPLICATION NO. _____
COUNTY Bergen
COORD. 26.03.5.26

WELL RECORD

1. OWNER Fine Organics ADDRESS 210 Main Street Lodi, NJ
   Owner's Well No. MW-19 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot #10 Block #81A
3. DATE COMPLETED 1/18/89 DRILLER Empire Soils Investigations, Inc.
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 25.0' Feet
5. CASING: Type PVC Diameter 4 Inches Length 22.0 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 5.0 Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY James Stavola Date 1/26/89
    supervised by Roger Logel #1166

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1302

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-15910
APPLICATION NO. _____
COUNTY _____
COORD. 26·03·532

WELL RECORD

1. OWNER Farm Road Reality ADDRESS 207 West Central Ave. Maywood, NJ
   Owner's Well No. MW 2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Same
3. DATE COMPLETED 3-18-89 DRILLER Allen Wilson-1278
4. DIAMETER: Top 4 inches Bottom 4 inches TOTAL DEPTH 20 Feet
5. CASING: Type PVC Diameter 4 Inches Length 5 Feet
6. SCREEN: Type PVC Size of Opening .020 Diameter 4 Inches Length 15 Feet
   Range in Depth { Top 5 Feet / Bottom 20 Feet } Geologic Formation Large gravel, gray clay, silt, sand
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See Back Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Wilson Drilling Co.
14. DATA OBTAINED BY Allen Wilson Date 3-27-89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1364

Soil Log

0' to 8' - Large gravel and gray clay
9' to 20' - Silt and sand

26-03-532
26-15909

WELREC 085 1363

Soil Log

26-03-532
26-15910

0' to 8' - Large gravel and gray clay
9' to 20' - Silt and sand

WELREC 085 1365

Soil Log

0' to 8' - Large gravel and gray clay
9' to 20' - Silt and Sand

26-03-532
26-15911

WELREC 085 1367

FORM 87

26-3-535

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2771
Application No. _____
County _____

WELL SEALED 5/14/86

WELL RECORD

Red #

1. OWNER Aquarium, Inc. ADDRESS 87 Route 17, Maywood, N. J.
   Owner's Well No. 1 SURFACE ELEVATION 43 (Above mean sea level) Feet
2. LOCATION Maywood, N. J.
3. DATE COMPLETED 4/25/63 DRILLER Burrows Well Drilling Co., Inc.
4. DIAMETER: top 10 Inches Bottom 8 Inches TOTAL DEPTH 300 Feet
5. CASING: Type Steel Diameter 10 Inches Length 22 Feet
6. SCREEN: Type _____ Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Rh 955
   Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 2/5/63 Yield 172 Gallons per minute
   Static water level before pumping 6½ Feet below surface
   Pumping level 50 feet below surface after 8 hours pumping
   Drawdown 43½ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Turbine How measured Orifice
   Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
   Type Submersible Mfrs. Name Byron-Jackson
   Capacity 150 G.P.M. How Driven Electric H.P. 20 R.P.M. 1750
   Depth of Pump in well 150 Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ____ Inches
10. USED FOR Industry AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. X
    Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG Gmar (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy) Are samples available? _____
13. SOURCE OF DATA Drillings
14. DATA OBTAINED BY Burrows Well Drilling Co. Date 4/30/63

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 1384

26-03-538
26-1620

LOG OF FORMATION

0 - 8'	Yellow clay and fill.
8 - 20'	Hardpan and stones.
20 - 37'	Red rock; weathered.
37 - 403'	Sandstone and shale rock.

RECEIVED
JUN 5 1957
Department of Conservation
& Economic Development
Geologic & Eng. Survey

WELREC 085 1492

DWR-138A

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26 14041-1
APPLICATION NO. _____
COUNTY Bergen
COORD: 2e. 03, 532

WELL RECORD

1. OWNER Mrs. Evelyn GRAMMATICO ADDRESS 216 Grove, Maywood, NJ
   Owner's Well No. MW15S SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lot 53, Block 17
3. DATE COMPLETED 10/28/86 DRILLER Empire Soils INVESTIGATIONS, INC.
4. DIAMETER: Top 2 inches Bottom 2 inches TOTAL DEPTH 16.5 Feet
5. CASING: Type STAINLESS STEEL Diameter _____ Inches Length 16.5 Feet
6. SCREEN: Type _____ Size of Opening ____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY JEFF JAWORSKI #1315 Date 2/20/89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1356

38-1

26.03.532

DATE	DRILLED FROM	DRILLED TO	WEATHER	TEMP.	TIME	ESI FIELD LOG	HOLE NO. 155
10/25/67	0	16½					GRD. ELEV.
							G.W. DEPTH
							26-14041-1

SHEET 1 OF 1 PROJECT

LOCATION

Depth of Sample	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	CLASSIFICATION OF MATERIAL DRILLED	OTHER DATA
									No Samples	water Level 6 FT
									Drill 0 – 16½ FT	
									set well 16½ FT	

DRILLERS CLASSIFICATION

NOTATION: SIZE CORE

SIZE SHELBY TUBE

SIZE AUGER 6¼"

N = No. blows to drive " spoon · " with lb. pin wt. falling " per blow.

C = No. blows to drive " casing " with lb. weight falling " per blow.

SOIL CLASSIFICATIONS BY:

IF OTHER SPECIAL EQUIPMENT HAS BEEN EMPLOYED PLEASE NOTE:

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 1357

26-03-531

26-4949 +
26-4964 +
26-4967

PROJECT Maywood Gulf
WELL NO. 2
26-4964

HANDEX CORPORATION
BORING LOG

DATE START: 1-27-81
DATE FINISH: 1-27-81
STATIC WATER LEVEL 9 ft.

LOCATION RT 17 North Maywood N.J.
DRILLING METHOD Hollow Stem SAMPLING METHOD
CASING: Type PVC Diameter 4" in. Length 3 ft.
SCREEN: Type PVC Diameter 4" in. Length 5 ft.
GRAVEL PACK yes ✓ no Gravel Size Total Depth 18 ft.
SANITARY SEAL yes no ✓ Type

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0"-10" BLACK TOP + CRUSH STONE
		1'-10' M/F Brown Sand + Gravel Fill
		10'-18' Boulders - BLACK Silty Sand Some Rock chips

TOP
Concrete
Cement

D-1245

WELREC 085 1331

26-03.531

26-4964 thru 26-4967

26-4965

PROJECT GDLF Maywood

WELL NO. 3

HANDEX CORPORATION

BORING LOG

DATE START: 1-27-81

DATE FINISH: 1-27-81

STATIC WATER LEVEL 9 ft.

LOCATION RT 17 North Maywood N.J.

DRILLING METHOD Hollow Stem SAMPLING METHOD

CASING: Type PVC Diameter 4 in. Length 2 ft.

SCREEN: Type PVC Diameter 4 in. Length 15 ft.

GRAVEL PACK yes ✓ no Gravel Size Total Depth 17 ft.

SANITARY SEAL yes no ✓ Type

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0-1' - BLACK TOP - CROSHED STONE TOP
5		
		1-10' FILL - BROWN SAND + 1/4-1/2" GRAVEL
10		
15		10'-11' BOULDERS - STUMPS BLACK SANDY SILT SOME SMALL STONES
20		

Top

Casing

Cone

WELREC 085 1332

26.03.531

26-4949+
26-4964 thru
26-4967

PROJECT Golf Heights
WELL NO. 4 (26 4960)

HANDEX CORPORATION
BORING LOG

DATE START: 1-27-81
DATE FINISH: 1-27-81
STATIC WATER LEVEL 9 ft.

LOCATION RT 17 North Maywood NJ.
DRILLING METHOD Hollow Stem SAMPLING METHOD _____
CASING: Type PVC Diameter 4 in. Length 2 ft.
SCREEN: Type PVC Diameter 4 in. Length 15 ft.
GRAVEL PACK yes ✓ no ____ Gravel Size _____ Total Depth 17 ft.
SANITARY SEAL yes ____ no ✓ Type _____

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-1' BLACK TOP + CRUSHED STONE-2"
5		1'-10' Fill - Brown f/c SAND + GRAVEL
10		
15		10'-17' Boulders - wood - BLACK Sandy SILT with some chips
20		

TOP
Casing
Screen

WELREC 085 1333

26-03.531

26-4949 + 26-4964 thru 4967

PROJECT Gulf Maywood
WELL NO. 5
26-4967

HANDEX CORPORATION
BORING LOG

DATE START: 1-27-81
DATE FINISH: 1-27-81

LOCATION RT 17 North Maywood Ill.
STATIC WATER LEVEL 9 ft.
DRILLING METHOD Hollow Stem SAMPLING METHOD
CASING: Type PVC Diameter 4 in. Length 7 ft.
SCREEN: Type PVC Diameter 4 in. Length 13 ft.
GRAVEL PACK yes no Gravel Size Total Depth 20 ft.
SANITARY SEAL yes no Type

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0'-1' BLACKTOP STONE
5		
		1'-10' BROWN SAND m/f + GRAVEL 1/4-1/2 in.
10		
15		
		10'-20' BOULDERS - STUMPS - BLACK SANDY SILT.
20		

Top
Casing
Screen

WELREC 085 1334

26-03-531

26-4949 + 26-4964 thru 26-4967

Form DWR-138

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-4967

APPLICATION NO. _____

COUNTY _____

FOR OBSERVATION PURPOSES ONLY

WELL RECORD

1. OWNER Gulf Oil Co. ADDRESS _____
   Owner's Well No. I-5 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION See Log
3. DATE COMPLETED 1/27/81 DRILLER Hadley
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR OBSERVATION AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 1329

26-03.531
26-4949 f
26-4964 thru
26-4967.

PROJECT Maywood Golf
WELL NO. 1
Permit # 264949

HANDEX CORPORATION
BORING LOG

DATE START: 1-27-81
DATE FINISH: 1-27-81
STATIC WATER LEVEL 9 ft.

LOCATION RT 17 North - Maywood N.J.
DRILLING METHOD Hollow Stem SAMPLING METHOD
CASING: Type PVC Diameter 4 in. Length 4½ ft.
SCREEN: Type PVC Diameter 4 in. Length 15 ft.
GRAVEL PACK yes ✓ no Gravel Size Total Depth 19½ ft.
SANITARY SEAL yes no ✓ Type Concrete Manhole

DEPTH BELOW SURFACE	SAMPLE NO DEPTHS	IDENTIFICATION OF SOILS REMARKS
		0-1' Black Top And 2" crushed stone
		2'-10' yellow sand and gravel
		10'-19½' Red Silty Sand Boulders

CAP
Coupling
Cone

D-1250

WELREC 085 1330

26-3-611 B

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. B6 3650
Application No. _____
County _____

WELL RECORD

1. OWNER Henry Menzer ADDRESS 339 Golf Ave. Maywood N.J.
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 339 Golf Ave. Maywood New Jersey
3. DATE COMPLETED 2/11/66 DRILLER Dwight H. Ward
4. DIAMETER: top 5 Inches Bottom 5 Inches TOTAL DEPTH 170 Feet
5. CASING: Type Black Steel Diameter 5 Inches Length 34 Feet
6. SCREEN: Type None Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Enk
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY no Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 2/11/66 Yield 29 Gallons per minute
Static water level before pumping 34 Feet below surface
Pumping level 131 feet below surface after 4 hours pumping
Drawdown 97 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Permanent Equipt. How measured 1000 Gal. Tank Truck
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type Submersible Mfrs. Name Myers
Capacity 24 G.P.M. How Driven 220V. H.P. 1 R.P.M. 3400
Depth of Pump in well 140 Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ___ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Domestic AMOUNT { Average 300 Gallons Daily / Maximum 600 Gallons Daily
11. QUALITY OF WATER Good Sample: Yes ___ No. ___
Taste Good Odor None Color Clear Temp. _____ °F
12. LOG Driller (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy) Are samples available? _____
13. SOURCE OF DATA Drill Log
14. DATA OBTAINED BY Driller Date 2/11/66

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

26-03-611.

26-3650

DRILLING RECORD

Hole No. 26,03,611

Party No. MENGER Date 2-11-66 26-3650

Location 339 Golf Ave. Maywood N.J.

Depth of Hole 170 Feet Casing 34 Ft. 5" Size

FEET FROM	FEET TO	FORMATION
0	14	Sand clay & gravel
14	170	Sand stone

REMARKS

Form D-181

RECEIVED
MAR 15 2 48 PM '66
GEOLOGY
&
TOPOGRAPHY

WELREC 085 1982

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17903
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner
Address U.S. DEPT. OF ENERGY
City 100 NORTH HUNTER AVENUE MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 27
County Bergen Municipality Lot No. Block No.
Address MAYWOOD BORO 46 124

TYPE OF WELL (as per Well Permit Categories)
Date well completed 12 / 14 /89
Regulatory Program Requiring Well N/A BORING Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	N/A			
Tail Piece	N/A			
Gravel Pack	N/A			
Annular Seal/Grout	N/A			
Method of Grouting	N/A			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 8 Br. Silty Sand
8 - 16 Br. Silty Sand & Gravels
16 - 19 Gray Clay
19 - 25 Red Fine Grained Sandstone
TD 25

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cipriano Date 12/14/89

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17902
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 26
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 12 / 12 / 89
Regulatory Program Requiring Well N/A BORING Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 9467
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 7 Br. Silty Sand
7 - 16 Br. Silty Sand & Gravels
16 - 21 Gray Clay
21 - 27 Red Fine Grained Sandstone
TD 27

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cappuccio Date 12/12/89

COPIES

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17901
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 25
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 12 / 7 /89
Regulatory Program Requiring Well N/A Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 5 Br. Silty Sand
5 - 15 Br. Silty Sand & Gravels
15 - 18 Gray Clay
18 - 24 Broken Red Fine Grained Sandstone
TD 24

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cognasola Date 12/7/89

COPIES: White & Canary - DEP Copy; Pink - Driller's Copy; Goldenrod - Owner's Copy

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17900
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38 G 24
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 12 / 6 / 89
Regulatory Program Requiring Well N/A Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6 Br. Silty Sand
6 - 14 Br. Silty Sand & Gravels
14 - 15 Gr. Clay
15 - 24 Red Fine Grained Sandstone
TD 24

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Capparale Date 12/6/89

COPIES ...

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17899
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 23
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 12 / 4 / 89
Regulatory Program Requiring Well N/A Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 23 ft.
Well finished to _____ ft.
Borehole diameter:
Top _____ in.
Bottom _____ in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 3 Br. Sand & Cobbles
3 - 9 Br. Silty Sand & Gravels
9 - 17 Gr. Clay & Sand
17 - 23 Red Fine Grained Sandstone
TD 23

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cognassola Date _____

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17898
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner
Address U.S. DEPT. OF ENERGY
City 100 NORTH HUNTER AVENUE MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 22
County Bergen Municipality Lot No. Block No.
Address MAYWOOD BORO 46 124

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/29 / 89
Regulatory Program Requiring Well N/A BORING Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 26 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 8 Br. Silty Sand
8 - 15 Gray Clay
15 - 20 Br. Silty Sand & Gravels
20 - 26 Broken Red Fine Grained Sandstone
TD 26

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Capasso Date 11/29/89

B-1258

COPIES: White & Green - DEP ...

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17897
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 21
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 11 / 28 / 89
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 9 Br. Silty Sand
9 - 16 Gr. Clay
16 - 20 Br. Silty Sand & Gravels
20 - 25 Broken Red Fine Grained Sandstone
TD - 25

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John L Cappuccio Date 11/28/89

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 17896
Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner U.S. DEPT. OF ENERGY
Address 100 NORTH HUNTER AVENUE
City MAYWOOD State NJ Zip Code 07607

WELL LOCATION - If not the same as owner please give address. Owner's Well No. B 38G 20
County Bergen Municipality MAYWOOD BORO Lot No. 46 Block No. 124
Address

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 11 / 27 / 89
Regulatory Program Requiring Well N/A BORING Case I.D. # N/A

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Don Downing Tele. # 201-843-7080

WELL CONSTRUCTION

Total depth drilled 22 ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	"			
Screen (Note slot size)	"			
Tail Piece	"			
Gravel Pack	"			
Annular Seal/Grout	"			
Method of Grouting	"			

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid None Type of Rig Acker Soil Sentry
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 947
Name of Drilling Company HYDRO GROUP, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 8 Br. Silty Sand
8 - 17 Gr. Clay
17 - 22 Broken Red Fine Grained Sandstone
TD 22

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John P Cognevale Date 11/27/89

COPIES ... Water & Power ... DEP ...

FORM 87

26-03-646

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26636.55
Application No. _____
County Bergen

WELL RECORD

1. OWNER Mr Arthur Abrams ADDRESS 5 Fairway Ave
Owner's Well No. One SURFACE ELEVATION 75 Feet (Above mean sea level)
2. LOCATION Maywood Bergen Co N.J.
3. DATE COMPLETED Dec 18 1965 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 100 Feet
5. CASING: Type steel Diameter 6 Inches Length 21 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
Range in Depth { Top — Feet / Bottom — Feet Geologic Formation ___
Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
Water rises to ___ Feet above surface
RECORD OF TEST: Date Dec 18 1965 Yield 20 Gallons per minute
Static water level before pumping 70 Feet below surface
Pumping level 80 feet below surface after 4 hours pumping
Drawdown 10 Feet Specific Capacity ___ Gals. per min. per ft. of drawdown
How Pumped Bailor How measured bbl
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type Submersible Mfrs. Name Deming
Capacity 20 G.P.M. How Driven electric H.P. 3/4 R.P.M. 3500
Depth of Pump in well 80 Feet Depth of Footpiece in well no Feet
Depth of Air Line in well no Feet Type of Meter on Pump no Size ___ inches
10. USED FOR Domestic AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily
11. QUALITY OF WATER ___ Sample: Yes ___ No. ___
Taste no Odor no Color clear Temp. 56 °F
12. LOG Hardpan Red Rock (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy) Are samples available? no
SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date Jan 10 1966

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 2112

FORM 87

26-03-563

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3570
Application No. _____
County Bergen

WELL RECORD

Red #

To be Stapled 3/3/15 4 mm

1. OWNER Jos L Muscarelle Inc ADDRESS 113 Essex St
   Owner's Well No. One SURFACE ELEVATION 40 Feet (Above mean sea level)
2. LOCATION Maywood Bergen Co N.J.
3. DATE COMPLETED Aug 5 1966 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 10 Inches Bottom 10 Inches TOTAL DEPTH 400 Feet
5. CASING: Type Steel Diameter 10 Inches Length 32 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
   Range in Depth { Top ___ Feet / Bottom ___ Feet } Geologic Formation ___
   Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
   Water rises to ___ Feet above surface
8. RECORD OF TEST: Date Aug 5 1966 Yield 159 Gallons per minute
   Static water level before pumping 10 Feet below surface
   Pumping level 185 feet below surface after 8 hours pumping
   Drawdown 175 Feet Specific Capacity ___ Gals. per min. per ft. of drawdown
   How Pumped Turbine How measured orifio
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Mfrs. Name Deming
   Capacity 150 G.P.M. How Driven electric H.P. 25 R.P.M. 1750
   Depth of Pump in well 210 Feet Depth of Footpiece in well 10 Feet
   Depth of Air Line in well 210 Feet Type of Meter on Pump no Size ___ Inches
10. USED FOR Cooling AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily }
11. QUALITY OF WATER ___ Sample: Yes X No. ___
    Taste No Odor no Color clear Temp. 56 °F
12. LOG 10 Red Hard Pan bel red shales and rock Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date Aug 19 1966

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 1802

J# 1828

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48627

Atlas Sheet Coordinates 26 : 00 : 539

OWNER IDENTIFICATION - Owner STEPAN COMPANY
Address 100 WEST HUNTER AVE.
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. ORC-1
County BERGEN Municipality MAYWOOD BORO Lot No. 32 Block No. 124
Address 100 WEST HUNTER AVE.

DATE WELL STARTED 9/4/97
DATE WELL COMPETED 9/4/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ZEBRA ENVIRONMENTAL Tele. #

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Is steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7 ft.

Water level was measured using TAPE

Well was developed for 2 hours
at 2 gpm

Method of development Sub. Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5.5	13.5	2	PVC	Sch. 40 .10
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3.0	13.5	8	#00 & #1	Morie
Grout	0	3	8	Neat Cement	20 lbs.
				Bentonite	lbs.

Grouting Method Pumped in place
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-7' Black Fill
7-10 Reddish Clay
10-13.5 Soft Shale

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TABASCO DRILLING CORP.
Well Driller (Print) Charles Hitzelberger
Driller's Signature Charles Hitzelberger
Registration No. NJP 1066 Date 9/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0481

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26- 48277

Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner SEARS, ROEBUCK & COMPANY
Address 200 ROUTE 17 SOUTH
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County BERGEN Municipality MAYWOOD BORO Lot No. 3 Block No. 125
Address 200 ROUTE 17 SOUTH

DATE WELL STARTED 7 / 31 / 97
DATE WELL COMPETED 7 / 31 / 97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 96-11-5-1158-01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) FD GTI Tele. # 507-0300

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 11½ ft.

Borehole diameter:
Top 8 3/4 in.
Bottom 8 3/4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 2½ ft.

Water level was measured using M-Scope

Well was developed for ½ hours at ½ gpm

Method of development pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B57 Mobile

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1½	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	1½	11½	4"	PVC .020	Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	13'	#1	Morie	
Grout	0'	1'		Neat Cement	lbs.
				Bentonite	10 lbs.

Grouting Method Gravity
Drilling Method H.S.A.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-2½ Asphalt + Fill, wood + Roots, concrete chunks
2½ - 13' Red + Grey fine Sand + silt cobbles @ 10'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TOTAL QUALITY DRILLING
Well Driller (Print) Michael Kavlunas
Driller's Signature Michael Kavlunas
Registration No. MD1328 Date 8 / 5 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0459

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 48275

Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner SEARS, ROEBUCK & COMPANY
Address 200 ROUTE 17 SOUTH
City MAYWOOD State NJ. Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality MAYWOOD BORO Lot No. 3 Block No. 125
Address 200 ROUTE 17 SOUTH

DATE WELL STARTED 7/31/97
DATE WELL COMPETED 7/31/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 96-11-5-1158-01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.D.G.I. Tele. # 587-0300

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 11½ ft.

Borehole diameter:
Top 8¾ in.
Bottom 8¾ in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 2½ ft.

Water level was measured using M-Scope

Well was developed for ½ hours
at ½ gpm

Method of development pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B57 Mobile

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1½'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	1½	11½	4"	PVC .020	Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	13'	#1	Morie	
Grout	0	1'		Neat Cement ____ lbs. Bentonite 10 lbs.	

Grouting Method Gravity
Drilling Method H.S.A.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-2½' Asphalt + Fill, wood, roots and concrete chunks
2½-13' Red + brey Fine sand + silt cobbles @ 10'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TOTAL QUALITY DRILLING

Well Driller (Print) Michael Kavlunas

Driller's Signature Michael Kavlunas

Registration No. MD1328 Date 8/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0460

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 48276

Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner SEARS, ROEBUCK & COMPANY
Address 200 ROUTE 17 SOUTH
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality MAYWOOD BORO Lot No. 3 Block No. 125
Address 200 ROUTE 17 SOUTH

DATE WELL STARTED 7/31/97
DATE WELL COMPETED 7/31/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 96-11-5-1158-01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) F.D.G.T.I Tele. # 587-0300

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 11½' ft.

Borehole diameter:
Top 8 3/4 in.
Bottom 8 3/4 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 2½ ft.

Water level was measured using M-Scope

Well was developed for ½ hours at ½ gpm

Method of development pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B57 mobile

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1½'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	1½	11½	4"	PVC .020	Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	13'	#1	morie	
Grout	0'	1'		Neat Cement / Bentonite	— lbs. / 50 lbs.

Grouting Method Gravity
Drilling Method H.S.A

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-2½' Asphalt + Fill wood Roots + Concrete chunks
2½'-13' Red + Grey Fine sand + Silt Cobbles @ 10'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TOTAL QUALITY DRILLING
Well Driller (Print) Michael Kavlunas
Driller's Signature Michael Kavlunas
Registration No. MD1328 Date 8/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0463

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 46624

Atlas Sheet Coordinates 26 : 03 : 297

OWNER IDENTIFICATION - Owner S B P C
Address 10 WAGARAW RD
City HAWTHORNE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 01 Block No. 63
Address CENTRAL AVE

DATE WELL STARTED 3 / 7 / 97
DATE WELL COMPETED 3 / 7 / 97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 91-08-19-1447

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Environmental Waste Management Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface 0 ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using water tape

Well was developed for 1 hours
at 5 gpm

Method of development sub pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity 0 gpm

Pump type: none

Drilling Fluid none Type of Rig TH60

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	3"	5'	4"	PVC	
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	5'	20'	4"	.020 slot PVC	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	20'		#2 well sand	
Grout	6"	3'		Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method gravity
Drilling Method air rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 1' asphalt & gravel
1' - 6' cobbles, brown sand, and gravel
6' - 20' medium brown sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SBI ENVIRONMENTAL INC.
Well Driller (Print) Robert Hough
Driller's Signature Robert Hough
Registration No. 13756 Date 3 / 14 / 97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 150 3283

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 48274

Atlas Sheet Coordinates 26 : 03 : 535

OWNER IDENTIFICATION - Owner SEARS, ROEBUCK & COMPANY
Address 200 ROUTE 17 SOUTH
City MAYWOOD State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality MAYWOOD BORO Lot No. 3 Block No. 125
Address 200 ROUTE 17 SOUTH

DATE WELL STARTED 7/31/97
DATE WELL COMPETED 7/31/97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 96-11-5-1158-01

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) E.D.G.T.I. Tele. # 587-0300

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 11½ ft.

Borehole diameter:
Top 8¾ in.
Bottom 8¾ in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 2½ ft.

Water level was measured using M-Scope

Well was developed for ½ hours
at ½ gpm

Method of development Pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid _____ Type of Rig B57 Mobile

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	1½'	4"	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	1½	11½'	4"	PVC Sch.	40.020
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	13'	#1	Morie	
Grout	0	1'		Neat Cement ___ lbs. Bentonite 10 lbs.	

Grouting Method Gravity
Drilling Method H.S.A.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-2½' Asphalt + Fill Materials Wood Roots + concrete Fragments
2½'-13' Red + Grey Fine sand + Silt Cobbles @ 10'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company TOTAL QUALITY DRILLING
Well Driller (Print) Michael Kavlunas
Driller's Signature Michael Kavlunas
Registration No. MD1328 Date 8/5/97

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0464

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED ../12/93

Well Permit No. 26 . 29007
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner ESSEX STREET PROPERTY
Address 130 - 136 ESSEX STREET
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality ~~ROCHELLE PARK T~~ Lot No. ~~1~~ Block No. ~~18 - 22~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 3 / 24 / 92
Regulatory Program Requiring Well UST Case I.D. # 93-3-12-10420
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Associates Tele. # 564-6006

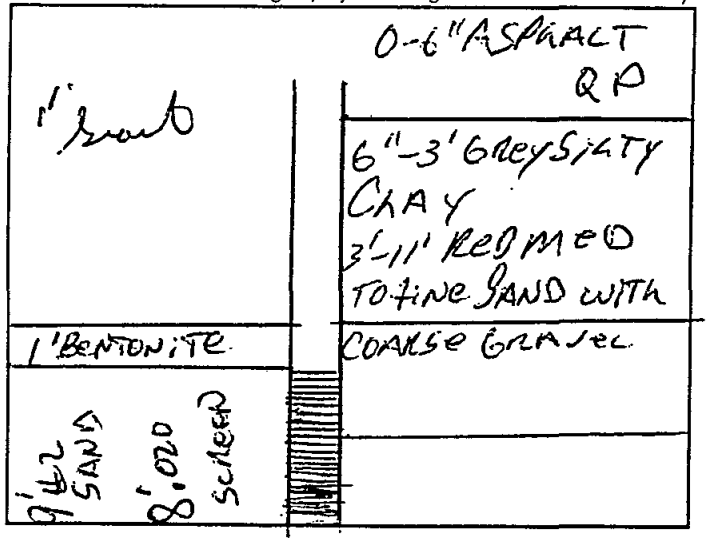
WELL CONSTRUCTION

Total depth drilled 11' ft.
Well finished to 11' ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
Finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6'	3'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3'	11'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	2'	11'		#2 Well Sand
Annular Seal/Grout	6'	2'		Portland & Bentonite Pellets
Method of Grouting	Pump			

Static water level after drilling 4' ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development Sub Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig TH60
Name of Driller William Ellefsen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1173
Name of Drilling Company SBI ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature William Ellefsen Date 5/12/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41624
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-21
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9,5,95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 34.5 ft.
Well finished to 25 ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	20	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	20	25	1.25	Sch 40 pvc - .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	18	25	4.5	#2 Morie
Annular Seal/Grout	0	18	4.5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Note: Bore hole Sealed with Bentonite from 25' to 34.5'

Static water level after drilling 15 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker ADII
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Asphalt
6" to 15' Red Brn Sd, grAvel & Silt
15' to 23' Red Brn Sd Silt & gravel
23' to 34.5' Decomposed Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9-16-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

WELL SEALED 10-19-93

MONITORING WELL RECORD

Well Permit No. 26 - 34345
Atlas Sheet Coordinates 26 : 03 : 538

OWNER IDENTIFICATION - Owner MUSCARELLE, JOSEPH L. EST
Address ~~130 - 136 ESSEX STREET~~ ROCHELLE PARK
City _____ State NJ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. _____
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 18-22
Address SAME AS ABOVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 8/16/93
Regulatory Program Requiring Well UST Case I.D. # ~~93-03-23-0900~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Dan Raviv Associates, Inc. Tele. # 564-6006

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

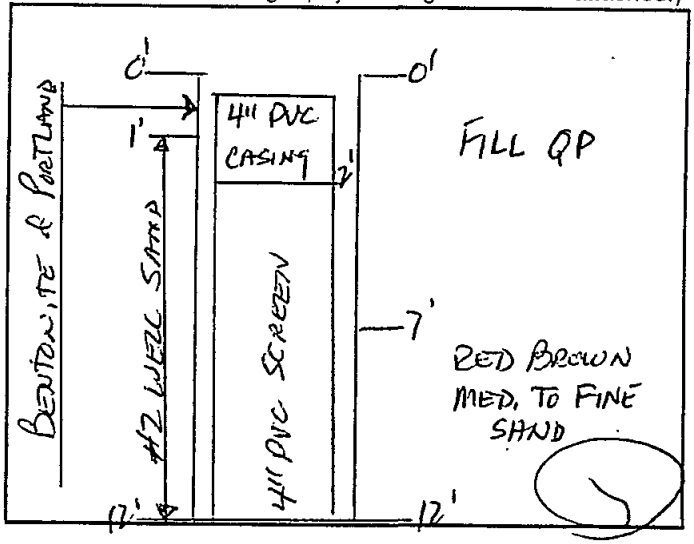
If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	3"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	1'	12'		#2 Well Sand
Annular Seal/Grout	3"	1'		Bentonite & Portland
Method of Grouting	Gravity			

Static water level after drilling 8 ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Air Rotary
Drilling Fluid _____ Type of Rig TH-60
Name of Driller William Ellefsen
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1173
Name of Drilling Company SBI ENVIRONMENTAL, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 9/22/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41626
Atlas Sheet Coordinates 26 : Ø3 : 538

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PM-11
County BERGEN Municipality LODI BORO Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/12/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 25 ft.
Well finished to 25' ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	20	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	20	25	1.25	Sch 40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	18	25	4.5	#2 Morie
Annular Seal/Grout	0	18	4.5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 6 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 13306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 25' Brown C/F Sand
Some C/F gravel Little Silt
Trace Shale Fragments

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9/16/95

COPIES: White - DEP Canary - Driller D-1272 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60719

ROCHELLE PARK TWP CLERK Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-7

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

Address 100 W HUNTER AVE

DATE WELL STARTED 5/10/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 5/17/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 109 ft.
Well finished to 109 ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 109' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No ADDED

Static water level after drilling 25' ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	19#/Sch 4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	109'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement / Bentonite	152 lbs. / 78 lbs.

Method of development Surge, Pump, Airlift Grouting Method TREMMIE

Drilling Method AIR Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations,

0-25': fill Material white to Blk f Sand + Silt
25'-29': Red Brn f-M Sand & silt
29-38': Same as above w/ f x Sh
38'-109': Competent Shale
Fx @ 52' & 79'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

D-1273

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61565

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 N
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-24 DD
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 20.01
Address 100 W HUNTER AVE

DATE WELL STARTED 8/12/01
DATE WELL COMPLETED 8/13/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-661

WELL CONSTRUCTION

Total depth drilled 105 ft.
Well finished to 105 ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 105' in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 18 gpm

Method of development Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	80'	4"	Steel	1926/Sch 4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	1926/Sch 4
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)	80'	105'	4"		
Tail Piece					
Gravel Pack					
Grout Outer Casing	Grade	35'		Neat Cement	584/446 lbs.
Inner Casing	Grade	80'		Bentonite	36/56 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material - White To Black f-M Sand & silt
25'-33': Red/Brn f-M Sand w/ fx Shale
33'-105': Fx Shale Occasional Red Sand
Fx @ 50' & 80' approx

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. T-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60716

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-4
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W HUNTER AVE

DATE WELL STARTED 5/14/01
DATE WELL COMPLETED 6/17/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-661

WELL CONSTRUCTION

Total depth drilled 61 ft.
Well finished to 61 ft.

Borehole diameter:
Top 10" To 40' 8" in.
Bottom 6" To 61 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 25' ft.

Water level was measured using TAPE

Well was developed for 4 hours at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	1946/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	61'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement Bentonite	252 lbs. 48 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

Method of development air lift, surge, pump.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1698 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill material white & Black silty sand
25'-37': Red/Brn f Sand & fx Shale
37'-40': Bedrock Competent
40'-61': Bedrock Competent fx @ 60'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

D-1275

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60717

Atlas Sheet Coordinates 26 : 03 : 53

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-5

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 8/6/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 8/7/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-66

WELL CONSTRUCTION

Total depth drilled 62' ft.

Well finished to 62' ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 62' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 43 ft.

Water level was measured using TAPE

Well was developed for 4 hours at 12 gpm

Method of development Surge, airlift, pumping

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	42'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	1926/Sch 40
Open Hole or Screen (No. Used, 010)	42'	62'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	40	62		#1 Morie	700 Lbs
Grout	6" Grade	40' #1		Neat Cement 5 sk / 732 lbs. Bentonite 3% / 48 lbs.	

Grouting Method Tremmie

Drilling Method AIR ROTARY

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. T-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material/ White To Black f. Sand & Silt
25'-37': Red/Brn Sand & Silt & Fx Shale
37'-40': Fx Shale — Bedrock
40'-62': Competent Shale

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.___" LONGITUDE: ___° ___' ___.___"

COPIES: White - DEP Canary - Driller 276 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

ENTERED

Well Permit No. 26 - 61154

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D RT. 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ-17A
County BERGEN Municipality ROCHELLE PARK Lot No. 1 Block No. 12B
Address 100 W. HUNTER AVE.

DATE WELL STARTED 4/20/01
DATE WELL COMPLETED 4/20/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. #(201) 226-6618

WELL CONSTRUCTION

Total depth drilled 13' ft.
Well finished to 13' ft.

Borehole diameter:
Top 2¼ in.
Bottom 2¼ in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface - ft.

Steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for 1 hours at ½ gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	3'	1"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3'	13'	1"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2½	13'		#0 Sand	100
Grout Portland	Grade	2½		Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method DIRECT PUSH

Method of development Whale Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity - gpm

Pump type: -

Drilling Fluid - Type of Rig Geo-Probe

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADI-MIDATLANTIC INC.

Well Driller (Print) Richard M TABOR

Driller's Signature Richard M. Tabor

Registration No. U-1598 Date 5/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - ½' : Grass + Topsoil
½' - 6' : White silt process waste
6' - 10' : Black & Sandy silt
10' - 12½' : Gray f Sand + fx Shale
12½ - 13' : Fx Shale Then Bedrock
End Drilling @ 13'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62385

Atlas Sheet Coordinates 26 : 03 :

OWNER IDENTIFICATION - Owner AMOCO OIL COMPANY
Address 300 INTERPACE PKWY
City PARSIPPANY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW8
County BERGEN Municipality LODI BORO Lot No. 14 Block No. 174.02
Address 80 ESSEX STREET @ RIVERVIEW

TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 9/20/01
DATE WELL COMPLETED 9/20/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Handex Environmental Tele. #

WELL CONSTRUCTION

Total depth drilled 25' ft.
Well finished to 25' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Gus Pech

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	25'	4"	PVC	.020 sch
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	25'		Morie #2	
Grout	0'	3'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 9 / 28 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

D-1278

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60711

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 16

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 11 / 01

DATE WELL COMPLETED 4 / 11 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	24	3	Morie #0	150 lbs
Grout	0	3	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt Process Waste
8
10 Medium fine grey silty Sand
20
28
24 EOH 24' Red Shale

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40896.0 EASTING: 74.0702

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller 1279 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60712

Atlas Sheet Coordinates 26 : 03 : 53

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 17

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 11 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 11 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7' ft.

Water level was measured using Tape

Well was developed for 4 hours at 1/2 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells.only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
Process Waste
8 Black Grey Med Fine
10 Silty Sand
18 EOH 18' Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller 1280 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60709

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 14

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B

Address 100 W HUNTER AVE

DATE WELL STARTED 4/12/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4/12/01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	6	21	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	4	21	3	Morie #0	150
Grout	0	4	3	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push.

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
Process Waste
10 ↓
Black Grey Medium Fine
Silty Sand
19 ↓
20 Red Med sand + Gravel
21 Red Shale Bedrock

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60710

Atlas Sheet Coordinates 26 03 53

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 15
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 10 / 01
DATE WELL COMPLETED 4 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 7 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	6	21	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	21	3	Morie #0	150
Grout	0	3	3	Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremmie
Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
5 ↓ Grey Black Silty Sand
10 ↓
18 Red Brown Sand + Gr
20 Bedrock 21'
21 EOH 21'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET
NORTHING: 408960 EASTING: 740702
OR
LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller DWR-1282 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60707

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 17
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 10 / 01
DATE WELL COMPLETED 4 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Direct Push

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill-White Silt (Process Waste)
10 ↓
12 Med Fine Black Grey Sand + Silt.
18 Weathered Bedrock
20 EOH 18'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 6 / 01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 408960 EASTING: 740702
OR
LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller D-1283 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60708

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 13
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
DATE WELL STARTED 4 / 10 / 01
DATE WELL COMPLETED 4 / 10 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-661

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3	18	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	18	3	Morie #0	150 lbs
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Direct Push

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill - White Silt
Process Waste
10
14 Black Grey Medium Fine Silty Sand
18
20 Red Shale Bedrock
EOH 18'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

OR

LATITUDE: ___° ___' ___.__" LONGITUDE: ___° ___' ___.__"

COPIES: White - DEP Canary - Driller D-1284 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60705

Atlas Sheet Coordinates 26 : 03 : 534

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK

Address 194-D RT 17 NORTH

City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 10

County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128

Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 9 / 01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER DATE WELL COMPLETED 4 / 9 / 01

Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Is steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours
at 1/2 gpm

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	24	3	Morie #0	200
Grout	0	3	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie

Drilling Method Direct Push

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fill
White Silt (Process Paste)
8
10 Grey Black Medium Fine
Sand + Silt.
↓
20
24 Red Brown Medium Sand + Gr.
Bedrock

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 408960 EASTING: 740702

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60706

Atlas Sheet Coordinates 26 : 03 : 5

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ 11
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 4/9/01
DATE WELL COMPLETED 4/9/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

Total depth drilled 24 ft.
Well finished to 24 ft.

Borehole diameter:
Top 3 in.
Bottom 3 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	4	24	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	2	24	3	Morie #0	200 lbs
Grout	0	2	3	Neat Cement Bentonite	94 lbs. 6 lbs.

Grouting Method Tremmie
Drilling Method Direct Push

Method of development Peristaltic Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
Fill - White silt
8 Process Waste
10 Black Grey Med Fine Silty Sand
20 Red Brown Med Fine Sand + Gravel
24 Bedrock Red Shale
EOH 24'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40860 EASTING: 74070 2

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller 1286 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59181

Atlas Sheet Coordinates 26 .03 534

OWNER IDENTIFICATION - Owner OMNI ASSETS/TAUBER, CONNI
Address 26 JOURNAL SQUARE 16TH FLOOR
City JERSEY CITY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1D
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 19.02
Address ROUTE 17

DATE WELL STARTED 1 / 9 / 01
DATE WELL COMPETED 1 / 11 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 46 ft.
Well finished to 46 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 4 hours
at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	21	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	21	8	Neat Cement Bentonite	450 lbs. 25 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Medium Fine Red Silty Sand + Gravel
10 ↓ Water 10'
10.5 Red Sandstone + Shale
20 Bedrock
30
40
46 EOH 46'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60703

Atlas Sheet Coordinates 26 : 03 : 53

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. PW 1 S
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 12B
Address 100 W HUNTER AVE

DATE WELL STARTED 4 / 3 / 01
DATE WELL COMPLETED 4 / 6 / 01

TYPE OF WELL (as per Well Permit Categories) RECOVERY
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 23.5 ft.
Well finished to 23.5 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 4 hours at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	4	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3.5	23.5	4	PVC	Sch 40 Wire Wrap
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	23.5	8	Morie #0	900 lbs
Grout	0	3	8	Neat Cement	188 lbs.
				Bentonite	12 lbs.

Grouting Method Tremmie Pipe
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B-61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE JR

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Grass + Topsoil
Fill - White silt
↓
10
Black/Gray Fine Medium Sand + Silt
↓
20 Red Brown Sand + Gravel
23.5 EOH 23.5 Bedrock

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 40,896.0 EASTING: 74,070.2

LATITUDE: 74° 04' __.__" OR LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61468

Atlas Sheet Coordinates 26 : 03 535

OWNER IDENTIFICATION - Owner ~~ROCHELLE PARK TWP. CLERK~~
Address ~~194-D ROUTE 17 NORTH~~
City ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-8
County ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~1~~ Block No. ~~128~~
Address ~~100 W. HUNTER AVE.~~

DATE WELL STARTED 5/22/01
DATE WELL COMPLETED 6/05/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well ____ Case I.D.# ____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-66[illegible]

WELL CONSTRUCTION

Total depth drilled 115' ft.
Well finished to 115' ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 115' in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ~~2.5~~ ft.

~~steel~~ protective casing installed?
☐ Yes ☒ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours
at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40	6"	Steel	19Lbs/Sch 4
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
~~Open Hole~~ or Screen (No. Used)	40'	115'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement Bentonite	~~150~~ lbs. 18 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

Method of development Airlift, Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~

Well Driller (Print) Richard M. Tabor

Driller's Signature Richard M. Tabor

Registration No. T-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White To Black f Sand & Silt
25-38': Red/Brown f-M Sand & Fx Shale
38'-104': Bedrock
Fx approx 57' & 81'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61469

Atlas Sheet Coordinates 26 : 03 535

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-9
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W. HUNTER AVE

DATE WELL STARTED 6/23/01
DATE WELL COMPLETED 6/24/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-661

WELL CONSTRUCTION

Total depth drilled 56 ft.
Well finished to 56 ft.

Borehole diameter:
Top 10" To 32' in.
Bottom 6" To 56' in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 25 ft.

Water level was measured using Tape

Well was developed for 4 hours at 12 gpm

Method of development Surge, Airlift, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	32'	6"	Steel	19#s/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (~~largest diameter~~)					
~~Open Hole~~ or Screen (No. Used)	32'	56'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	32'		Neat Cement Bentonite	~~25~~ lbs. 48 lbs.

Grouting Method Tremmie
Drilling Method AIR Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25' : Fill Material White To Black f Sand & Silt
25'-28' : Red/Brn f-m Sand & Fx Shale
28-32' : FX Shale Than Bedrock
32'-56' : Bedrock
Fx @ 24' & 38'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company HOWARD REXRODE, JR
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61467

Atlas Sheet Coordinates 26 03 535

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-3
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W. HUNTER AVE.

DATE WELL STARTED 7/23/01
DATE WELL COMPLETED 7/24/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-66

WELL CONSTRUCTION

Total depth drilled 57 ft.
Well finished to 57 ft.

Borehole diameter:
Top 10" To 35' in.
Bottom 6" To 57' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 20 ft.

Water level was measured using Tape

Well was developed for 4 hours at 12 gpm

Method of development Surge & pump.

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: —

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	37'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	35'	6"	Steel	19#/Sch
Open Hole or Screen (No. Used .010)	37'	57'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	35'	57'		#1 Morie	700 Lbs 65#/ft
Grout OUTER CASING	GRADE	35'	10	Neat Cement	650/550 lbs.
INNER CASING	GRADE	37'	6	Bentonite	42/35 lbs.

Grouting Method Tremmie
Drilling Method AIR ROTARY

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-25': Fill Material Wht to Black F-M Sand & Silt
25-33': Red/Brn M Sand & Silt w/ fx Shale
33'-57': fx Shale To 35' T Clay Bedrock.
fx approx 40'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard A. Tabor
Driller's Signature Richard A. Tabor
Registration No. J-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____
OR
LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61466

Atlas Sheet Coordinates 26 . 03 535

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-2
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W. HUNTER AVE.

DATE WELL STARTED 7/23/01
DATE WELL COMPLETED 7/24/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6648

WELL CONSTRUCTION

Total depth drilled 62' ft.
Well finished to 62' ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 62' in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 25' ft.

Water level was measured using Tape

Well was developed for 4 hours at 12 gpm

Method of development Surge & Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity _____ gpm

Pump type: _____

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	42'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	1946/Sch
Open Hole or Screen (No. Used .010)	42'	62'	2"	PVC	Sch 40
Blank Casings (No. Used ~~.010~~)					
Tail Piece					
Gravel Pack	40'	62'		#1 Morie	700 Lbs
Grout OUTER CASING	Grade	40'		Neat Cement	658/584 lbs.
INNER CASING	Grade	42'		Bentonite	42/36 lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M Tabor
Driller's Signature Richard M. Tabor
Registration No. V-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White - Black Sand & Silt
25'-38': Rd/Brn F-M Sand & Silt w/Fx Shale
38'-62': Fx Shale To 40' Then Bedrock.
Fx @ 52' Approx

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61465

Atlas Sheet Coordinates 26 : 03 535

OWNER IDENTIFICATION - Owner ~~ROCHELLE PARK TWP. CLERK~~
Address ~~194-D ROUTE 17 NORTH~~
City ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-1
County BERGEN Municipality ~~ROCHELLE PARK T~~ Lot No. 1 Block No. 128
Address 100 W. HUNTER AVE

DATE WELL STARTED 5/23/01
DATE WELL COMPLETED 6/01/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 115 ft.
Well finished to 115 ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 115 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling approx 20 ft.

Water level was measured using Tape

Well was developed for 4 hours
at 25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	19#/SCH 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	115'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement	262 lbs.
				Bentonite	48 lbs.

Grouting Method Tremmie
Drilling Method AIR Rotary

Method of development Airlift, Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-25' : OVERBURDEN White to black F Sand & silt (Fill)

25'-40' : Bedrock Fx H&O Fx @ 35' & 40'

40'-115' : Competent Bedrock Fx @ 75'

End @ 115'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61464

Atlas Sheet Coordinates 26 03 535

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D RT. 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-22
County BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
Address 100 W. HUNTER AVE.

DATE WELL STARTED 6/20/01
DATE WELL COMPLETED 6/20/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-66[illegible]

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 6" in.
Bottom 6" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 4½' ft.

Water level was measured using Tape

Well was developed for 1 hours at 2 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	2'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	2'	10'	2"	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1'	10'		#0 Morie	500 Lbs
Grout	Grade	1'		Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method Tremie
Drilling Method Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-10': Red/Brn f-M Sand w/ Cobbles & Fx Shale

H₂O @ 4½'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR
Well Driller (Print) Richard M Tabor
Driller's Signature Richard M. Tabor
Registration No. T-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Form 87-5M

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply
WELL RECORD

Permit No. 26-650
Application No. _____
County _____

1. OWNER Mario & Dan Newhouse ADDRESS Passaic St. Rochelle Park, N.J.
   Owner's Well No. 1 SURFACE ELEVATION 50 Feet (Above mean sea level)
2. LOCATION Ff 26
3. DATE COMPLETED 4/14/53 DRILLER John W Sikkema
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH 75 Feet
5. CASING: Type Steel Diameter 6 Inches Length 44 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet Bottom _____ Feet Geologic Formation _____
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 4/14/53 Yield 50 Gallons per minute
   Static water level before pumping 6 Feet below surface
   Pumping level 6 feet below surface after 3 hours pumping
   Drawdown None Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Gasoline Pump How measured Bottle
   Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Capacity _____ Gallons per minute
   How Driven _____ Horse Power _____ R.P.M. _____
   Depth of pump in well _____ Feet Depth of Foot piece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR Domestic AMOUNT { Average 500 Gallons Daily Maximum 800 Gallons Daily
11. QUALITY OF WATER Good Sample: Yes ✓ No. _____
    Taste None Odor None Color None Temperature 52 °F
12. LOG _____ (Give details on back of sheet or on separate sheet) Are samples available? No
13. SOURCE OF DATA Drillers Log
    DATA OBTAINED BY John W Sikkema DATE 4/14/53

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

FORM 87

26-03-567

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3034
Application No. _____
County Bergen

WELL RECORD

Red #

1. OWNER Master Etching Corporation ADDRESS 60 Industrial Road
Owner's Well No. One SURFACE ELEVATION 75 Feet (Above mean sea level)
2. LOCATION Lodi N.J.
3. DATE COMPLETED April 15 1965 DRILLER Rinbrand Well Drilling Co Inc
4. DIAMETER: top 8 Inches Bottom 8 Inches TOTAL DEPTH 400 Feet
5. CASING: Type steel Diameter 8 Inches Length 29 Feet
6. SCREEN: Type none Size of Opening ___ Diameter ___ Inches Length ___ Feet
Range in Depth { Top ___ Feet / Bottom ___ Feet Geologic Formation Red Ss
Tail piece: Diameter ___ Inches Length ___ Feet
7. WELL FLOWS NATURALLY ___ Gallons per Minute at ___ Feet above surface
Water rises to ___ Feet above surface
8. RECORD OF TEST: Date April 15 1965 Yield 105 Gallons per minute
Static water level before pumping 15 Feet below surface
Pumping level 182 feet below surface after 8 hours pumping
Drawdown 167 Feet Specific Capacity ___ Gals. per min. per ft. of drawdown
How Pumped Turbine How measured Orific
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type Turbine Mfrs. Name Deming
Capacity 105 G.P.M. How Driven electric H.P. 10 R.P.M. 1750
Depth of Pump in well 100 Feet Depth of Footpiece in well 10 Feet
Depth of Air Line in well no Feet Type of Meter on Pump yes Size 3 Inches
10. USED FOR Cooling AMOUNT { Average ___ Gallons Daily / Maximum ___ Gallons Daily
11. QUALITY OF WATER ___ Sample: Yes x No. ___
Taste no Odor no Color clear Temp. 56 °F
12. LOG Red shale 371 red rock Are samples available? no
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand Date June 10 1965

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -55698

Atlas Sheet Coordinates 26 : 03 : 289

WNER IDENTIFICATION - Owner ~~SHOTMEYER BROS PETROLEUM~~

ddress ~~230 ROCHELLE AVE~~

ity ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2R

ounty ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. 5 Block No. 29

ddress ~~230 ROCHELLE AVE~~

DATE WELL STARTED 11/9/99

YPE OF WELL (as per Well Permit Categories) ~~REPLACE MONITOR~~ DATE WELL COMPLETED 11/9/99

egulatory Program Requiring Well ~~UST~~ Case I.D.# ~~91-08-29-1447~~

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) ECM Tele. #

WELL CONSTRUCTION

otal depth drilled 20 ft.

/ell finished to 20 ft.

orehole diameter:
Top 8 in.
Bottom 8 in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up above land surface N/A ft.

/as steel protective casing installed? ☒ Yes ☐ No

tatic water level after drilling 12 ft.

/ater level was measured using M-Scope

/ell was developed for .5 hours

t 2 gpm

/ethod of development Sub pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 1)	5	20	4	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	—	morie #2	600 #
Grout	0	3	—	Neat Cement Bentonite	94 lbs. ___ lbs.

Grouting Method Gravity

Drilling Method HSA

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity N/A gpm

ump type: N/A

Drilling Fluid None Type of Rig Simco 2800

Health and Safety Plan submitted? ☐ Yes ☒ No

.evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC

/ Driller (Print) Michael Akemosinski

Driller's Signature

Registration No. 12420 Date 11/9/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-18 Fine Sand

18-20 Fine Silty Sand

20

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D-1297

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 55699

Atlas Sheet Coordinates 26 : 03 : 289

OWNER IDENTIFICATION - Owner SHOTMEYER BROS PETROLEUM
Address 230 ROCHELLE AVE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. P2 I
County BERGEN Municipality ROCHELLE PARK T Lot No. 5 Block No. 29
Address 230 ROCHELLE AVE

DATE WELL STARTED 11/9/99
DATE WELL COMPLETED 11/9/99

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well UST Case I.D.# 91-08-29-1447

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ELM Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.

Borehole diameter:
Top 4 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 12 ft.

Water level was measured using M-Scope

Well was developed for .5 hours at 1 gpm

Method of development Bailer

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 1)	5	20	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	—	morie #2	250 #
Grout	0	3	—	Neat Cement	94 lbs.
				Bentonite	lbs.

Grouting Method Gravity
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid None Type of Rig Simco 2500

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC

Well Driller (Print) Michael A Komasinski

Driller's Signature

Registration No. U2420 Date 11/9/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-16 Fine sand

16-20 Fine silty sand

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COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 55700

Atlas Sheet Coordinates 26 03 289

WNER IDENTIFICATION - Owner ~~SHOTMEYER BROS PETROLEUM~~
ddress ~~230 ROCHELLE AVE~~
ty ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. PZ2
ounty ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~5~~ Block No. ~~29~~
ddress ~~230 ROCHELLE AVE~~

DATE WELL STARTED 11/9/89
DATE WELL COMPLETED 11/9/89

YPE OF WELL (as per Well Permit Categories) PIEZOMETER
egulatory Program Requiring Well ~~UST~~ Case I.D.# ~~91-08-29-1447~~

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) ELM Tele. #

WELL CONSTRUCTION

otal depth drilled 20 ft.
ell finished to 20 ft.

orehole diameter:
Top 4 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

fi[redacted]ed above grade, casing height (stick
ip[redacted]ve land surface N/A ft.

as steel protective casing installed?
☒ Yes ☐ No

tatic water level after drilling 12 ft.

ater level was measured using M-Sipe

ell was developed for .5 hours
t 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	1	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 1)	5	20	1	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	20	1"	morie #2	250±
Grout	0	3	—	Neat Cement Bentonite	44 lbs. — lbs.

Grouting Method Gravity
Drilling Method HSA

ethod of development Bailer

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity N/A gpm

ump type: N/A

Drilling Fluid None Type of Rig Simco 2800

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company INLAND POLLUTION SERVICES INC

W[redacted]iller (Print) Michael A Komoski

Driller's Signature

Registration No. 52420 Date 11/9/89

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-15 Fine Sand
15-20 Fine silty Sand

D-1299

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138
5/95

New Jersey Department of Environmental Protection
Bureau of Water Allocation

WELL RECORD

Well Permit Number 26 _ 54214

Atlas Sheet Coordinates 26 : 03 : 288

OWNER YELAVICH, ELEANOR

Address 257 SADDLE RIVER RD.

City SADDLE BROOK State NJ Zip Code 07663

WELL LOCATION ADDRESS 257 SADDLE RIVER RD. Owner's Well No. 1

County ~~BERGEN~~ Municipality ~~SADDLE BROOK TW~~ Lot No. ~~8~~ Block No. ~~904~~

WELL USE IRRIGATION

DATE WELL STARTED 08 /09 /99

DATE WELL COMPLETED 08 /10 /99

WELL CONSTRUCTION

Total Depth Drilled 102 ft.

Finished Well Depth 102 ft.

Borehole Diameter:
Top 8 in.
Bottom 6 in.

Well Casing Begins:
1 ft. above grade or
_____ ft. below grade

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	1+	52	8	Steel	40
Middle Casing (for triple cased wells only)	N/A				
Outer Casing (largest diameter)	N/A				
Open Hole or Screen (No. Used)	52	104	6		
Blank Casings (No. Used)	N/A				
Tail Piece	N/A				
Gravel Pack	N/A				
Grout	0	52		Neat Cement Bentonite	1150 lbs 15 lbs

RECORD OF TEST

Test Date 08 / 10 / 99

Static Water Level 12'-6" ft. below land surface

Water Level Measured Using M-Scope

Pumping Water Level _____ ft. below land surface

Well Was Pumped Using Air from rig

Well Yield 100 gpm

If Pump Tested: Discharge Rate _____ gpm

Duration of Test _____ hours

Grouting Method Pressure

Drilling Method Rotary

PERMANENT PUMPING EQUIPMENT

Installed by Graham B. Every Reg. No. M-004

Pump Type Submersible

Depth of Pump below land surface 40 ft.

Capacity 10 gpm Horsepower 0.5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ARTESIAN WELL & EQUIPMENT CO

Well Driller (Print) Graham B. Every

Driller's Signature Graham B. Every

Registration No. M-004 Date 12 / 27 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0' - 31' Overburden

31' to 104' Red sandstone with clay seams

Well made water along its entire depth

D-1300

WR-138 M
I/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57638

Atlas Sheet Coordinates 26 : 03 523

WNER IDENTIFICATION - Owner SHOTMEYER BROS. PETROLEUM
ddress 10 WAGARAW RD.
ity HAWTHORNE State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW12
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 5 Block No. 29
ddress 230 ROCHELLE AVE.

DATE WELL STARTED 8/24/00
DATE WELL COMPLETED 8/24/00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Environmental Liability Management Tele. #

WELL CONSTRUCTION

otal depth drilled 20' ft.
'ell finished to 20' ft.

orehole diameter:
Top 10" in.
Bottom 10" in.

'ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) e land surface ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling Portland ft.

ater level was measured using Tape

ell was developed for 1/2 Hour hours
1/2 gpm

lethod of development Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity gpm

ump type:

rilling Fluid Type of Rig Gus Pech

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	4"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	20'	4"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	20'		Morie #1	
Grout	0'	2'		Neat Cement	282 lbs.
				Bentonite	15 lbs.

Grouting Method gravity
Drilling Method Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company SUMMIT WELL DRILLING CO INC

/ell Driller (Print) Rich Gurczynski

riller's Signature Rich Gurczynski

egistration No. J1570 Date 9/1/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.c

WELL LOG

WELL: RW1 DATE DRILLED: 08/24/2000 COORD #1: 26.03.523 PERMIT #1: 26-57637
COORD #2: PERMIT #2:
SITE: Westview Friendly Mobil, 230 Rochelle Avenue, Rochelle Park Twp., NJ COUNTY: Bergen
OWNER: Shotmeyer Bros. Petroleum, 10 Wagaraw Road, , Hawthorne, NJ 07507 XSTREET: Central Avenue
USE: Recovery

INNER CASING: PVC
DIAMETER: 6"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 6"
LENGTH 1: 25'
LENGTH 2:
SLOT SIZE: .010

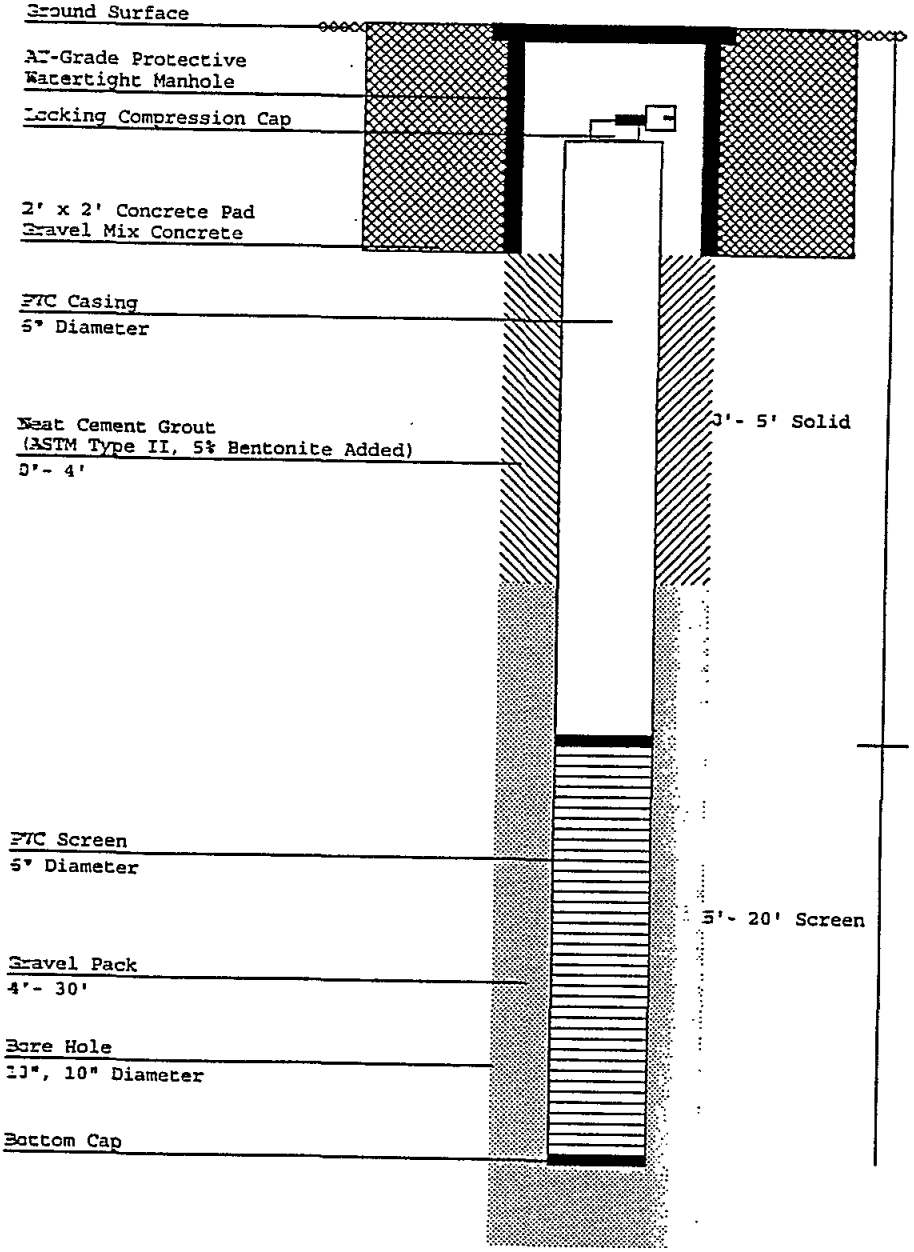
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 10"
TOTAL DEPTH: 30'

SET WELL: 30'
GRAVEL PK SZ: Morie #1
DRILLER: Rich Gurczynski
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: Portland
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL:
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
		0'- 27' Brown medium sand.
		27'- 30' M/c sand.



VR-138 M
98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 57637

Atlas Sheet Coordinates 26 : 03 523

WNER IDENTIFICATION - Owner SHOTMEYER BROS. PETROLEUM
dress 10 WAGARAW RD.
y HAWTHORNE State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. RW1
unty BERGEN Municipality ROCHELLE PARK T Lot No. 5 Block No. 29
ldress 2430 ROCHELLE AVE.

DATE WELL STARTED 8/ 24/ 00
DATE WELL COMPLETED 8/ 24/ 00

PE OF WELL (as per Well Permit Categories) RECOVERY
gulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Environmental Liability Management Tele. #

WELL CONSTRUCTION

al depth drilled 30' ft.
ll finished to 30' ft.

rehole diameter:
Top 10" in.
Bottom 10" in.

ll was finished: ☐ above grade
☒ flush mounted

nished above grade, casing height (stick
) land surface ft.

s steel protective casing installed?
]Yes ☒ No

tic water level after drilling Portland ft.

ter level was measured using Tape

ll was developed for 1/2 Hour hours
1/2 gpm

thod of development Pump

as permanent pumping equipment installed? ☐ Yes ☒ No

mp capacity gpm

mp type:

illing Fluid Type of Rig Gus Pech

ealth and Safety Plan submitted? ☒ Yes ☐ No

vel of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

illing Company SUMMIT WELL DRILLING CO INC

ell Driller (Print) Rich Gurczynski

iller's Signature Rich Gurczynski

egistration No. J1570 Date 9 / 1 / 00

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	6"	PVC	sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	20'	6"	PVC	.010 sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	4'	30'		Morie #1	
Grout	0'	4'		Neat Cement Bentonite	282 lbs. 15 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -58714

Atlas Sheet Coordinates 26 : 03 525

OWNER IDENTIFICATION - Owner EXXON MOBIL REFINING & SU
Address 1900 E. LINDEN AVE./PO BOX 730
City LINDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11
County BERGEN Municipality SADDLE BROOK TW Lot No. 5 Block No. 1105
Address 16 PEHLE AVE.

DATE WELL STARTED 10 / 26 / 00
DATE WELL COMPLETED 10 / 26 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GES Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.

Borehole diameter:
Top 12 in.
Bottom 12 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface NA ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using TAPE

Well was developed for .5 hours at 3 gpm

Method of development MOyNO

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	4	PVC	SCH. 40
Middle Casing (for triple cased wells only)	NA				
Outer Casing (largest diameter)	NA				
Open Hole or Screen (No. Used)	4	16	4	PVC	.020 SLOT SCH. 40
Blank Casings (No. Used)	NA				
Tail Piece	NA				
Gravel Pack	3	16	12	#2 SAND	
Grout	0	3	12	Neat Cement	— lbs.
				Bentonite	22 lbs.

Grouting Method TREMIE
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity NA gpm

Pump type: NA

Drilling Fluid NONE Type of Rig A300

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company GARY PARENT/SHORE DRLG. INC.

Well Driller (Print) GARY PARENT

Driller's Signature Gary Parent

Registration No. MD1540 Date 12/08/00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-4" ASPHALT
4"-8' LT BRN MD SD
8-16' LT BRN MD/FN SD

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

VR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61469

Atlas Sheet Coordinates 26 : 03 535

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
ddress 194-D ROUTE 17 NORTH
ty ROCHELLE PARK State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. BRPZ-9
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
ddress 100 W. HUNTER AVE

DATE WELL STARTED 6/23/01
DATE WELL COMPLETED 6/24/01

YPE OF WELL (as per Well Permit Categories) PIEZOMETER
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

otal depth drilled 56 ft.
'ell finished to 56 ft.

orehole diameter:
Top 10" To 32' in.
Bottom 6" To 56' in.

'ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick
ip) ve land surface ____ ft.

/as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling approx 25 ft.

/ater level was measured using Tape

/ell was developed for 4 hours
t 12 gpm

/lethod of development Surge, Airlift, Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity ____ gpm

ump type: ____

Drilling Fluid ____ Type of Rig T-450

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	32'	6"	Steel	19lbs/Sch40
Middle Casing (for triple cased wells only)					
Outer Casing (~~largest diameter~~)					
~~Open Hole~~ or Screen (No. Used)	32'	56'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	32'		Neat Cement Bentonite	252 lbs. 48 lbs.

Grouting Method Tremmie
Drilling Method Air Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White To Black f Sand & Silt
25'-28': Red/Brn f-m Sand & Shale
28-32': Fx Shale Than Bedrock
32'-56': Bedrock Fx @ 24', & 38'

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59181

Atlas Sheet Coordinates 26 .03 534

OWNER IDENTIFICATION - Owner -- OMNI ASSETS/TAUBER, CONNI
Address 26 JOURNAL SQUARE 16TH FLOOR
City JERSEY CITY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1D
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 19.02
Address ROUTE 17

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 1 / 9 / 01
DATE WELL COMPETED 1 / 11 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 46 ft.
Well finished to 46 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using Tape

Well was developed for 4 hours
at 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	21	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	21	8	Neat Cement Bentonite	450 lbs. 25 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Medium Fine Red Silty Sand + Gravel
10 ↓ Water 10'
10.5 Red Sandstone + Shale
20 Bedrock
30
40
46 EOH 46'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59011

Atlas Sheet Coordinates 26 03 523

OWNER IDENTIFICATION - Owner DIMHRIA, VIRGINA-ROCHELLE
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4D
County BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
Address 100 W HUNTER AVE

DATE WELL STARTED 1/4/01
DATE WELL COMPLETED 1/8/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 43 ft.
Well finished to 43 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8 ft.

Water level was measured using Tape

Well was developed for 3 hours at 2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	18	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	18	43	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	18	8	Neat Cement Bentonite	400 lbs. 20 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
8 Medium Fine Silty Red Sand & Gravel — Water 8'
20 Red Shale Bedrock
30
40
43 EOH 43'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 2/5/01

D-1307

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 59010

Atlas Sheet Coordinates 26 03 523

WNER IDENTIFICATION - Owner ~~DIMHRIA, VIRGINA ROCHELLE~~
ddress ~~194-D ROUTE 17 NORTH~~
ity ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4S
ounty ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~ROW~~ Block No. ~~ROW~~
ddress ~~100 W HUNTER AVE~~

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well
DATE WELL STARTED 10 / 30 / 00
DATE WELL COMPLETED 10 / 30 / 00
Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

otal depth drilled 10 ft.
ell finished to 9 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed? ☐ Yes ☒ No

atic water level after drilling 8 ft.

ater level was measured using Tape

ell was developed for 1 hours .5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	5	9	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	10	6	Morie 0	350 lbs
Grout	0	3	6	Neat Cement Bentonite	94 lbs. 5 lbs.

ethod of development Submersible Pump
Grouting Method Tremie
Drilling Method Drive + Wash Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid — Type of Rig CME-75

ealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

ell Driller (Print) Steve Wolf

riller's Signature Steve Wolf

egistration No. 1579 Date 12 / 18 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med fine Red Silty Sand + Gravel
5 ↓
Weathered Red Shale
10 EOH 10'

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 58964

Atlas Sheet Coordinates 26 03 523

OWNER IDENTIFICATION - Owner MACCHIONE, FRANK
Address 141 W. CENTRAL AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7D
County BERGEN Municipality ROCHELLE PARK T Lot No. 32 Block No. 24.01
Address 100 W. HUNTER AVE./MAYWOO

DATE WELL STARTED 1 / 5 / 01
DATE WELL COMPLETED 1 / 10 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 46 ft.
Well finished to 46 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 11 ft.

Water level was measured using Tape

Well was developed for 3 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	21	46	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	21	8	Neat Cement Bentonite	450 lbs. 22 lbs.

Grouting Method Tremonie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Fine Red Silty Sand + Clay
10 Water 11'
11 Red Shale Bedrock
20
30
40
46 EOH 46'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

D-1309

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -58963

Atlas Sheet Coordinates 26 03 523

WNER IDENTIFICATION - Owner MACCHIONE, FRANK
ldress 141 W. CENTRA AVENUE
ty ROCHELLE PARK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7S
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 32 Block No. 24.01
ldress 100 W. HUNTER AVE./MAYWOO

DATE WELL STARTED 12 / 4 / 00
/PE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 12 / 4 / 00
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

tal depth drilled 16.5 ft.
ell finished to 15 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as steel protective casing installed?
☐ Yes ☒ No

atic water level after drilling 11 ft.

ater level was measured using Tape

ell was developed for 2.5 hours
1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	16.5	6	Morie 0	400 lbs
Grout	0	3	6	Neat Cement Bentonite	150 lbs. 7 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

Drilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations....

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 1 / 18 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Fine Silty Sand
5
10
15 Weathered Rock
16.5 Red Shale Bedrock

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58962

Atlas Sheet Coordinates 26 : 03 523

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT. 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6D
County BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
Address MAYWOOD CHEMICAL/100 W. H

DATE WELL STARTED 1 / 8 / 01
DATE WELL COMPLETED 1 / 11 / 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 54 ft.
Well finished to 54 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 2.5 hours at 2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	29	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	29	54	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	29	8	Neat Cement Bentonite	800 lbs. 40 lbs.

Grouting Method Tremmie
Drilling Method Drive & Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Silty Red Sand & Gravel — Water 6'
10 ↓
19
20 Red Shale
30 ↓
40
50
EOH 54'

D-1311

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58961

Atlas Sheet Coordinates 26 : 03 : 523

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
ddress 194-D RT. 17 NORTH
ity ROCHELLE PARK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5D
ounty BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
ddress MAYWOOD CHEMICAL/100 W. H

DATE WELL STARTED 11 / 14 / 00
DATE WELL COMPLETED 11 / 16 / 00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

otal depth drilled 52 ft.
/ell finished to 52 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

/ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick ıp) above land surface — ft.

/as steel protective casing installed? ☐ Yes ☒ No

tatic water level after drilling 9 ft.

/ater level was measured using Tape

/ell was developed for 3 hours
t 2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	32	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	32	52	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	32	8	Neat Cement Bentonite	800 lbs. 40 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Red Fine Silty Sand
10 Water 9'
13
Red Silt + Clay
20
22
Red Sandstone + Shale Bedrock
30
40
50 EOH 52'

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D-1312

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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58960

Atlas Sheet Coordinates 26 : 03 : 523

)WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
Address 194-D RT. 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5S
County BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
Address MAYWOOD CHEMICAL/100 W. H

DATE WELL STARTED 11 / 6 / 00
DATE WELL COMPLETED 11 / 7 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201-556-0160

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 20 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 9 ft.

Water level was measured using Tape

Well was developed for 7 hours
at 2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	10	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	10	20	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	7	21	6	Morie 0	600 lbs
Grout	0	7	6	Neat Cement Bentonite	300 lbs. 15 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium Fine Silty Red Brown Sand w
5 Gravel
10
15
20 Weathered Red Shale
EOH 21

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
W[illegible]Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 12 / 18 / 00

D-1313

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW12 DATE DRILLED: 08/24/2000 COORD #1: 26.03.523 PERMIT #1: 26-57638
COORD #2: PERMIT #2:

SITE: Westview Friendly Mobil, 230 Rochelle Avenue, , Rochelle Park Twp., NJ
OWNER: Shotmeyer Bros. Petroleum, 10 Wagaraw Road, , Hawthorne, NJ 07507

COUNTY: Bergen
XSTREET: Central Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 15'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 10"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #1
DRILLER: Rich Gurczynski
SURFACE COMPLETION: M

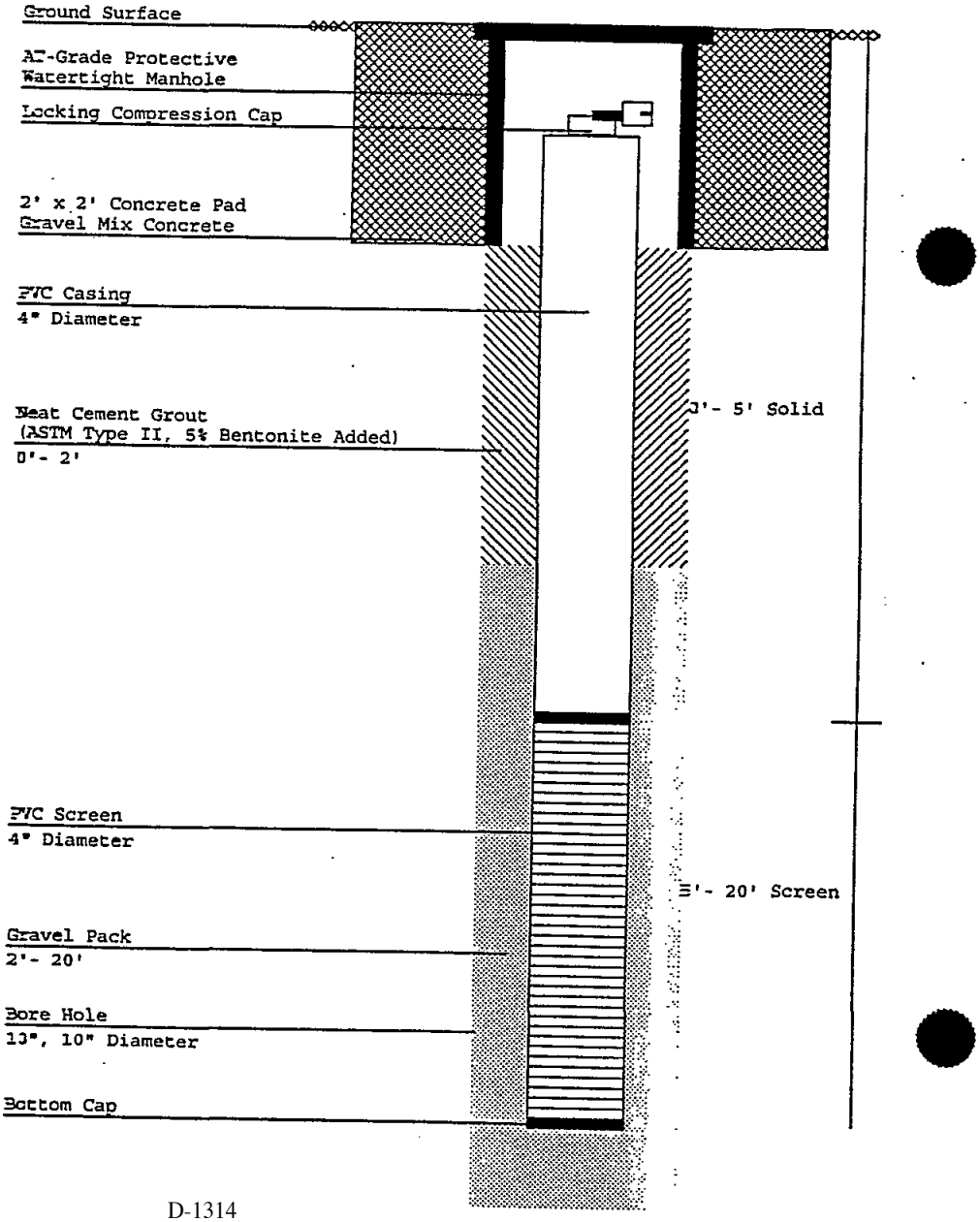
GAL PER MIN: 1/2
STAT H2O LVL: Portland
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL:
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6" Asphalt
6"- 20' Brown medium sand.



NWR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 58835

Atlas Sheet Coordinates 26 03 526

OWNER IDENTIFICATION - Owner DIMARIA, VIRGINIA-ROCHELL
Address 194-0 ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6S
County BERGEN Municipality ROCHELLE PARK T Lot No. R.O.W. Block No. R.O.W.
Address 100 W HUNTER AVE

DATE WELL STARTED 10 / 31 / 00
DATE WELL COMPLETED 10 / 31 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 15 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 6 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B61

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	16	6	Morie 00	350
Grout	0	3	6	Neat Cement	94 lbs.
				Bentonite	5 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
1 Red Medium Fine Silty Sand + Gravel
5
10
15
16 Weathered Red Shale
EOH 16'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 12 / 18 / 00

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WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 58834

Atlas Sheet Coordinates 26 03 526

OWNER IDENTIFICATION - Owner DIMARIA, VIRGINIA-ROCHELL
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2S
County BERGEN Municipality ROCHELLE PARK T Lot No R.O.W. Block No R.O.W.
Address 100 W HUNTER AVE

DATE WELL STARTED 10 / 26 / 00
DATE WELL COMPLETED 10 / 26 / 00

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 13 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8.5 ft.

Water level was measured using Tape

Well was developed for 1 hours at 1 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	5	13	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	3	14	6	Morie 00	300 lbs
Grout	0	3	6	Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 12 / 18 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Black Top
	Red Medium Fine Silty Sand + Gravel
5	
10	
14	Red Shale
15	EOH 14'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 58959

Atlas Sheet Coordinates 26 : 03 526

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP CLERK
ddress 194-D RT. 17 NORTH
ity ROCHELLE PARK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2D
ounty BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
ddress MAYWOOD CHEMICAL/BECKER A

DATE WELL STARTED 12 / 20 / 00
DATE WELL COMPLETED 12 / 22 / 00

YPE OF WELL (as per Well Permit Categories) MONITORING
.egulatory Program Requiring Well Case I.D.#

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

otal depth drilled 48.5 ft.
/ell finished to 48.5 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick
ıp ve land surface — ft.

/as steel protective casing installed?
☐ Yes ☒ No

itatic water level after drilling 8.5 ft.

/ater level was measured using Tape

/ell was developed for 3 hours
t 1.5 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	23.5	4	steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	23.5	48.5	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	23.5	8	Neat Cement Bentonite	600 lbs. 30 lbs.

Grouting Method Tremie
Drilling Method Drive + Wash Rotary

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Medium Fine Reddish Brown
10 Silt + Sand w/ Clay
12
20 Red Shale Bedrock
30
40
50 EOH 48.5

D-1317

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

)WR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59180

Atlas Sheet Coordinates 26 : 03 526

)WNER IDENTIFICATION - Owner - OMNI ASSETS/TAUBER, CONNI
\ddress 26 JOURNAL SQUARE 16TH FLOOR
:ity JERSEY CITY State NJ Zip Code

VELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1S
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 19.02
\ddress ROUTE 17

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 12 / 8 / 00
DATE WELL COMPETED 12 / 8 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

Total depth drilled 10.5 ft.
Well finished to 8.5 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8 ft.

Water level was measured using Tape

Well was developed for 2.5 hours
at 2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3.5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	3.5	8.5	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	1.5	10.5	6	Morie 00	300 lbs
Grout	0	1.5	6	Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 12 / 18 / 00

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Brown Silty Fine Sand w/ Gravel
5
10 Weathered Red Shale EOH 10.5

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

NR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59106

Atlas Sheet Coordinates 26 : 03 532

WNER IDENTIFICATION - Owner ROCHELLE PARK TOWNSHIP
ddress 194 D ROUTE 17 NORTH
ty ROCHELLE PARK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-19DD
ounty BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
ddress WEST CENTRAL AVE. & LINCO

DATE WELL STARTED 12/5/00
DATE WELL COMPLETED 12/7/00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226-6618

WELL CONSTRUCTION

otal depth drilled 76 ft.
ell finished to 76 ft.

orehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick
) above land surface — ft.

as protective casing installed?
☐ Yes ☒ No

atic water level after drilling 9.5 ft.

ater level was measured using Tape

ell was developed for 2.5 hours
2 gpm

ethod of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME-75

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	51	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	51	76	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	51	8	Neat Cement Bentonite	1550 lbs. 120 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Black Top
6	Med. fine Dark Brown/Red Silty Sand
10	Water
	Red Shale + Sandstone 9.5
20	Bedrock
30	
40	
50	
60	
70	
76	EOH 76'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.
/ell Driller (Print) Steve Wolf
rill[illegible] Signature Steve Wolf
egistration No. 1579 Date 2/6/01

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59105

Atlas Sheet Coordinates 26 : 03 532

OWNER IDENTIFICATION - Owner ROCHELLE PARK TOWNSHIP
Address 194 D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW - 19 D
County BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
Address WEST CENTRAL AVE. & LINCO

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 12 / 4 / 00
DATE WELL COMPLETED 12 / 6 / 00
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 226 6618

WELL CONSTRUCTION

Total depth drilled 42 ft.
Well finished to 42 ft.

Borehole diameter:
Top 8 in.
Bottom 4 in.

Well was finished: ☐ above grade ☒ flush mounted

Finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 9.5 ft.

Water level was measured using Tape

Well was developed for 5 hours
2 gpm

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid Water Type of Rig CME-75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	17	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	17	42	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	17	8	Neat Cement Bentonite	450 lbs. 20 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 2 / 6 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations:

0 Blacktop
6 fine Brown Sand + Gravel — Water 5'
10 Red Shale + Sandstone Bedrock
20
30
40
42 EOH 42'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59104

Atlas Sheet Coordinates 26 : 03 532

WNER IDENTIFICATION - Owner ROCHELLE PARK TOWNSHIP
ddress 194 D ROUTE 17 NORTH
ity ROCHELLE PARK State NJ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 19 S
ounty BERGEN Municipality ROCHELLE PARK T Lot No. ROW Block No. ROW
ddress WEST CENTRAL AVE. & LINCO

DATE WELL STARTED 11 / 1 / 00
YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 11 / 1 / 00
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556 0160

WELL CONSTRUCTION

otal depth drilled 13 ft.
ell finished to 13 ft.

orehole diameter:
Top 6 in.
Bottom 6 in.

ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick p) above land surface — ft.

as el protective casing installed? ☐ Yes ☒ No

atic water level after drilling 9.5 ft.

ater level was measured using Tape

ell was developed for 1 hours
1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	8	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used .010)	8	13	2	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	6	13	6	Morie 0	250 lbs
Grout	0	6	6	Neat Cement Bentonite	200 lbs. 12 lbs.

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

lethod of development Submersible

/as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid — Type of Rig CME 75

lealth and Safety Plan submitted? ☒ Yes ☐ No

evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

/ell Driller (Print) Steve Wolf

rille Signature Steve Wolf

egistration No. 1579 Date 1 / 22 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Medium fine Red Silty Sand w/ Gravel
5
10
EOH 13'
15

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

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/98

MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 59013

Atlas Sheet Coordinates 26 : 03 532

WNER IDENTIFICATION - Owner STAVOLA, GUSSIE & THOMAS
ddress PO BOX 1058
ty MAYWOOD State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8D
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 35 Block No. 24.02
ddress 100 W HUNTER AVE

DATE WELL STARTED 12 / 19 / 00
DATE WELL COMPLETED 12 / 21 / 00

YPE OF WELL (as per Well Permit Categories) MONITORING
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone + Webster Tele. # 201 556-0160

WELL CONSTRUCTION

tal depth drilled 52 ft.
ell finished to 52 ft.

rehole diameter:
Top 8 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

inished above grade, casing height (stick) above land surface — ft.

as steel protective casing installed?
Yes ☒ No

atic water level after drilling 11 ft.

ater level was measured using Tape

ell was developed for 3 hours
2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	27	4	Steel	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used)	27	52	4	—	—
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	—	—	—	—	—
Grout	0	27	8	Neat Cement Bentonite	500 lbs. 25 lbs.

ethod of development Submersible Pump

Grouting Method Tremmie
Drilling Method Drive + Wash Rotary

as permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity — gpm

ump type: —

rilling Fluid Water Type of Rig CME 75

ealth and Safety Plan submitted? ☒ Yes ☐ No

vel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company H. LEONARD REXRODE, JR.

ell Driller (Print) Steve Wolf

iller's Signature Steve Wolf

egistration No. 1579 Date 2 / 5 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Black Top
Medium Fine Silty Red
10 Sand + Gravel Water 11'
17 ↓
20
Red Shale Bedrock
30
40
52 EOH 52'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61465

Atlas Sheet Coordinates 26 . 03 535

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP. CLERK
Address 194-D ROUTE 17 NORTH
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-1
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 128
Address 100 W. HUNTER AVE

DATE WELL STARTED 5/23/01
DATE WELL COMPLETED 6/01/01

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6618

WELL CONSTRUCTION

Total depth drilled 115 ft.
Well finished to 115 ft.

Borehole diameter:
Top 10" To 40' in.
Bottom 6" To 115 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling approx 20 ft.

Water level was measured using Tape

Well was developed for 4 hours at 25 gpm

Method of development Airlift, Surge, Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig T450

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	40'	6"	Steel	19#/Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	40'	115'	6"		
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Grade	40'		Neat Cement Bentonite	252 lbs. 48 lbs.

Grouting Method Tremmie
Drilling Method AIR Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-25' : OVERBURDEN White to black F Sand & silt (Fill)
25'-40' : Bedrock FX H2O FX @ 35' & 40'
40'-115' : Competent Bedrock FX @ 75'
End @ 115'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Richard M. Tabor
Driller's Signature Richard M. Tabor
Registration No. J-1598 Date 9/17/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1323 Pink - Owner Goldenrod - Health Dept.

NR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61466

Atlas Sheet Coordinates 26 : 03 535

WNER IDENTIFICATION - Owner ~~ROCHELLE PARK TWP. CLERK~~
ddress ~~194-D ROUTE 17 NORTH~~
ty ~~ROCHELLE PARK~~ State ~~NJ~~ Zip Code

'ELL LOCATION - If not the same as owner please give address. Owner's Well No. BR PZ-2
ounty ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~1~~ Block No. ~~128~~
ddress ~~100 W. HUNTER AVE.~~

DATE WELL STARTED 7/23/01
DATE WELL COMPLETED 7/24/01

YPE OF WELL (as per Well Permit Categories) PIEZOMETER
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Stone & Webster Tele. # (201) 226-6688

WELL CONSTRUCTION

otal depth drilled 62' ft.
'ell finished to 62' ft.

orehole diameter:
Top 10" To 40' in.
Bottom 6" To 62' in.

'ell was finished: ☐ above grade ☒ flush mounted

finished above grade, casing height (stick ip) above land surface ____ ft.

las steel protective casing installed? ☐ Yes ☒ No

tatic water level after drilling 25' ft.

/ater level was measured using Tape

/ell was developed for 4 hours
t 12 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Grade	42'	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	Grade	40'	6"	Steel	19#/Sch 40
Open Hole or Screen (No. Used .010)	42'	62'	2"	PVC	Sch 40
Blank Casings (No. Used ~~.010~~)					
Tail Piece					
Gravel Pack	40'	62'		#1 Morie	@ 700 Lbs
Grout OUTER CASING	Grade	40'		Neat Cement	@ 658/594 lbs.
INNER CASING	Grade	42'		Bentonite	@ 42/36 lbs.

Grouting Method TREMMIE
Drilling Method AIR ROTARY

Method of development Surge & Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig DK-5

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ~~H. LEONARD REXRODE, JR.~~

Well Driller (Print) Richard M Tabor

Driller's Signature Richard M. Tabor

Registration No. V-1598 Date 9/17/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-25': Fill Material White - Black Sand & silt
25'-38': Rd/Brn F-M Sand & silt w/Fx Shale
38'-62': Fx Shale To 40' Then Bedrock.
Fx @ 52' Approx

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___ ° ___ ' ___.___ " LONGITUDE: ___ ° ___ ' ___.___ "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62111

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 8/6/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller D-1325 Pink - Owner Goldenrod - Health Dept.

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

ELL: MW2 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62111
COORD #2: PERMIT #2:
ITE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
WNER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

NNER CASING: PVC
IAMETER: 2"
ENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 15'

ET WELL: 15'
RAVEL PK SZ: Morie #2
RILLER: John Vogt
URFACE COMPLETION: M

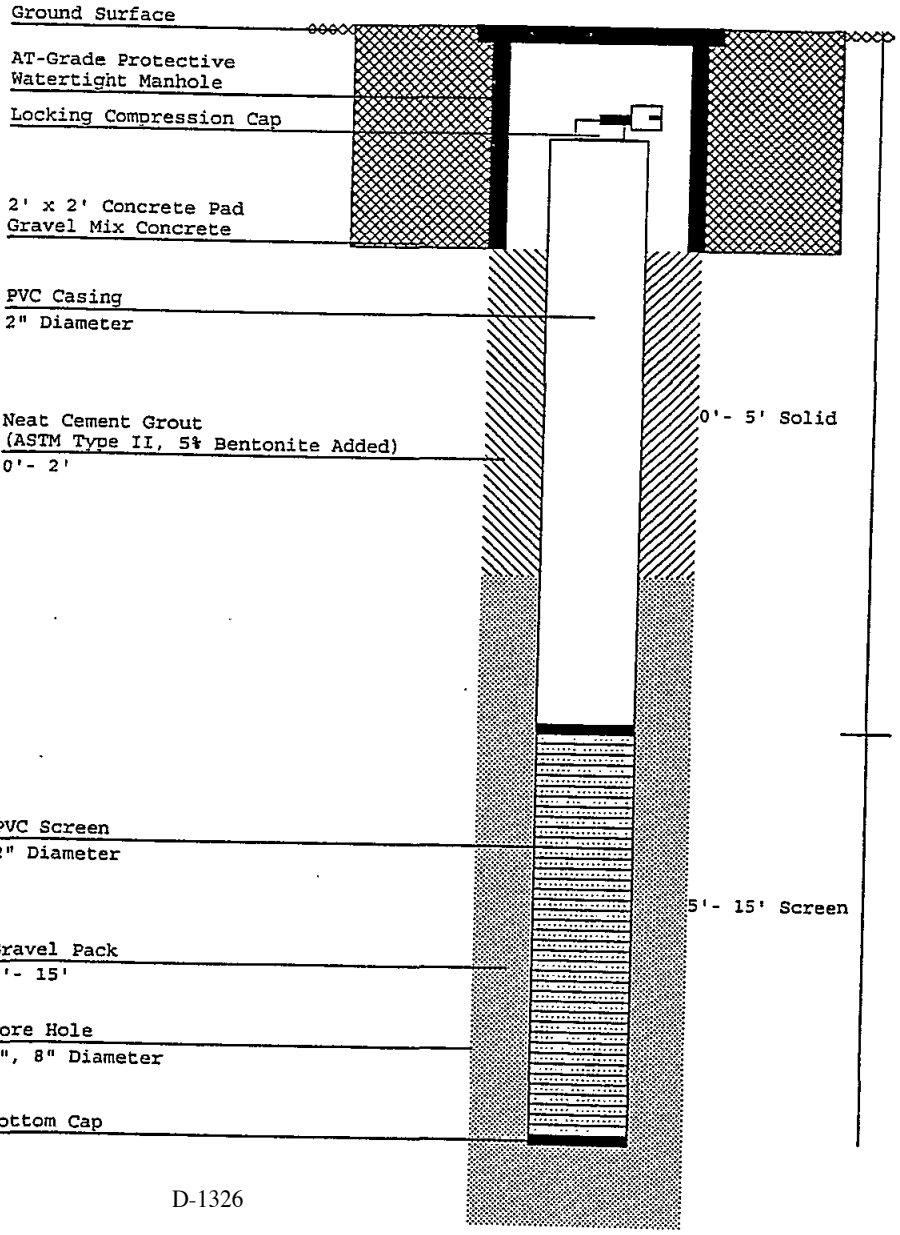
GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

EMARKS / SOILS IDENTIFICATION

'- 15' Red sand silt some gravel.



WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62112

Atlas Sheet Coordinates 26 : 03 : 537

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP
ddress 151 W PASSAIC ST
ity ROCHELLE PARK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
:ounty BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
ddress LOTZ LANE

YPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
:egulatory Program Requiring Well Case I.D.#

:ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

otal depth drilled 15' ft.
/ell finished to 15' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

/ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) ove land surface ____ ft.

/a el protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 8' ft.

/ater level was measured using Tape

/ell was developed for 1/2 hours
t 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

/lethod of development pump

/as permanent pumping equipment installed? ☐ Yes ☒ No

?ump capacity ____ gpm

?ump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

.evel of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 8/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller D-1327 *Pink - Owner Goldenrod - Health Dept.*

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

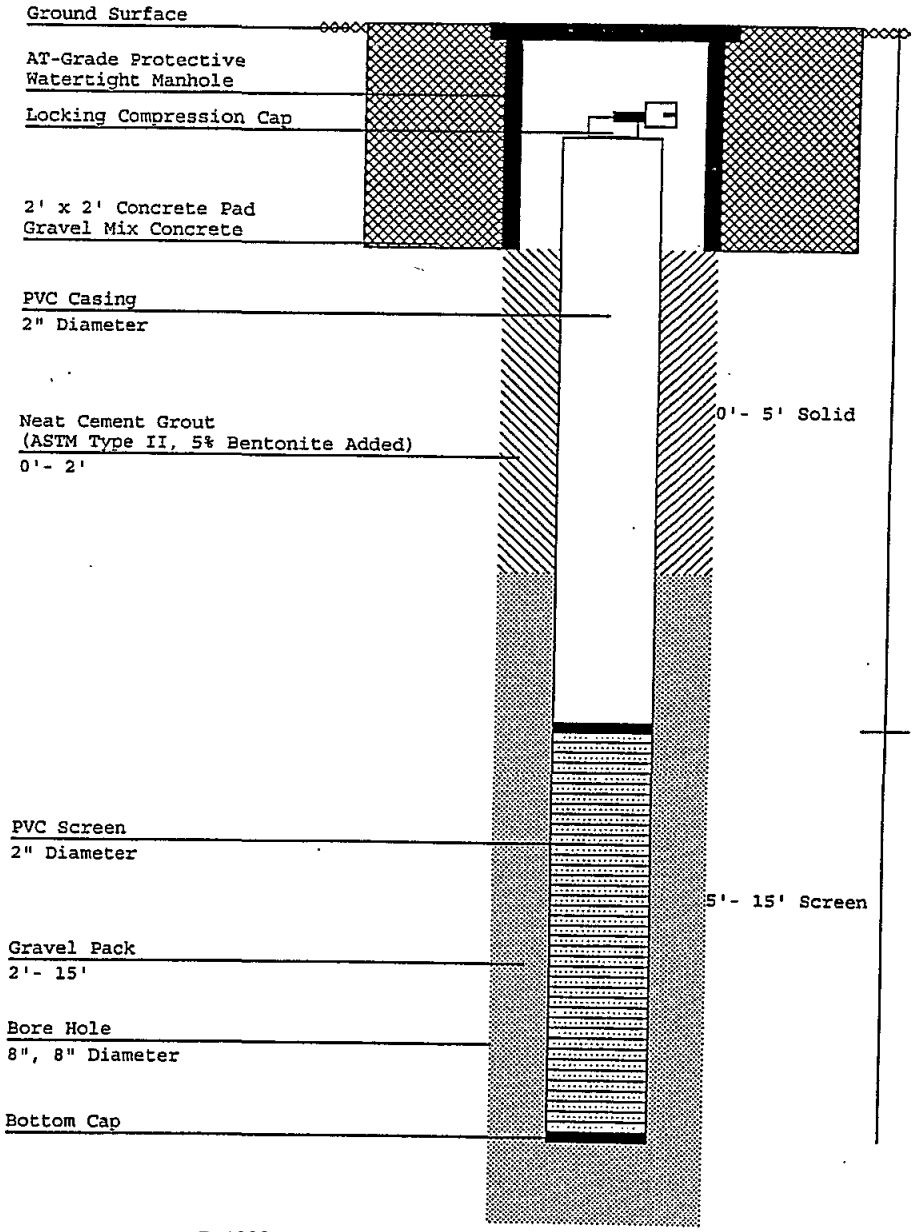
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

L: MW3 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62112
COORD #2: PERMIT #2:
E: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
ER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

ER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
METER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
GTH: 5' LENGTH: DIAMETER: 2" HOLE DIA: 8", 8"
LENGTH 1: 10' TOTAL DEPTH: 15'
WELL: 15' GAL PER MIN: 1/2 LENGTH 2:
VEL PK SZ: Morie #2 STAT H2O LVL: 8' SLOT SIZE: .020
LLER: John Vogt DEVELOPMENT METHOD: pump CASING SEAL: Portland
FACE COMPLETION: M DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
0 - 15'		Red sand silt some gravel.



WR-138 M
'00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62110

Atlas Sheet Coordinates 26 : 03 : 537

[redacted]ER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

[redacted]eel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

[redacted]'s Signature John Vogt

Registration No. 1544 Date 8/6/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1329 *Pink - Owner Goldenrod - Health Dept.*

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

LL: MW1 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62110
COORD #2: PERMIT #2:
TE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
NER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

NER CASING: PVC
AMETER: 2"
NGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

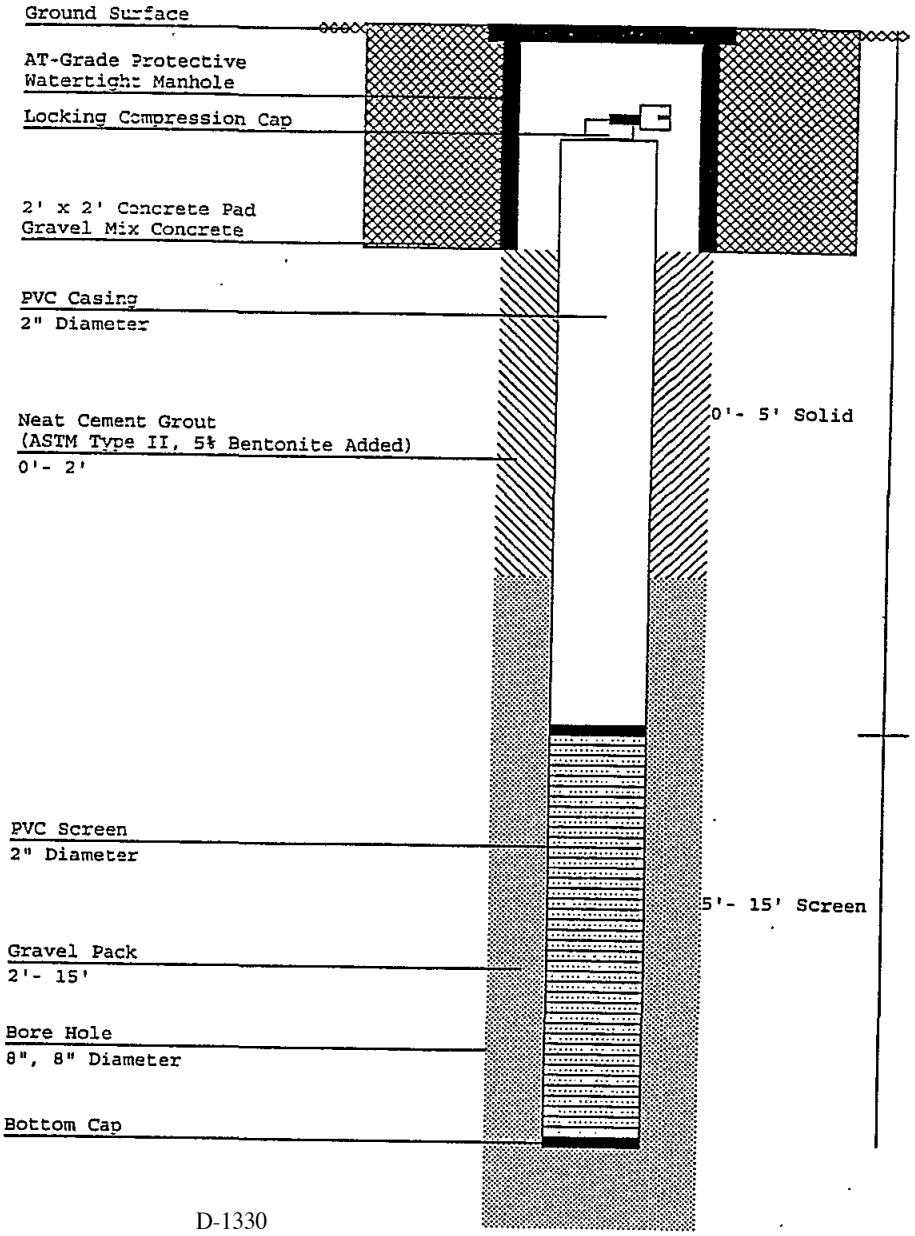
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 15'

T WELL: 15'
AVEL PK SZ: Morie #2
ILLER: John Vogt
RFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 15'		Red sand silt some gravel.



DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 46623

Atlas Sheet Coordinates 26 : Ø3 : 297

OWNER IDENTIFICATION - Owner S B P C
Address 10 WAGARAW RD
City HAWTHORNE State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-10
County BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 63
Address CENTRAL AVE

DATE WELL STARTED 3 / 7 / 97
DATE WELL COMPETED 3 / 7 / 97

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well UST Case I.D.# 91-08-19-1447

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Environmental Waste Management Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface 0 ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using water tape

Well was developed for 1 hours at 5 gpm

Method of development sub pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	3"	5'	4"	PVC	
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1)	5'	20'	4"	.020 slot PVC	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	3'	20'		#2 well sand	
Grout	6"	3'		Neat Cement	94 lbs.
				Bentonite	6 lbs.

Grouting Method gravity
Drilling Method air rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity 0 gpm

Pump type: none

Drilling Fluid none Type of Rig TH60

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SBI ENVIRONMENTAL INC.

Well Driller (Print) Robert Hough

Driller's Signature Robert Hough

Registration No. 13756 Date 3 / 14 / 97

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 - 1' asphalt & gravel
1' - 6' cobbles, brown sand, and gravel
6' - 20' brown medium sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 150 2282

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46182
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW3-6-R-25
County BERGEN Municipality SADDLE BROOK TW Lot No. NA Block No. NA
Address RT. 80 WESTBOUND Date well started 11/25/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/25/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Garrett Fleming Tele. # 908-562-0112

WELL CONSTRUCTION

Total depth drilled 32 ft.
Well finished to 32 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	22	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	22	32	1.25	Sch 40 pvc - 020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	20	32	4	#2 morie
Annular Seal/Grout	0	20	4	Bensead
Method of Grouting	Tremi with Pump			

Static water level after drilling 30' ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6' Black Top
6" to 1' Bluestone
1' to 32' Red Brn Silt Tr Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/28/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

E DMR

MONITORING WELL RECORD

Well Permit No. 26 44037
Atlas Sheet Coordinates 26 : 03 : 297

OWNER IDENTIFICATION - Owner BERGEN PASSAIC TRANSPORT
Address 53 CENTRAL AVE.
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 23
Address 53 CENTRAL AVE. Date well started 3/25/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/25/96
Regulatory Program Requiring Well UST Case I.D. # 90-01-05-1348
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Enviroteck Consultants Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter: Top 8 in. Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	15	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	2	15		Morie #2
Annular Seal/Grout	0	2		Portland
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 3 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 000359
Name of Drilling Company ~~SUMMIT WELL DRILLING~~ Summit Drilling

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 4/2/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1333

WELREC 150 3280

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW5 DATE DRILLED: 3/25/1996 COORD #1: 26.03.297 PERMIT #1: 26-44037
COORD #2: PERMIT #2:
SITE: Bergen Passaic Transport,, 53 Central Avenue, , Rochelle Park, NJ COUNTY: Bergen
OWNER: Bergen Passaic Transport,, 53 Central Avenue, , Rochelle, NJ XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

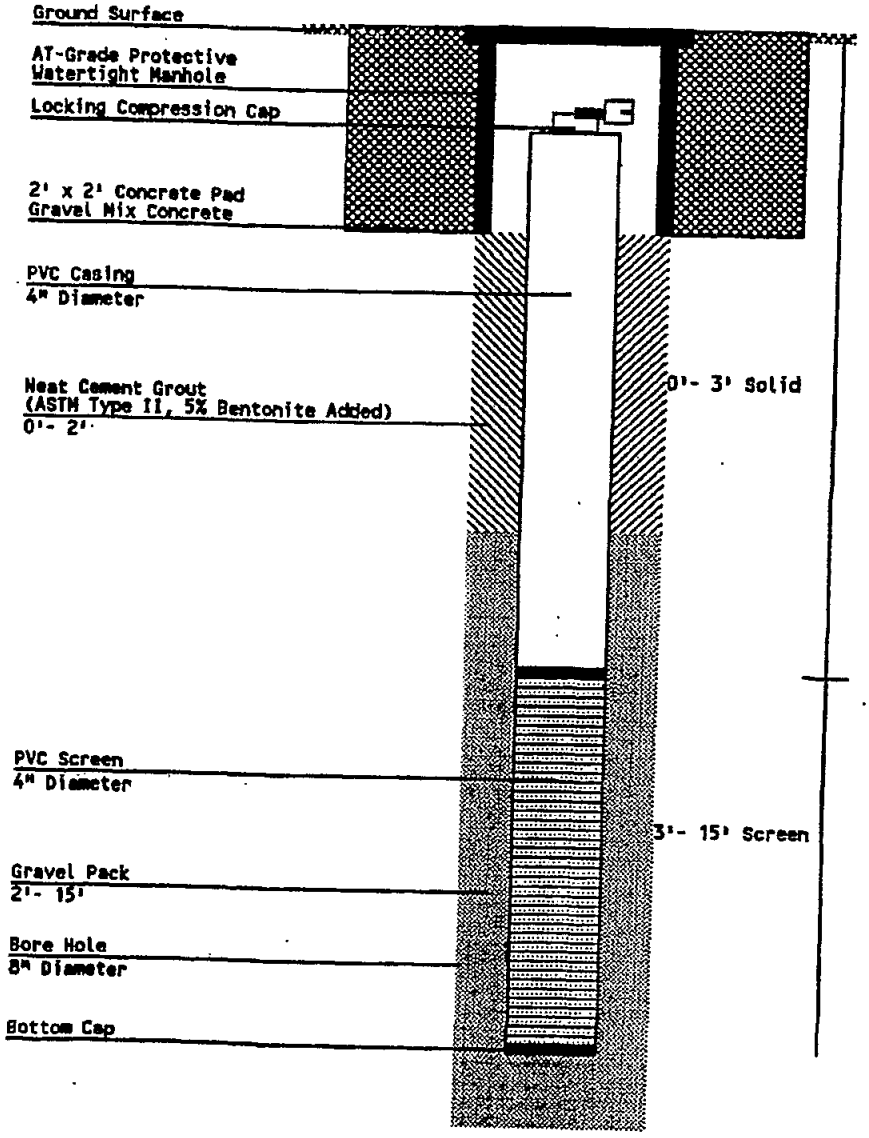
GAL PER MIN: 3
STAT H2O LVL: 6'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0' - 2' Asphalt & stone.
2' - 5' Fill.
5' - 10' Red-brown m/f sand & gravel trace cobbles some silt.
10' - 15' Bedrock.



DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

DMR

Well Permit No. 26 44036
Atlas Sheet Coordinates 26 : 03 297

OWNER IDENTIFICATION - Owner BERGEN PASSAIC TRANSPORT
Address 53 CENTRAL AVE.
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 23
Address 53 CENTRAL AVE Date well started 3/25/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/25/96
Regulatory Program Requiring Well UST Case I.D. # 90-07-05-1348
CONSULTING FIRM/FIELD SUPERVISOR (If applicable) Enviroteck Consultant Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter: Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	Sch40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3	15	4	Sch40 PVC.020
Tail Piece				
Gravel Pack	2	15		Morie #2
Annular Seal/Grout	0	2		Portland
Method of Grouting	Gravity			

Static water level after drilling 6 ft.
Water level was measured using tape
Well was developed for 1/2 hours at 3 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig B-80
Name of Driller Steve Yotcoski
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 0001359
Name of Drilling Company ~~SUMMIT WELL DRILLING~~ Summit Drilling

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature Steve Yotcoski Date 4/2/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 150 3278

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW4 DATE DRILLED: 3/25/1996 COORD #1: 26.03.29Z PERMIT #1: 26-44036
COORD #2: PERMIT #2:

SITE: Bergen Passaic Transport,, 53 Central Avenue, , Rochelle Park, NJ
OWNER: Bergen Passaic Transport,, 53 Central Avenue, , Rochelle, NJ

COUNTY: Bergen
XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .020

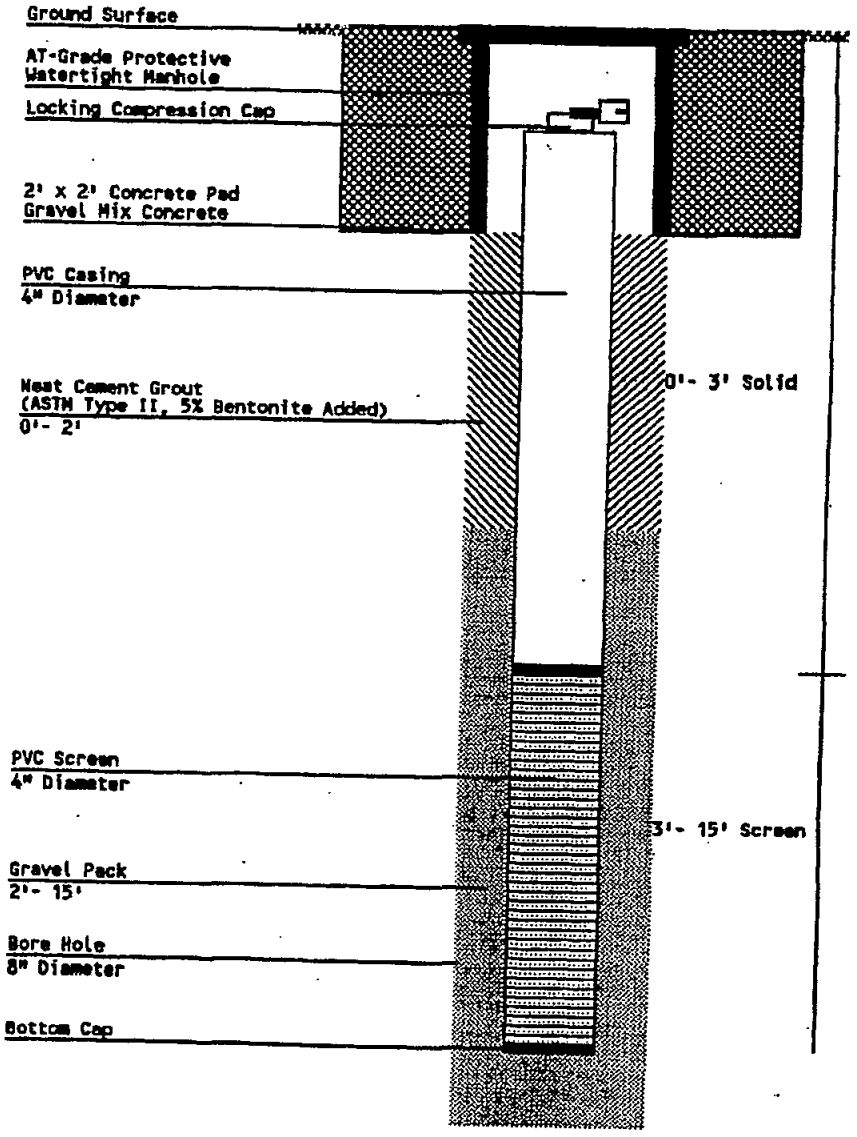
DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIAMETER: 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

GAL PER MIN: 3
STAT H2O LVL: 6'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0' - 2'		Asphalt & stone.
2' - 5'		Fill.
5' - 10'		Red-brown m/f sand & gravel trace cobbles some silt.
10' - 15'		Bedrock.



WELREC 150 3279

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26- 42873
Atlas Sheet Coordinates 26 03 534

OWNER IDENTIFICATION - Owner ~~FRAPAUL CONSTRUCTION~~
Address ~~124 ESSEX ST.~~
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 6
County BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 1
Address ~~124 ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/30/95 ✓
Regulatory Program Requiring Well UST Case I.D. # 94-7-5-1120-56

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) SHAKTI CONSULTANTS Tele. # 908-521-2322

WELL CONSTRUCTION

Total depth drilled 12.08 ft.
Well finished to 12.08 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	NONE			
Outer Casing (Not Protective Casing)	.37	2.08	4	Sched. 40 PVC
Screen (Note slot size)	2.08	12.08	4	Sched 40 PVC (.01)
Tail Piece	NONE			
Gravel Pack	2	12.08	10	Morie #00
Annular Seal/Grout	0	2	10	NEAT CEMENT
Method of Grouting	PRESSURE			

Static water level after drilling 4.5 ft.
Water level was measured using TAPE
Well was developed for .2 hours at NA gpm
Method of development DIAPHRAGM PUMP
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGER
Drilling Fluid NONE Type of Rig CME 55
Name of Driller M. H. ~~BRINKERHOFF~~
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1496
Name of Drilling Company DIAMOND DRILLING CO., INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-.25 ASPHALT
.25'-12.08' Reddish brown clayey Fine SAND AND SILT WITH SOME PEBBLES, STONES AND COBBLES.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 12-1-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151.0152

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. ~~26~~ - ~~42872~~
Atlas Sheet Coordinates ~~26~~ ~~03~~ ~~534~~

OWNER IDENTIFICATION - Owner FRAPAUL CONSTRUCTION
Address ~~124 ESSEX ST.~~
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 5
County BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 1
Address 124 ESSEX ST.
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/30/95
Regulatory Program Requiring Well UST Case I.D. # 94-7-5-1120-56
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) SHAKTI CONSULTANTS Tele. # 908-521-2322

WELL CONSTRUCTION

Total depth drilled 12.54 ft.
Well finished to 12.54 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	NONE			
Outer Casing (Not Protective Casing)	.38	2.54	4	Sched. 40 PVC
Screen (Note slot size)	2.54	12.54	4	Sched. 40 PVC (.01)
Tail Piece	NONE			
Gravel Pack	2	12.54	10	MOKIE #00
Annular Seal/Grout	0	2	10	NEAT CEMENT
Method of Grouting	PRESSURE			

Static water level after drilling 4.5 ft.
Water level was measured using TAPE
Well was developed for 2 hours at N/A gpm
Method of development DIAPHRAGM PUMP
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGER
Drilling Fluid NONE Type of Rig CME 55
Name of Driller M.A. BRUKHOFF III
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 31496
Name of Drilling Company ~~DIAMOND DRILLING CO., INC.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'-.25' ASPHALT
.25'-12.54' Reddish brown clayey fine sand and silt with some pebbles, stones and cobbles

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 12-1-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0451

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26- 42871
Atlas Sheet Coordinates 26 03 534

OWNER IDENTIFICATION - Owner ~~FRAPAUL CONSTRUCTION~~
Address 124 ESSEX ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County BERGEN Municipality ROCHELLE PARK T Lot No. 1.01 Block No. 1
Address ~~124 ESSEX ST.~~

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 11/30/95
Regulatory Program Requiring Well UST Case I.D. # ~~94-7-5-1120-56~~

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) SHAKTI CONSULTANTS Tele. # 908-521-2322

WELL CONSTRUCTION

Total depth drilled 12.33 ft.
Well finished to 12.33 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	NONE			
Outer Casing (Not Protective Casing)	.58	2.33	4	Sched. 40 PVC
Screen (Note slot size)	2.33	12.33	4	Sched. 40 PVC (.01)
Tail Piece	NONE			
Gravel Pack	2	12.33	10	MORIE #00
Annular Seal/Grout	0	2	10	NEAT CEMENT
Method of Grouting	PRESSURE			

Static water level after drilling 4 ft.
Water level was measured using TAPE
Well was developed for 2 hours at NA gpm
Method of development DIAPHRAGM PUMP.
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method AUGER
Drilling Fluid NONE Type of Rig CME 55
Name of Driller M. W. BRINKERHOFF III
Health and Safety Plan submitted? ☐ Yes ☑ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 7496
Name of Drilling Company DIAMOND DRILLING CO., INC.

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

0'-12.33' Reddish brown clayey fine sand and silt with some pebbles, stones and cobbles.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 12-1-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0450

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41641
Atlas Sheet Coordinates 26 : 03 : 523

OWNER IDENTIFICATION - Owner PARKWAY GARDEN ASSOCIATES
Address 128 ROCHELLE AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW.3
County BERGEN Municipality ROCHELLE PARK T Lot No. 1 Block No. 110
Address 128 ROCHELLE AVE.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/8/95
Regulatory Program Requiring Well UST Case I.D. # UST #01704208

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ANS Tele. # 908-764-8393

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10		SCH 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	10	20		SCH 40(.020")
Tail Piece				
Gravel Pack	9	20		MORIE #1
Annular Seal/Grout	8	9		BENTONITE PELLETS
Method of Grouting	TREMIE GROUT 10-8 (Bentonite)			

Static water level after drilling ±13 ft.
Water level was measured using TAPE
Well was developed for 1.0 hours at ±5 gpm
Method of development AIR LIFT
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method AUGER
Drilling Fluid — Type of Rig MOBILE B-61
Name of Driller R. KIMLEY
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 15056
Name of Drilling Company CRAIG TEST BORING CO. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MF SAND
F GRAVEL
0 - 20'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature R. Kimley Date 9-11-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

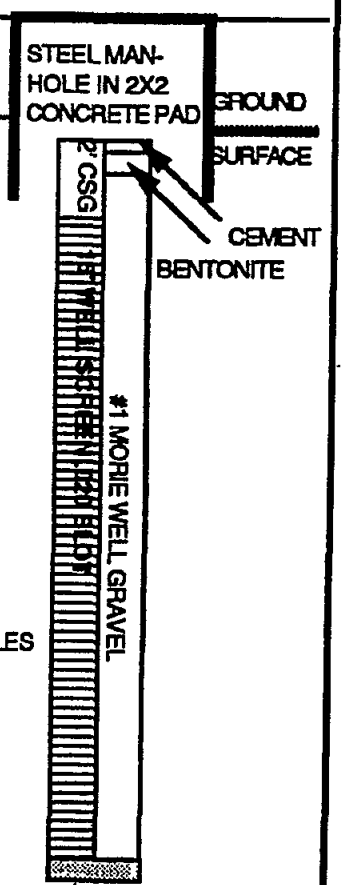
WELREC 151 0383

LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94		COORDINATE: 26 03 531
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36624	WELL NO: MW # 3	DEPTH: 17'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: BENTONITE/CEMENT	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN
			0" - 1' ASPHALT/ROADSTONE
		N	1' - 8' RED/BROWN SAND & SILTS & BOULDERS
		O	
		S	
		P	
		O	
		O	
		N	8' - 11' BLACK SILTY SANDS AND CLAY
		S	
			11' - 17' RED/BROWN SAND & SILTS & COBBLES



WELREC 151 0413

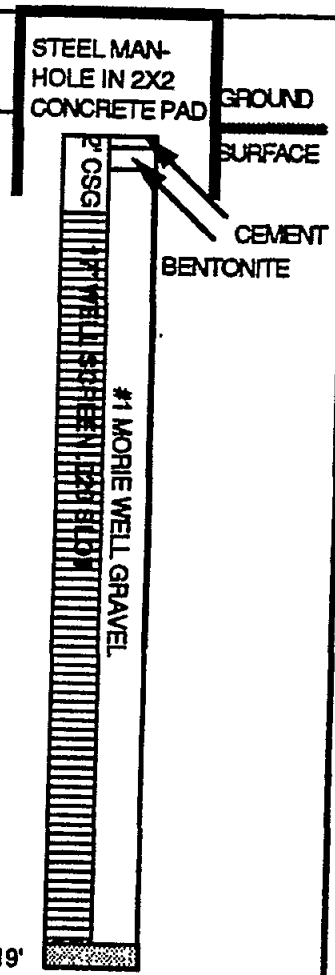
LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94		COORDINATE: 26 03 531
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36623	WELL NO: MW # 2	DEPTH: 19'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8"
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 17'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: BENTONITE/CEMENT		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	
			0" - 2' BLACK SILTY SANDS
		N	
		O	2' - 17' RED/BROWN FILL DEBRIS AND Tight Packed clays AND SILTS.
		S	
		P	
		O	
		O	
		N	
		S	
			17' - 19' BOULDERS, RED/BROWN SANDS

WELL DESIGN

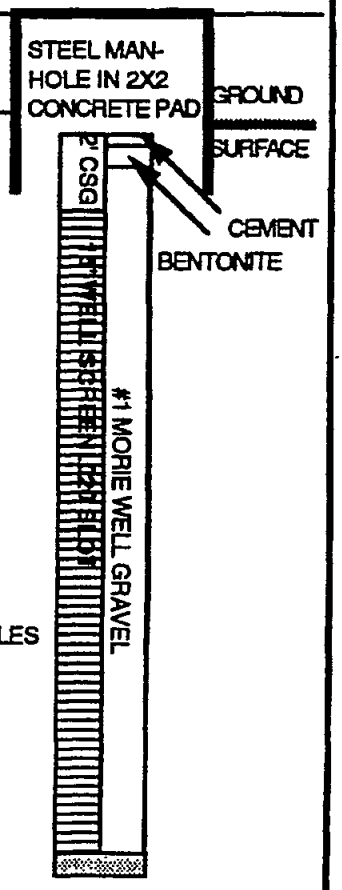


LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94		COORDINATE: 26 03 531
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36624	WELL NO: MW # 3	DEPTH: 17'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: BENTONITE/CEMENT		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	
			0" - 1'	ASPHALT/ROADSTONE
		N	1' - 8'	RED/BROWN SAND & SILTS & BOULDERS
		O		
		S		
		P		
		O		
		O		
		N	8' - 11'	BLACK SILTY SANDS AND CLAY
		S		
			11' - 17'	RED/BROWN SAND & SILTS & COBBLES



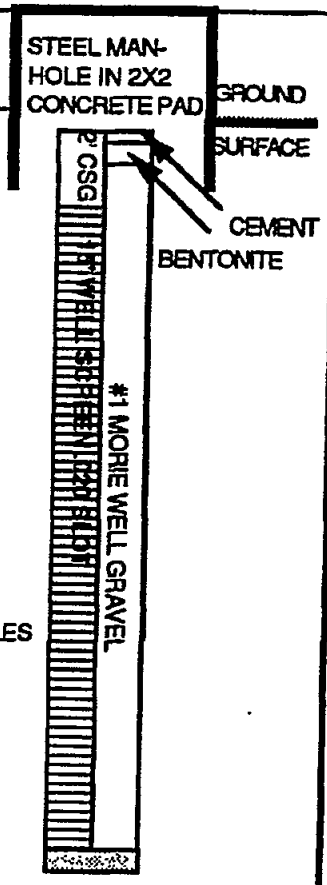
LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94		COORDINATE: 26 03 531
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36624	WELL NO: MW # 3	DEPTH: 17'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: BENTONITE/CEMENT	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER		
			0" - 1'	ASPHALT/ROADSTONE
		N	1' - 8'	RED/BROWN SAND & SILTS & BOULDERS
		O		
		S		
		P		
		O		
		O		
		N	8' - 11'	BLACK SILTY SANDS AND CLAY
		S		
			11' - 17'	RED/BROWN SAND & SILTS & COBBLES

WELL DESIGN



WELL SET AT 17'

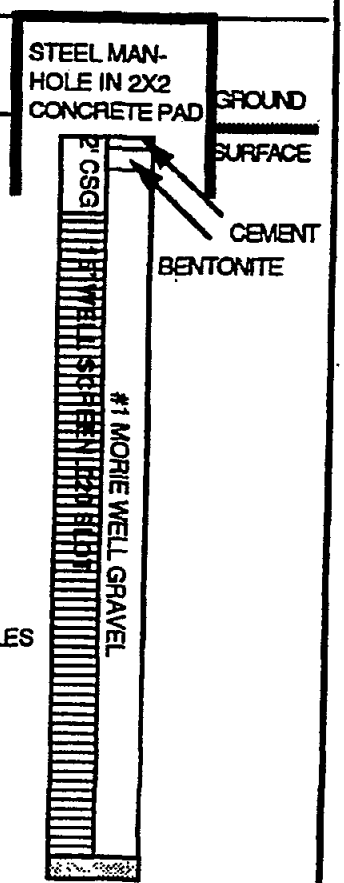
LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94	COORDINATE: 26 03 531	
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36624	WELL NO: MW # 3	DEPTH: 17'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: COMPOSITE		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: BENTONITE/CEMENT	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	
			0" - 1' ASPHALT/ROADSTONE
		N	1' - 8' RED/BROWN SAND & SILTS & BOULDERS
		O	
		S	
		P	
		O	
		O	
		N	8' - 11' BLACK SILTY SANDS AND CLAY
		S	
			11' - 17' RED/BROWN SAND & SILTS & COBBLES

WELL DESIGN



WELL SET AT 17'

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

6-10

Well Permit No. 26 - 36624
Atlas Sheet Coordinates 26 : 03 . 531

OWNER IDENTIFICATION - Owner FRAPAUL CONSTRUCTION CO.
Address 324 BROADWAY
City ELIZABETH State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW#3
County ~~BERGEN~~ Municipality ~~ROCHELLE PARK T~~ Lot No. ~~1.01,3~~ Block No. ~~1~~
Address FRAPAUL, 124 ESSEX, STREET, ROCHELLE PARK, NJ

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 04 / 21 / 94
Regulatory Program Requiring Well ~~UST~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BERTIN ENGINEERING Tele. # (201) 288-6414

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	2'	4"	PVC BEDROCK FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	~~XXX~~ 17	4"	PVC, SLOT .020 BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	1'	17'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	1'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	TREMMY			

Static water level after drilling APRX. 5 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at < 1 gpm
Method of development BAILING + PUMPED.
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig CANTERRA CT-450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date 6-8-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0414

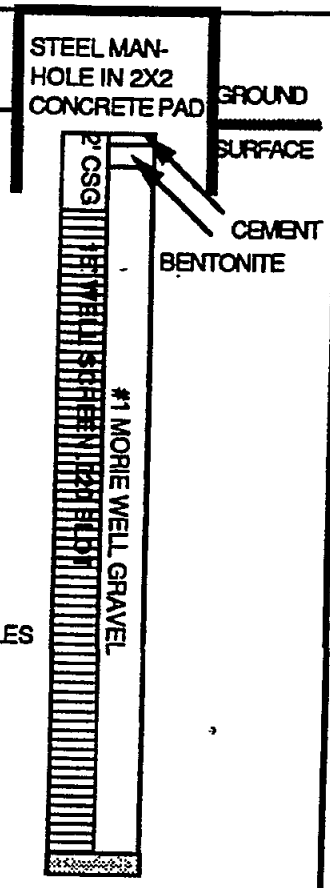
LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: FRAPAUL	DATE DRILLED: 04/21/94	COORDINATE: 26 03 531	
LOCATION: 124 ESSEX STREET ROCHELLE PARK, NJ	PERMIT #: 26-36624	WELL NO: MW # 3	DEPTH: 17'
	STATIC WATER LEVEL: APPROX. 5'		HOLE DIA: 8
OWNER: FRAPAUL CONST.	ADDRESS: 324 BROADWAY, ELIZABETH, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: N/A	LENGTH: 2'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4"	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: COMPOSITE	FORMATION: UNCONSOLIDATED		
GRAVEL PACK SIZE: #1 MORIE/BAGGED	SEAL: BENTONITE/CEMENT		

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER		
			0" - 1'	ASPHALT/ROADSTONE
		N	1' - 8'	RED/BROWN SAND & SILTS & BOULDERS
		O		
		S		
		P		
		O		
		O		
		N	8' - 11'	BLACK SILTY SANDS AND CLAY
		S		
			11' - 17'	RED/BROWN SAND & SILTS & COBBLES

WELL DESIGN



WELL SET AT 17'

WELREC 151.0419

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 39187
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner TURLICK, MARK
Address 20 SUN FIRE AVE.
City CAMP HILL State PA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 8
County BERGEN Municipality HAYWOOD BORO Lot No. 52 Block No. 107
Address 9 Brook Ave. Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 01 / 09 / 95
Regulatory Program Requiring Well UST Case I.D. # 90-08-15-1603
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) E. S. A. Tele. #908-469-8888

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2.5	4	sch 40 pcv
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	2.5	10	4	.020 slot sch 40 pvc
Tail Piece	none			
Gravel Pack	1.5	10		#2 well gravel
Annular Seal/Grout	0	1.5		bentonite/cement
Method of Grouting	gravity placement			

Static water level after drilling 5 ft.
Water level was measured using steel tape
Well was developed for 1 hours at 2 gpm
Method of development centrifugal pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow stem auger
Drilling Fluid none Type of Rig Diedrich D50
Name of Driller Allen J. Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. JD1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Fill material
5' to 10' Silty sands
water at 5'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 2-27-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-13SA
1:88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-359
APPLICATION NO. _____
COUNTY _____
COORD. 26-03-531

WELL RECORD

1. OWNER Metalfab ADDRESS Woodland Ave. & Rt. 17 Rochelle Park, NJ
   Owner's Well No. one SURFACE ELEVATION 50 Feet (Above mean sea level)
2. LOCATION S. E. Corner of Bldg., Woodland and Rt. 17 - Rochelle Park, NJ
3. DATE COMPLETED 10-11-51 DRILLER John E. Georgi 99
4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 103 Feet
5. CASING: Type steel Diameter 6 Inches Length 19'6" Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 10-11-51 Yield 40 Gallons per minute
   Static water level before pumping 6 Feet below surface
   Pumping level 8 1/2 feet below surface after 2 hours pumping
   Drawdown 2 1/2 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped Power Pump How measured in measured container
   Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
   Type Shallow Well Pump Mfrs. Name _____
   Capacity 5 G.P.M. How Driven electricity H.P. 1/4 R.P.M. 3450
   Depth of Pump in well _____ Feet Depth of Footpiece in well 30 Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Drinking & Sanitary purposes AMOUNT { Average 150-200 Gallons Daily / Maximum 300 Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes ____ No X
    Taste Good Odor none Color clear Temp. ? °F.
12. LOG on back Are samples available? no
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Georgi Bros. 85 Echo Place, E. Paterson, NJ
14. DATA OBTAINED BY John E. Georgi 99 Date 10-11-51

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

Log

0-2	Soil
3-12	Sandy Clay
13-18	Shale
19-103	Red Sandstone

WELREC 085 1328

26-3-298

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2776
Application No. _____
County _____

WELL RECORD

1. OWNER Frank & Joseph Alesso ADDRESS 214 Hemlock Ave., Point Pleasant
Owner's Well No. 1 SURFACE ELEVATION 38 Feet (Above mean sea level)

2. LOCATION Rochelle Park, New Jersey

3. DATE COMPLETED 5/6/63 DRILLER Burrows Well Drilling Co., Inc.

4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 100 Feet

5. CASING: Type Steel Diameter 6 Inches Length 23&11" Feet

6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
Tail piece: Diameter _____ Inches Length _____ Feet

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date 4/25/63 Yield 45 Gallons per minute
Static water level before pumping 6 Feet below surface
Pumping level 21 feet below surface after _____ hours pumping
Drawdown 15 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Bailer How measured Watch & pail
Observed effect on nearby wells None

9. PERMANENT PUMPING EQUIPMENT:
Type Shallow Well Jet Mfrs. Name Burks
Capacity _____ G.P.M. How Driven Electric H.P. 1/3 R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR Domestic AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes ___ No. X
Taste _____ Odor _____ Color _____ Temp. _____ °F

12. LOG Over
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy) Are samples available? No

13. SOURCE OF DATA Drillings

14. DATA OBTAINED BY Burrows Well Drilling Co., Inc. Date 5/22/63

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 0467

26-03-535
26-2771

Black muck to 2 feet
3 feet of clay
Red clay mixed with
red sandstone to 20

22 feet of 10" casing

Open 10" hole

150 feet of 8" open hole

Total depth 300 feet

RECEIVED
MAY 9 1963
DEPT. OF CONSERVATION &
ECONOMIC DEVELOPMENT
GEOLOGIC & TOP. SURVEY

WELREC 085 1385

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 18730
Atlas Sheet Coordinates 26 : 03 : 526

OWNER IDENTIFICATION - Owner U.S. ARMY CORPS OF ENGINE
Address 26 FEDERAL PLAZA, ROOM 2144
City NEW YORK State NY Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SR-18
County Municipality ~~ROCHELLE PARK T~~ Lot No. ~~5~~ Block No. ~~12~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~BORING~~ Date well completed 04/21/90
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 26.0 ft.
Well finished to ft.
Borehole diameter:
Top in.
Bottom in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling ft.
Water level was measured using
Well was developed for hours at gpm
Method of development
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method
Drilling Fluid Type of Rig
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company ARMY CORPS OF ENGINEERS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature x Carl J Moon Date x 8-27-92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

26-03-526 26-18730 Hole No. SR-48

DRILLING LOG

DIVISION: SOUTH ATLANTIC
INSTALLATION: SAVANNAH DISTRICT
SHEET 1 OF 2 SHEETS

1. PROJECT: LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT
2. LOCATION (Coordinates or Station)
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SR-48
5. NAME OF DRILLER: CARL NIOGRET
6. DIRECTION OF HOLE: ☑ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN: 14.1
8. DEPTH DRILLED INTO ROCK: 11.9
9. TOTAL DEPTH OF HOLE: 26.0
10. SIZE AND TYPE OF BIT: 4" AUGER
11. DATUM FOR ELEVATION SHOWN (TBM or MSL): NAVD
12. MANUFACTURER'S DESIGNATION OF DRILL: FAILING 314
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED 10; UNDISTURBED
14. TOTAL NUMBER CORE BOXES: 1
15. ELEVATION GROUND WATER: NOT OBSERVED
16. DATE HOLE: STARTED 04/21/90; COMPLETED 04/21/90
17. ELEVATION TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING: 1.6
19. SIGNATURE OF INSPECTOR: J. CHILDERS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
			[illegible] NO SAMPLE			
	1'		SM - BROWNISH RED SILTY FINE SAND W/TRACE OF MICA. ROCK FRAGMENTS 1/4" & MATERIAL ROOTS	0.7'	1	
	2'		SM - RED SILTY FINE TO MED. GRAIN SAND W/TRACE OF MICA ROCK FRAG. 1/4" & HAIRLIKE ROOTS	0.6'	2	
	3'					
	4'		SM - BROWNISH RED SILTY FINE TO MED. GRAIN SAND W/ TRACE OF GRAVEL 3/4"	0.9'	3	
	5'		SM - BROWNISH RED SILTY FINE - MED. GRAIN SAND W/ TRACE OF GRAVEL 1/2"	0.5'	4	
	6'					
	7'		SM - BROWNISH RED SILTY FINE - MED GRAIN SAND W/ TRACE OF MICA ROCK FRAG & GRAVEL 1"	1.2	5	
	8'		SM - BROWNISH RED SILTY FINE - MED GRAIN SAND W/ A LITTLE MICA ROCK FRAG 1/4"	1.4'	6	
	9'					
	10'		SM - RED SILTY FINE TO MEDIUM GRAIN SAND W/TRACE OF WEA ROCK FRAG 1/4"	0.7'	7	
	11'		SM - RED SILTY FINE TO MED - GRAIN SAND W/ A LITTLE WEA ROCK FRAG 1"	1.5'	8	
	12'					
	13'		SM - RED SILTY FINE TO MED GRAIN SAND W/ A LITTLE WEA ROCK FRAG 1/4"	1.3'	9	
	14'		GM - SILTY SAND W/ A ROCK FRAG. 1" REFUSAL	.6'	10	SET AT 14' IN CHANNEL BEDROCK CHECK AT CORE

PRELIMINARY
SUBJECT TO CORRECTION

WELREC 085 1306

26-03-526 26-18730

DRILLING LOG (Cont Sheet) ELEVATION TOP OF HOLE

Hole No. SR-48

PROJECT LOWER SADDLE RIVER, BERGEN COUNTY, NJ, FLOOD CONTROL PROJECT | INSTALLATION: SAVANNAH DISTRICT | SHEET 2 OF 2 SHEETS

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV-ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	14.1					
				20		PULL-1 depth 14.1-19.1 Run 5.0 Rec 1.0 C.L. 4.0 SOFT SAND-SILT ZONE THIN PORTION NO WATER LOSS WATER RED
	19.1					PULL-2 depth 19.1-23.1 Run 2.0 Rec 2.0 C.L. 0.0 WATER RETURN 100% COLOR RED
	23.8			100	6/-	PULL-3 d- 23.1 — 23.8 Run Rec C.L. WATER RETURN 100% COLOR RED
					1	

PRELIMINARY
SUBJECT TO CORRECTION

WELREC 085 1307

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 21716
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner RANKIN, MATTHEW TRUST OFF
Address 716 BROAD STREET
City NEWARK State NJ Zip Code 07102

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County Bergen Municipality ~~MAYWOOD BORO~~ Lot No. ~~52~~ Block No. ~~107~~
Address 9 Brook Ave

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/9/90
Regulatory Program Requiring Well UST Case I.D. # 90-06-15-1793
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Eco Sciences INC Tele. # 627-5726

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.
Borehole diameter:
Top 9 5/8 in.
Bottom 9 5/8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0.5	5	4	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	5	10	4	Sch 40 pvc .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	4	10	9 5/8	#2 well gravel
Annular Seal/Grout	0.5	4	9 5/8	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 5.9 ft.
Water level was measured using Tape drop line
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Auger
Drilling Fluid N/A Type of Rig Acker Soil Max 300
Name of Driller Frank Sipple
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 11489
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0.0 to 0.3 Blk Top
0.3 to 2 Brn f/sd & F/Gravel
2 to 4 Blk St & wood Ash
4' to 8' Gry f/sd
8' to 10' Red Till

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Frank Sipple Date 9/8/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 0469

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23594
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner BERGEN PASSAIC TRANSPORT
Address 53 CENTRAL AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Bergen Municipality Lot No. Block No.
Address ROCHELLE PARK T 1 23

TYPE OF WELL (as per Well Permit Categories) Date well completed 1 / 25 / 91
Regulatory Program Requiring Well MONITORING UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirotech Consultants Inc. Tele. # 305-8200

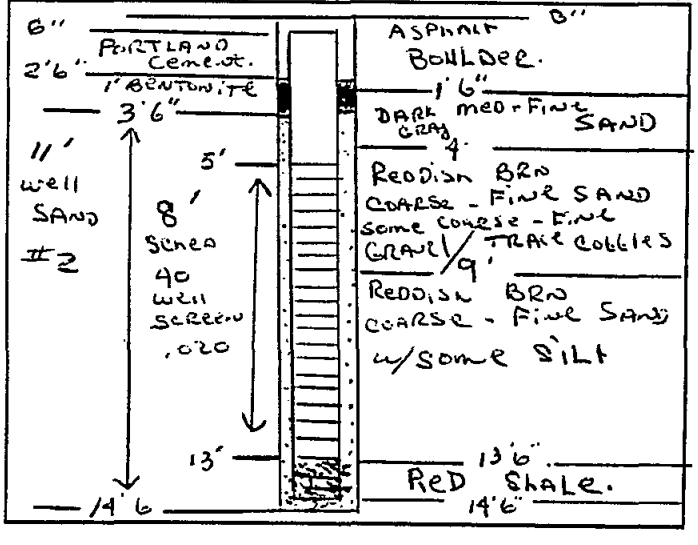
WELL CONSTRUCTION

Total depth drilled 14.5 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	5'	4"	Schedule 40 PVC
Outer Casing (Not Protective Casing)	–	–	–	–
Screen (Note slot size)	5	13	4"	Schedule 40 PVC screen .020
Tail Piece	–	–	–	–
Gravel Pack	3'6"	14'6"	–	#2 well sand
Annular Seal/Grout	6"	3'6"		Bentonite Pellets Portland Cement
Method of Grouting	grout pump			

Static water level after drilling 9 ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development electric pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity – gpm
Pump type: – –
Drilling Method Air Rotary
Drilling Fluid – Type of Rig IR TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1330
Name of Drilling Company SALOMONE BROS. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Nemetz D-1357 Date

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 23595
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner BERGEN PASSAIC TRANSPORT
Address 53 CENTRAL AVENUE
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Bergen Municipality ROCHELLE PARK T Lot No. 1 Block No. 23
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1 / 25 / 91
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Envirotech Consultants, Inc. Tele. # 305-8200

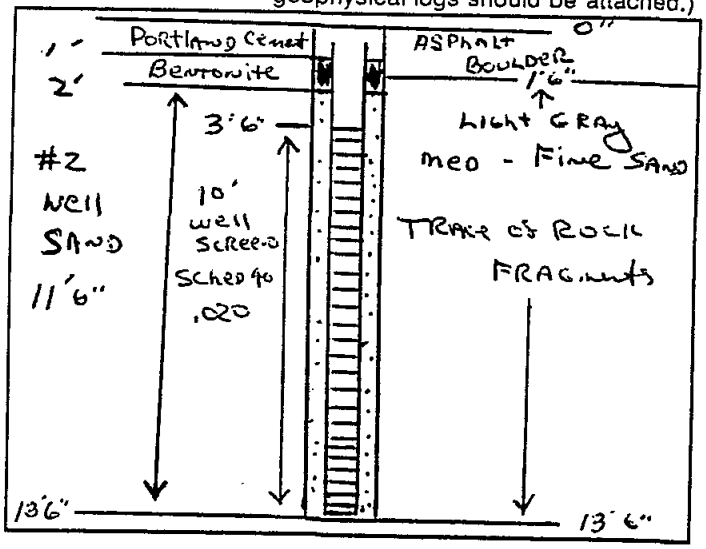
WELL CONSTRUCTION

Total depth drilled 13'6" ft.
Well finished to 13'6" ft.
Borehole diameter:
Top 8" in.
Bottom 8" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	3'6"	4"	Schedule 40 PVC
Outer Casing (Not Protective Casing)	–	–	–	–
Screen (Note slot size)	3'6"	13'6"	4"	Schedule 40 PVC screen .020
Tail Piece	–	–	–	–
Gravel Pack	2'	13'6"		#2 well sand
Annular Seal/Grout	6"	2'		1' Bentonite 6" Portland Cement
Method of Grouting	Place 1' bentonite pellets over well sand & place 6" portland cement to complete grouting.			

Static water level after drilling 8' ft.
Water level was measured using water tape
Well was developed for 1 hours at 5 gpm
Method of development electric pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity – gpm
Pump type: –
Drilling Method Air Rotary
Drilling Fluid – Type of Rig IR TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1330
Name of Drilling Company SALOMONE BROS. INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Nemetz Date

VR-138 M
)0

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62112

Atlas Sheet Coordinates 26 : 03 : 537

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP
ddress 151 W PASSAIC ST
ty ROCHELLE PARK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
ounty BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
ddress LOTZ LANE

YPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
egulatory Program Requiring Well Case I.D.#

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

otal depth drilled 15' ft.
ell finished to 15' ft.

orehole diameter:
Top 8" in.
Bottom 8" in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick p) above land surface ft.

a el protective casing installed?
☐ Yes ☒ No

atic water level after drilling 8' ft.

ater level was measured using Tape

ell was developed for 1/2 hours
1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

lethod of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity gpm

ump type:

rilling Fluid Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Dri e Signature John Vogt

Registration No. J1544 Date 8/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

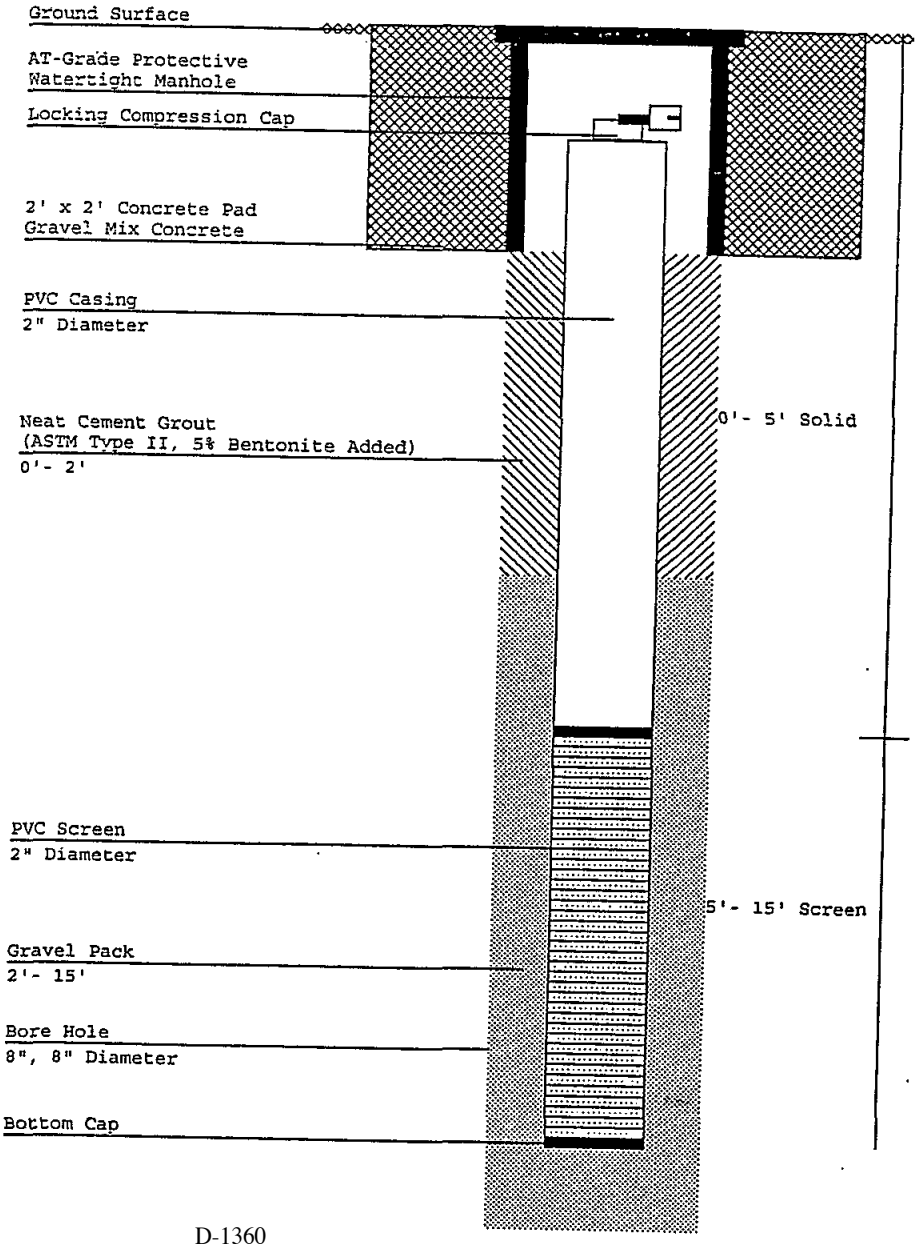
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1005
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

LL: MW3 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62112
COORD #2: PERMIT #2:
TE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
NER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

NER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
AMETER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
NGTH: 5' LENGTH: DIAMETER: 2" HOLE DIA: 8", 8"
LENGTH 1: 10' TOTAL DEPTH: 15'
T WELL: 15' GAL PER MIN: 1/2 LENGTH 2:
AVEL PK SZ: Morie #2 STAT H2O LVL: 8' SLOT SIZE: .020
ILLER: John Vogt DEVELOPMENT METHOD: pump CASING SEAL: Portland
RFACE COMPLETION: M DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 15'		Red sand silt some gravel.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

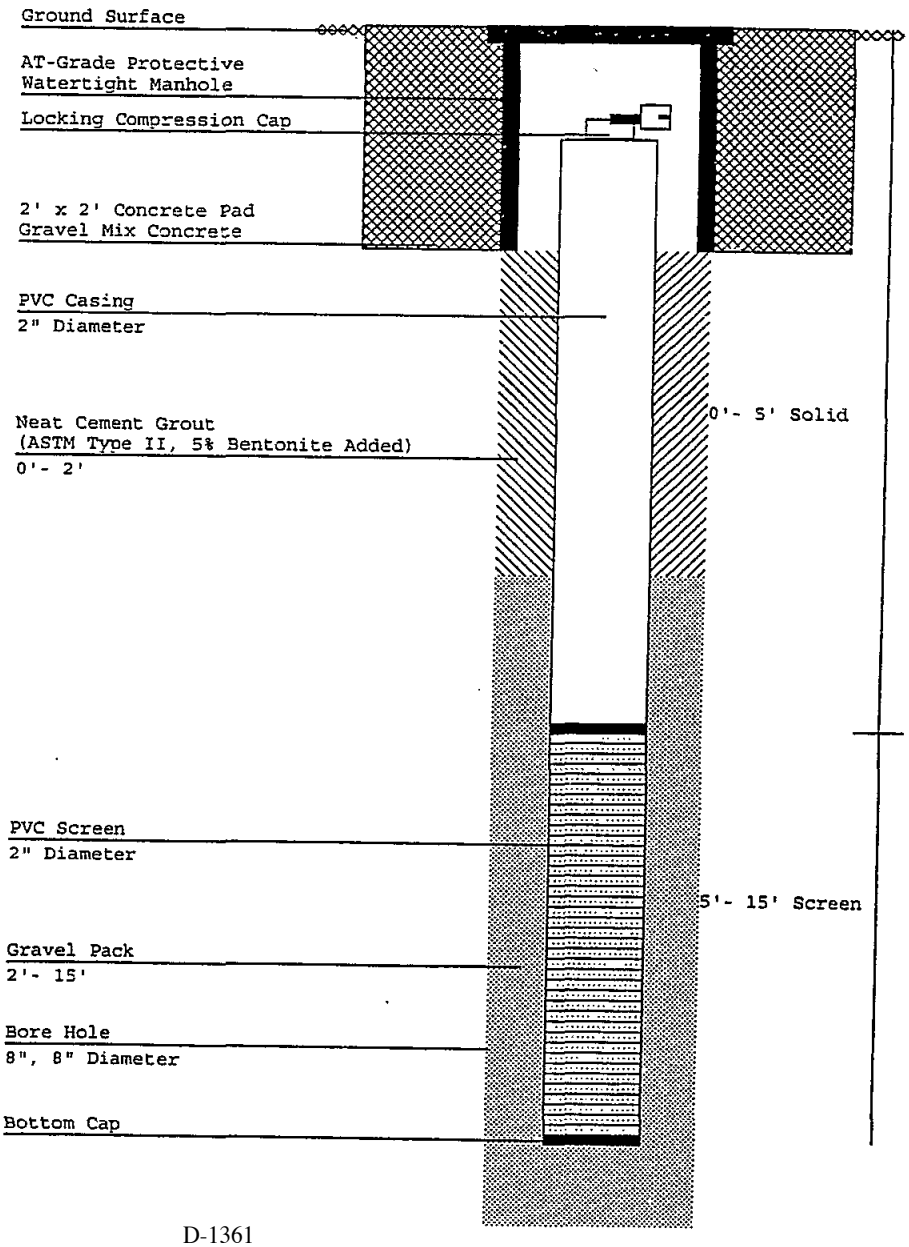
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

LL: MW2 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62111
COORD #2: PERMIT #2: COUNTY: Bergen
TE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ XSTREET:
NER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ USE: Monitor

NER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
AMETER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
NGTH: 5' LENGTH: DIAMETER: 2" HOLE DIA: 8", 8"
LENGTH 1: 10' TOTAL DEPTH: 15'
T WELL: 15' GAL PER MIN: 1/2 LENGTH 2:
AVEL PK SZ: Morie #2 STAT H2O LVL: 8' SLOT SIZE: .020
ILLER: John Vogt DEVELOPMENT METHOD: pump CASING SEAL: Portland
RFACE COMPLETION: M DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	MARKS / SOILS IDENTIFICATION
- 15'		Red sand silt some gravel.



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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62111

Atlas Sheet Coordinates 26 : 03 : 537

WATER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	~~94~~ lbs. ~~5~~ lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller Signature John Vogt

Registration No. J1544 Date 8/6/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __° __' __.__" LONGITUDE: __° __' __.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
VIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.co
email: info@summitdrilling.co

WELL LOG

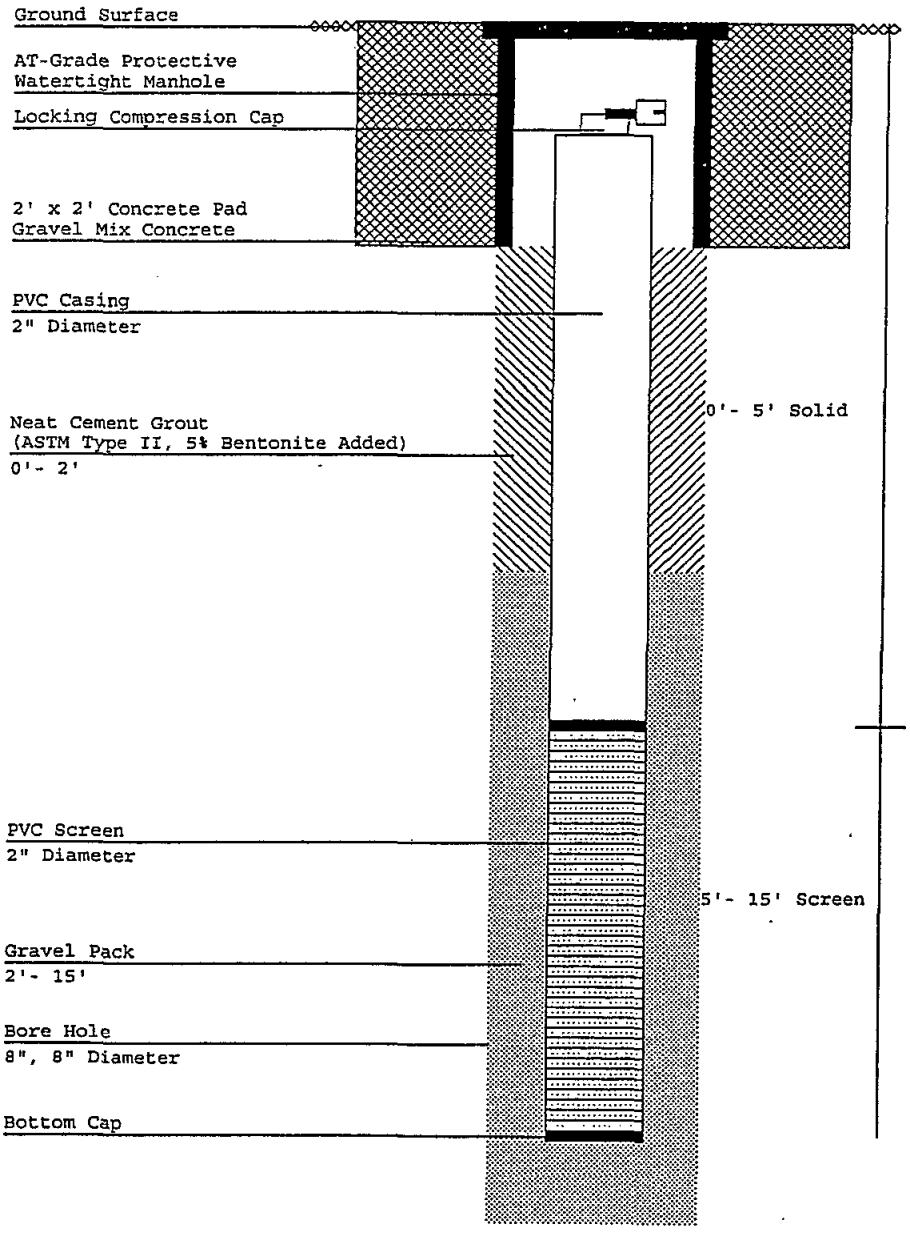
L: MW1 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62110
COORD #2: PERMIT #2: COUNTY: Bergen
E: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ XSTREET:
ER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ USE: Monitor

ER CASING: PVC OUTER CASING: SCREEN TYPE 1: PVC DRILLING METHOD: Auger
METER: 2" DIAMETER: SCREEN TYPE 2: SAMPLING METHOD:
GTH: 5' LENGTH: DIAMETER: 2" HOLE DIA: 8", 8"
LENGTH 1: 10' TOTAL DEPTH: 15'
WELL: 15' GAL PER MIN: 1/2 LENGTH 2:
VEL PK SZ: Morie #2 STAT H2O LVL: 8' SLOT SIZE: .020
LLER: John Vogt DEVELOPMENT METHOD: pump CASING SEAL: Portland
FACE COMPLETION: M DEVELOPMENT TIME: 1/2 OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

ARKS / SOILS IDENTIFICATION

15' Red sand silt some gravel.



WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62110

Atlas Sheet Coordinates 26 : 03 : 537

WNER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was a protective casing installed? ☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1/2 gpm

Method of development pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Well Driller (Print) John Vogt

Driller Signature John Vogt

Registration No. 51544 Date 8/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61785

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner BROWN, ELLIOT DR.
Address 181 LONGHILL ROAD
City LITTLE FALLS State NJ Zip Code 07424

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County ESSEX Municipality NORTH CALDWELL Lot No. 5 Block No. 601
Address 8 WHITE OAK DRIVE

DATE WELL STARTED 9/4/01
DATE WELL COMPLETED 9/5/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.# 00-07-13-1108-00

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

Total depth drilled 38.5 ft.
Well finished to 38.5 ft.

Borehole diameter:
Top 10 in.
Bottom 2 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 11.5 ft.

Water level was measured using tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	8.5	6	Steel Casing	
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8.5	38.5	2	Open Hole (Basalt)	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	8.5		~~Neat Cement~~ Bentonite	234 lbs. ____ lbs.

Grouting Method Tremie Grout (Portland)
Drilling Method Hollow Stem Augers, NX Core

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig CME-750

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) (None) D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company CRAIG TEST BORING CO INC.
Well Driller (Print) TOM WARD
Driller's Signature Tom Ward
Registration No. J-1334 Date 9/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-8.5' Fill: cmf Sand, sm of gravel, sm silt / BN, moist
8.5-18.5' Basalt - grey, hard rock, highly-moderately weathered, closely-moderately spaced joints, vertical & horizontal
18.5-38.5' Basalt - grey, hard rock, slightly weathered, closely spaced joints, verhal & horizontal

* See Attachments To Permit/Approved Prior to Drilling *

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62112

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 8/6/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.__" LONGITUDE: ___° ___' ___.__"

D-1367

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT® DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6618
FAX: (732) 356-
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW2 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62111
COORD #2: PERMIT #2:
SITE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
OWNER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Vogt
SURFACE COMPLETION: M

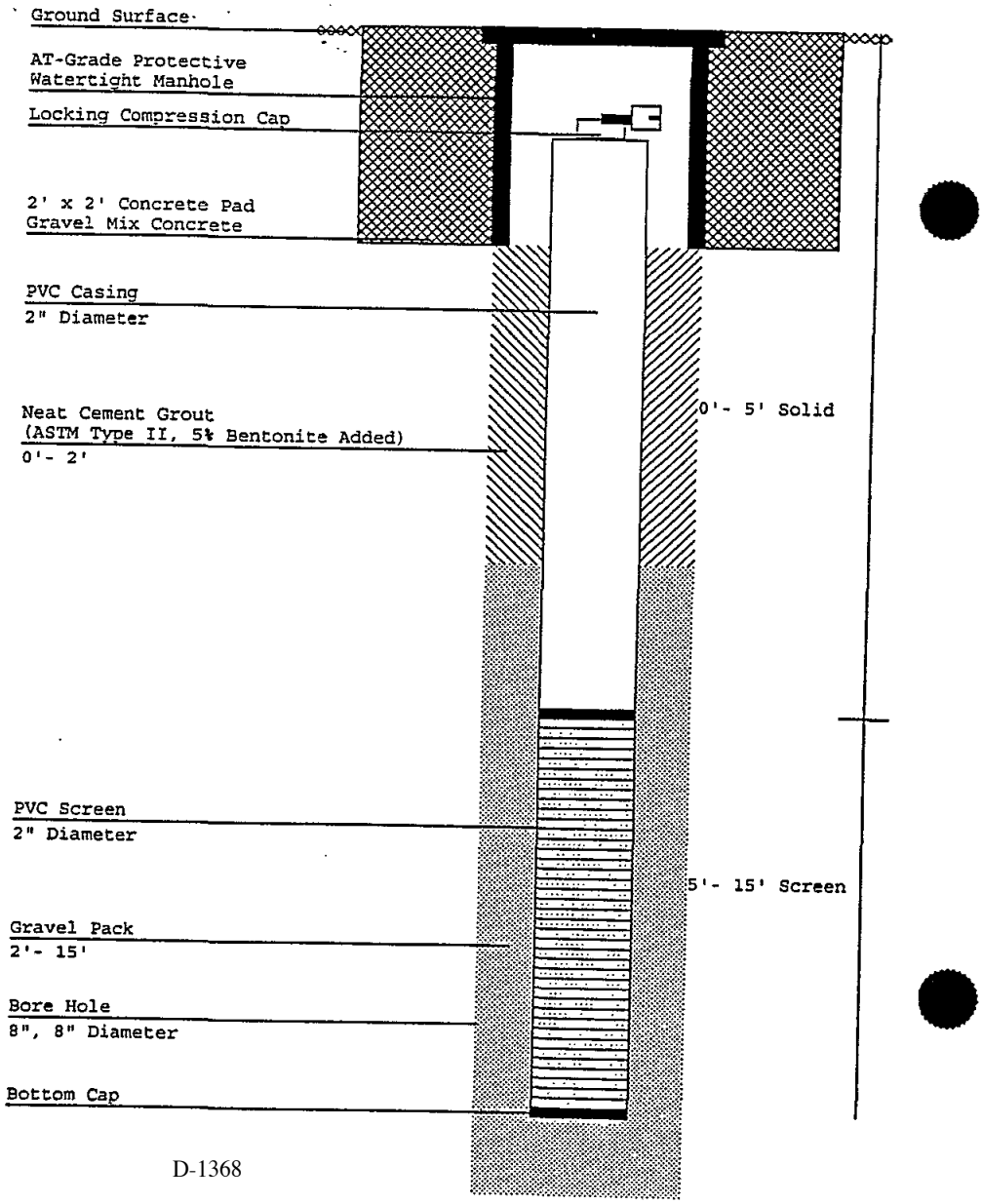
GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 15' Red sand silt some gravel.



DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62111

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW2
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7 / 30 / 01
DATE WELL COMPLETED 7 / 30 / 01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement Bentonite	94 lbs. 5 lbs.

Grouting Method gravity
Drilling Method Auger

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. J1544 Date 8 / 6 /01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' . " LONGITUDE: ° ' . "

D-1369

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling
email: info@summitdrilling.

WELL LOG

WELL: MW1 DATE DRILLED: 07/30/2001 COORD #1: 26.03.537 PERMIT #1: 26-62110
COORD #2: PERMIT #2:
SITE: Rochelle Park DPW Garage, Lotz Lane, , Rochelle Park, NJ COUNTY: Bergen
OWNER: Rochelle Park Township Pa, 151 W.Passaic Street, , Rochelle PArk, NJ XSTREET:
USE: Monitor

INNER CASING: PVC
DIAMETER: 2"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 2"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Vogt
SURFACE COMPLETION: M

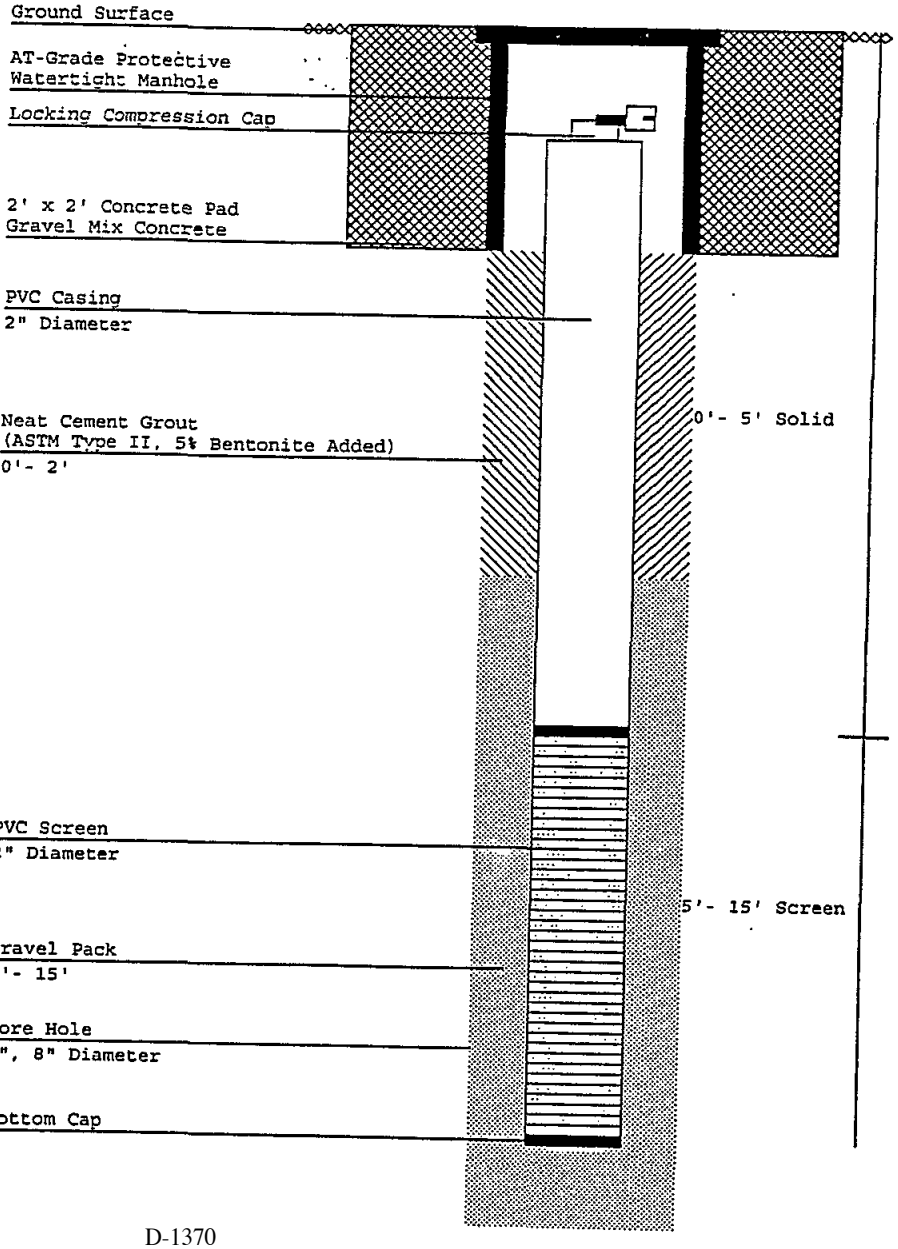
GAL PER MIN: 1/2
STAT H2O LVL: 8'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 15' Red sand silt some gravel.



DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 62110

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner ROCHELLE PARK TWP
Address 151 W PASSAIC ST
City ROCHELLE PARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County BERGEN Municipality ROCHELLE PARK T Lot No. 6 Block No. 64
Address LOTZ LANE

TYPE OF WELL (as per Well Permit Categories) MONITORING
DATE WELL STARTED 7/30/01
DATE WELL COMPLETED 7/30/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Accutech Environmental Services Inc. Tele. #

WELL CONSTRUCTION

Total depth drilled 15' ft.
Well finished to 15' ft.

Borehole diameter:
Top 8" in.
Bottom 8" in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 8' ft.

Water level was measured using Tape

Well was developed for 1/2 hours
at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	5'	15'	2"	PVC	.020 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2'	15'		Morie #2	
Grout	0'	2'		Neat Cement	~~64~~ lbs.
				Bentonite	~~5~~ lbs.

Grouting Method gravity
Drilling Method Auger

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUMMIT WELL DRILLING CO INC

Driller (Print) John Vogt

Driller's Signature John Vogt

Registration No. 1544 Date 8/6/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

D-1371

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61785

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner BROWN, ELLIOT DR.
Address 181 LONGHILL ROAD
City LITTLE FALLS State NJ Zip Code 07424

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County ESSEX Municipality NORTH CALDWELL Lot No. 5 Block No. 601
Address 8 WHITE OAK DRIVE

DATE WELL STARTED 9/4/01
DATE WELL COMPLETED 9/5/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.# 00-07-13-1108-00

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

Total depth drilled 38.5 ft.
Well finished to 38.5 ft.

Borehole diameter:
Top 10 in.
Bottom 2 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 11.5 ft.

Water level was measured using tape

Well was developed for N/A hours
at N/A gpm

Method of development N/A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	8.5	6	Steel Casing	
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8.5	38.5	2	Open Hole (Basalt)	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	8.5		~~Neat Cement~~ Bentonite	234 lbs. ___ lbs.

Grouting Method Tremie Grout (Portland)
Drilling Method Hollow Stem Augers, NX Core

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig CME-750

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) (None) D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company CRAIG TEST BORING CO. INC.

Well Driller (Print) TOM WARD

Driller's Signature Tom Ward

Registration No. J-1334 Date 9/25/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-8.5' Fill: cmf Sand, sm cf gravel, sm silt / BN, moist
8.5-18.5' Basalt - grey, hard rock, highly-moderately weathered, closely-moderately spaced joints, vertical & horizontal
18.5-38.5' Basalt - grey, hard rock, slightly weathered / closely spaced joints, vertical & horizontal

* See Attachments To Permit/Approved Prior to Drilling *

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.__" LONGITUDE: ___° ___' ___.__"

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Handex

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751

BORING LOG

Well No. W-8 Permit No. 26-17320 Coord. 26.03.6.45

Date Drilled 07/12/89 County Bergen Use Monitoring

Location Shell Service Station, Essex & Polify Road, Hackensack, New Jersey

Owner Shell Oil Company Address 100 Executive Drive, West Orange, NJ

Drilling Method Air - Rotary Sampling Method Split Spoon / Cuttings

Hole Diameter 8" Total Depth 17'

CASING: Type PVC Schedule 40 Diameter 4" Length 2'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 15'

Gravel Pack Size #1 Morie Casing Seal concrete Static Water Level 10.86'

DEPTH - BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0 - 1' ASPHALT 1' - 12'6" Grey coarse SAND and fine Gravel fill
5			WELL	
10				
			SCREEN	12'6" - 14' Red brown very fine SAND and SILT (weathered rock)
15				14' Red SHALE, little (-) Sand (bed rock)
20				

D-1373

Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
PHONE (201) 722-4266 FAX (201) 356-1009

BORING LOG

Well No. Replacement Coordinate No. 26.03.6.51 Permit No. 26-15614-8

Date Drilled 2/16/89 County Bergen Use Monitor

Location Acme Quality Products, 205 S. Newman St., Hackensack, NJ 07601

Owner Same

Drilling Method 6" hollow stem Sampling Method no samples

Hole Diameter 10" Total Depth 8'

Casing: Type PVC Diameter 4" Length 3'

Screen: Type PVC Slot .010 Diameter 4" Length 5'

Gravel Pack Size Morie # 00 Casing Seal Pellets & grout

Static Water Level 3 - 4' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design			Identification of Soils / Remarks	
				0' - 1'	CONCRETE	0' - 1'	Asphalt, roadstone
				1' - 2'	PELLETS	1' - 8'	Red & br. & gray clay silt, tr. f/ sand
				2' - 8'	GRAVEL		
10'							
20'							
30'							
40'							

WELREC 085 2125

Handex

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751

BORING LOG

Well No. W-1 Permit No. 2616424-8 Coordinate No. 26.03.5.69

Date Drilled 3/28/89 County Bergen Use monitoring

Location Block 114A, Lot 3 (Behind 445 Route 17 South), Hackensack, New Jersey

Owner Amoco Oil Company Address P.O. Box 87707, Chicago, Illinois, 60680

Drilling Method augers Sampling Method split-spoon

Hole Diameter 8" Total Depth 12'6"

CASING: Type PVC Schedule 40 Diameter 4" Length 2'6"

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 10'

Gravel Pack Size #1 Casing Seal cement/bentonite Static Water Level 6.56'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-3' Red/brown and black medium to fine SAND, little (-) silt, trace (-) clay
5'			WELL SCREEN	3'-5' Red/brown medium to fine SAND, little (-) silt, trace (+) clay
				5'-7' Red/brown coarse to fine SAND, some (+) silt, trace (+) clay
	S-1 5'-7'	23.37.43.50		7'-12'6" Red/brown coarse to medium SAND, some (+) silt, little (-) clay, some (-) boulders and fine gravel
10'				
				NOTE: 11'6" - some (+) boulders and fine gravel
15'				

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-426(
Toll Free: (800) 242-664(
FAX: (732) 356-100(
http://www.summitdrill[redacted]on
email: info@summitdrill[redacted]com

WELL LOG

WELL: MW16 DATE DRILLED: 06/30/2000 COORD #1: 26.03.567 PERMIT #1: 26-57858
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ
OWNER: N.J.D.O.T., 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625

COUNTY: Bergan
XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 6'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Air Rotary
SAMPLING METHOD:
HOLE DIA: 8", 8"
TOTAL DEPTH: 16'

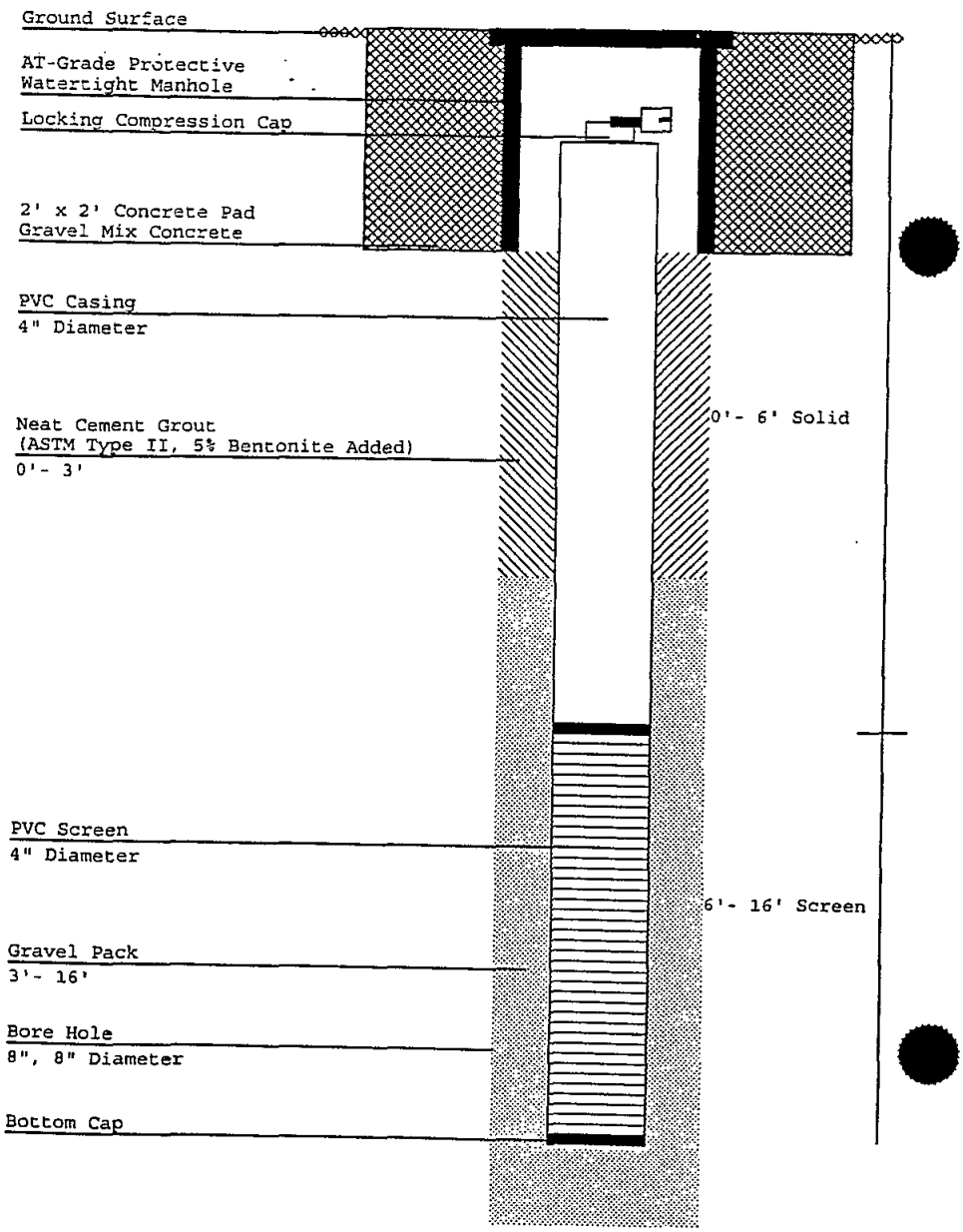
SET WELL: 16'
GRAVEL PK SZ: Morie #1
DRILLER: Jim Burton
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 11'

DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1/2 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
2'- 16'		Red-brown f/m silty sand some gravel.



VR-138 M
)0

New Jersey Department of Environmental Protection
Bureau of Water Allocation
MONITORING WELL RECORD

26 60521

Well Permit No. 26 03 651

WNER IDENTIFICATION - Owner BERGEN, COUNTY OF Atlas Sheet Coordinates : :
ddress 21 MAIN ST./COURT PLAZA SOUTH
ty HACKENSACK State NJ Zip Code 07601

ELL LOCATION - If not the same as owner please give address. Owner's Well No. B-8
ounty BERGEN Municipality ~~HACKENSACK CITY~~ Lot No. ~~N/A~~ Block No. ~~N/A~~
ddress COURT ST.

DATE WELL STARTED 3/29/01
DATE WELL COMPLETED 3/30/01

YPE OF WELL (as per Well Permit Categories) BORING
egulatory Program Requiring Well N/A Case I.D.# N/A

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Lichtenstein Tele. # 1-201-368-0400

WELL CONSTRUCTION

otal depth drilled 138 ft.
ell finished to N/A ft.

orehole diameter:
Top 4 in.
Bottom 4 in.

ell was finished: ☐ above grade
☒ flush mounted

finished above grade, casing height (stick up) ~~e~~ land surface N/A ft.

as steel protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 6 ft.

ater level was measured using Tape

ell was developed for N/A hours
N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

ump capacity N/A gpm

ump type: N/A

Drilling Fluid Bentonite Type of Rig CME55

Health and Safety Plan submitted? ☐ Yes ☒ No

evel of Protection used on site (circle one) (None) D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	___ lbs. ___ lbs.

Grouting Method Tremi with pump
Drilling Method mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 15' fill wood/Sand/gravel
15 to 30' DK grey Sd/gravel
30 to 128' Grey Sty Clay
128' to 138' Red Brn Silt/Sand/gravel

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

rilling Company JERSEY BORING

ell ~~e~~r (Print) Frank Canozza

riller's Signature

egistration No. B0270 Date 4/7/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___ ° ___ ' ___.__ " LONGITUDE: ___ ° ___ ' ___.__ "

D-1377

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Central Jersey Industrial Park
Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009

WELL LOG

WELL: MW10 DATE DRILLED: 07/06/1998 COORD #1: 26.03.566 PERMIT #1: 26-51006
COORD #2: PERMIT #2:
SITE: NJDOT Lodi Maintenance, Facility, Gregg Street, Lodi, NJ COUNTY: Bergan
OWNER: N.J.D.O.T., 1035 Parkway Avenue, CN 600, Trenton, NJ 08625 XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 8'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 10'
LENGTH 2:
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 10"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #2
DRILLER: Matthew Raab
SURFACE COMPLETION: M

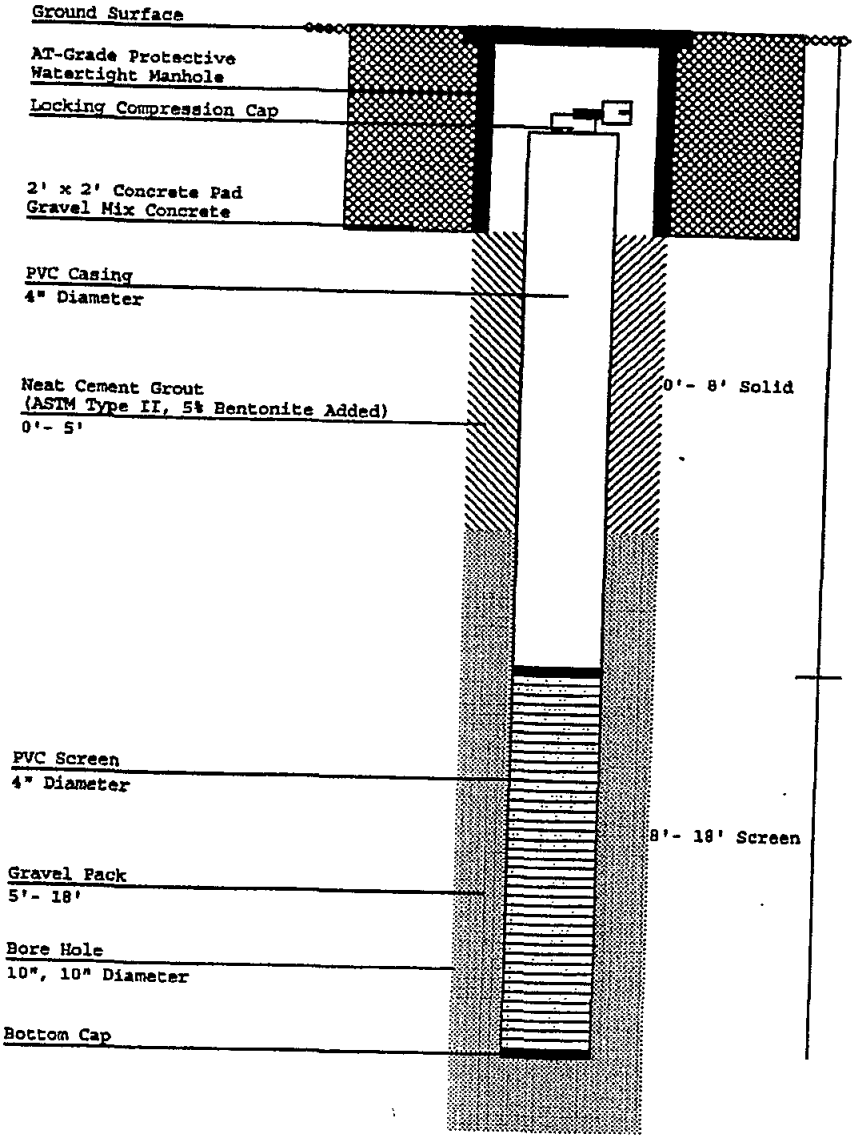
GAL PER MIN: 1
STAT H2O LVL: 11'
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
12' - 14'	1-1-6-8
14' - 16'	6-12-15-18

REMARKS / SOILS IDENTIFICATION

0'- 1' Asphalt & stone.
1'- 3' Dark brown silt & sand fine gravel.
3'- 18' Red-brown clayey silt some f/m sand trace f/m gravel with shale fragments.



DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 20965
Atlas Sheet [redacted] 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW1
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 416 LANZA AVE SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/30/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.3 ft.
Well finished to 10.3 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.3'	10.3'	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.3'	10.3'		
Annular Seal/Grout	0	5.3		
Method of Grouting	TREMIE			

Static water level after drilling 4.6' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

08 01 92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/92

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

BORING LOG

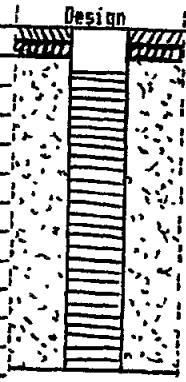
Summit Drilling Company, Inc.

"SUPERIOR QUALITY, VALUE & PERFORMANCE"
489 UNION AVENUE BRIDGEWATER, NJ 08807
1-800-242-6648 (201) 722-4266 FAX (201) 356-1009

Well No. MW - 1 Coordinate No. 26.03.5.66 Permit No. 26-18944-5
Date Drilled 02/23/90 County Bergen Use Monitor
Location Bergen Cable Technologies, 170 Gregg St., Lodi, NJ 07644
Owner Same
Drilling Method Air rotary Sampling Method none
Hole Diameter 8" Total Depth 11.5'
Casing: Type PVC Diameter 4" Length 1.5'
Screen: Type PVC Slot .020 Diameter 4" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets, grout
Static Water Level 1.5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler

Well Design



10'
20'
30'
40'

Identification of Soils / Remarks

0' - 2' Gravel driveway, fill
2' - 11.5' Red-br. m/f sand, tr. silt

Form DWR- 138
11/80

26-03-619

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-5039

APPLICATION NO. _____

COUNTY Bergen

WELL SEALED 4/4/89

WELL RECORD

1. OWNER ~~[illegible]~~ Players Club ADDRESS 40 Polifly Road

Owner's Well No. One SURFACE ELEVATION 40 Feet (Above mean sea level)

2. LOCATION Hackensack Bergen Co N.J.

3. DATE COMPLETED July 20 1981 DRILLER Rinbrand Well Drilling Co Inc

4. DIAMETER: Top 6 inches Bottom 6 inches TOTAL DEPTH 305 Feet

5. CASING: Type Steel Diameter 6 Inches Length 85 Feet

6. SCREEN: Type none Size of Opening ____ Diameter ____ Inches Length ____ Feet

Range in Depth { Top ____ Feet / Bottom ____ Feet Geologic Formation ____

Tail Piece: Diameter ____ Inches Length ____ Feet

7. WELL FLOWS NATURALLY no Gallons per minute at ____ Feet above surface

Water rises to ____ Feet above surface

8. RECORD OF TEST: Date July 20 1981 Yield 30 Gallons per minute

Static water level before pumping 36' Feet below surface

Pumping level 180 feet below surface after 6 hours pumping

Drawdown 144 Feet Specific Capacity ____ Gals. per min. per ft. of drawdown

How pumped Submersible How measured orific

Observed effect on nearby wells none

9. PERMANENT PUMPING EQUIPMENT:

Type Submersible Mfrs. Name Deming

Capacity 30 G.P.M. How Driven electric H.P. 5 R.P.M. 3500

Depth of Pump in well 200 Feet Depth of Footpiece in well none Feet

Depth of Air Line in well no Feet Type of Meter on Pump no Size ____ Inches

10. USED FOR Domestic AMOUNT { Average ____ Gallons Daily / Maximum ____ Gallons Daily

11. QUALITY OF WATER ____ Sample: Yes x No ____

Taste no Odor no Color clear Temp. 56 °F.

12. LOG 30 Clay, Red Shale Are samples available? no

(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)

13. SOURCE OF DATA Rinbrand Well Drilling Co Inc

DATA OBTAINED BY Adam F Rinbrand Date July 22 1981

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 2004

26.03.64B

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751 (201) 536-8500

BORING LOG

Well No. 1 Application No. _____ Permit No. 26-6916
Date Drilled July 23, 1984 County Bergen Use monitor
Location Essex and Summit Street, Hackensack, New Jersey
Owner Amoco Oil Company Address Wayne, Pennsylvania
Drilling Method air rotary Sampling Method cuttings
Hole Diameter 7-7/8" Total Depth 10'4"

Casing:
Type PVC Schedule 40 Diameter 4" Length 1'6"

Screen:
Type PVC Schedule 40 Slot 20 Diameter 4" Length 8'
Gravel Pack Size #1 Casing Seal bentonite
Static Water Level 5' Geologic Formation Trb

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-1'2" FILL--asphalt, roadstone, etc.
5'			Well Screen	1'2"-10'4" Bedrock--Red SHALE
10'				NOTE: Gasoline odor at 3'6"
15'				

DEC 11 1984

Form 07 11/24/78

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Permit No. 26-4762

Application No. _____

County _____

26-03-645

WELL RECORD

1. OWNER Kings Custom Molding Inc. ADDRESS 194 Daniel St., Hackensack, N.J.

Owner's Well No. 1 SURFACE ELEVATION 52 Feet (Above mean sea level)

2. LOCATION 194 Daniel St., Hackensack, N.J.

3. DATE COMPLETED March 1, 1979 DRILLER Ernest S. Richardson

4. DIAMETER: top 6 inches Bottom 6 inches TOTAL DEPTH 186 Feet

5. CASING: Type steel Diameter 6 inches Length 43 Feet

6. SCREEN: Type ----- Size of Opening ___ Diameter _____ inches Length _____ Feet

Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____

Tail piece: Diameter _____ inches Length _____ Feet

7. WELL FLOWS NATURALLY ===== Gallons per Minute at _____ Feet above surface

Water rises to _____ Feet above surface

8. RECORD OF TEST: Date February 26, 1979 Yield 50 Gallons per minute

Static water level before pumping 28 Feet below surface

Pumping level 130 feet below surface after 2 hours pumping

Drawdown 80 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown

How Pumped _____ How measured _____

Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

Type submersible Mfrs. Name Red Jacket

Capacity 45 G.P.M. How Driven elec. H.P. 5 R.P.M. 3450

Depth of Pump in well 150 Feet Depth of Footpiece in well ----- Feet

Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR cooling AMOUNT { Average 18,000* Gallons Daily / Maximum 30,000 Gallons Daily

11. QUALITY OF WATER Used Sample: Yes ___ No. ___

Taste none Odor none Color clear Temp. 54 °F

12. LOG _____ Are samples available? _____

(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

13. SOURCE OF DATA _____

14. DATA OBTAINED BY Ernest S. Richardson Date February 26, 1979

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

WELREC 085 2110

26-03-645

0'------43'------Red hardpan stony
43'------186'------Red shale with some very hard streaks 26-4762

RECEIVED
APR 16 11 36 AM '79
GEOLOGY
AND
PHOTOGRAPHY

FORM 87

26.03.559 ☐

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 56-2891
Application No. _____
County _____

WELL RECORD

1. OWNER Lake Developers ADDRESS 101 N. Beverwyck Rd., Lake Hiawatha N.J
Owner's Well No. _____ SURFACE ELEVATION 170 Feet (Above mean sea level)

2. LOCATION Route 46, Saddle Brook, N. J.

3. DATE COMPLETED Dec. 3, 1963 DRILLER Soren Nelson Jr.

4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 81 Feet

5. CASING: Type 19.45 # Drive Diameter 6 Inches Length 44'6" Feet

6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet
Tail piece: Diameter _____ Inches Length _____ Feet

Geologic Formation Sand & gravel (Qsd) to 15', clay to 31', water bearing fine sand to 37', hardpan to rock at 41', sand stone to 62', shale to 78', sand stone to bottom.

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date Dec. 3, 1963 Yield 30 Gallons per minute
Static water level before pumping 13 Feet below surface
Pumping level 25 feet below surface after 3 hours pumping
Drawdown 25 Feet Specific Capacity 30 Gals. per min. per ft. of drawdown
How Pumped Suction pump How measured 5 gal. pail and watch.
Observed effect on nearby wells No

9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR Hamburger Stand AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER Sample to be taken. Sample: Yes ___ No. ___
Taste good Odor none Color clear Temp. 55 °F

12. LOG _____ Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

SOURCE OF DATA Well site

14. DATA OBTAINED BY Pine Brook Well Drillers Date Dec. 3, 1963.

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

18' fill
22' of 8" casing
red sandstone with clay
300' deep

26-03-563
26-2171

Form 87-5M

26-03-648

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 26-1030
Application No. _____
County _____

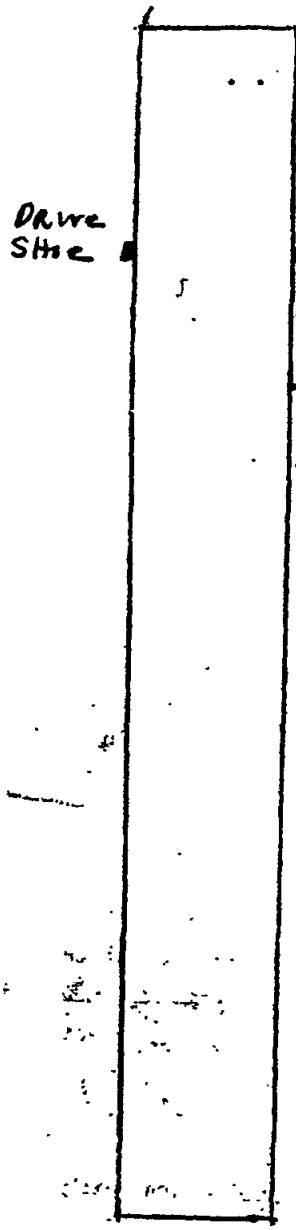
1. OWNER Lang Design Service ADDRESS 300 South Bummit Ave.
   Owner's Well No. One SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hackensack N.J.
3. DATE COMPLETED Sept 18 1954 DRILLER Adam F Rinbrand
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH 150 Feet
5. CASING: Type Steel Diameter 6 Inches Length 13 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet Bottom _____ Feet Geologic Formation _____
   Tail piece. Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Sept 17 1954 Yield 10 Gallons per minute
   Static water level before pumping 30 Feet below surface
   Pumping level 35 feet below surface after 2 hours pumping
   Drawdown 5 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped bailor How measured Bbl
   Observed effect on nearby wells no
9. PERMANENT PUMPING EQUIPMENT:
   Type Jet Capacity 10 Gallons per minute
   How Driven electric Horse Power ½ R.P.M. 3500
   Depth of pump in well _____ Feet Depth of Foot piece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste no Odor ho Color clear Temperature 54 °F
12. LOG Red hard pan red shale Are samples available? no
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA Rinbrand Well Drilling Co Inc
14. DATA OBTAINED BY Adam F Rinbrand DATE Sept 18 1954

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 2114

Depth of Well 105'
Drive Casing 26'
Dia. 6"

96-03-562
26-825



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New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 -53935

Atlas Sheet Coordinates 26 : 03 537

WNER IDENTIFICATION - Owner NJ DEPT OF TRANSPORATION
ddress PARKWAY AVE
ity TRENTON State NJ Zip Code 08625

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. Site NW-15
ounty BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
ddress I-80

DATE WELL STARTED 6/11/99
YPE OF WELL (as per Well Permit Categories) BORING DATE WELL COMPLETED 6/11/99
egulatory Program Requiring Well N/A Case I.D.# N/A

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 1-609-734-7000

WELL CONSTRUCTION

otal depth drilled 31.5 ft.
/ell finished to N/A ft.

orehole diameter:
Top 4 in.
Bottom 4 in.

/ell was finished: ☐ above grade
☐ flush mounted

finished above grade, casing height (stick
ip) above land surface N/A ft.

/a el protective casing installed?
☐ Yes ☒ No

tatic water level after drilling 4 ft.

/ater level was measured using Tape

/ell was developed for N/A hours
: N/A gpm

/ethod of development N/A

Vas permanent pumping equipment installed? ☐ Yes ☒ No

'ump capacity N/A gpm

'ump type: N/A

Drilling Fluid Bentonite Type of Rig

Health and Safety Plan submitted? ☐ Yes ☒ No

.evel of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	___ lbs. ___ lbs.

Grouting Method Tremi with pump
Drilling Method Mud Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 to 6" Asphalt
6" to 5' Blk m/f Gravel
5' to 31.5' Brn m/f SD gravel & Silt

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JERSEY BORING
Well Driller (Print) George Thornhill
Dri Signature
Registration No. 13068 Date 7/3/99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

OWR-138 M
3/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 61785

Atlas Sheet Coordinates 26 : 03 : 537

OWNER IDENTIFICATION - Owner BROWN, ELLIOT DR.
Address 181 LONGHILL ROAD
City LITTLE FALLS State NJ Zip Code 07424

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW1
County ESSEX Municipality NORTH CALDWELL Lot No. 5 Block No. 601
Address 8 WHITE OAK DRIVE

DATE WELL STARTED 9/4/01
DATE WELL COMPLETED 9/5/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.# 00-07-13-1108-00

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION

Total depth drilled 38.5 ft.
Well finished to 38.5 ft.

Borehole diameter:
Top 10 in.
Bottom 2 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface N/A ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 11.5 ft.

Water level was measured using tape

Well was developed for N/A hours at N/A gpm

Method of development N/A

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity N/A gpm

Pump type: N/A

Drilling Fluid N/A Type of Rig CME-750

Health and Safety Plan submitted? ☐ Yes ☒ No

Level of Protection used on site (circle one) (None) D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	8.5	6	Steel Casing	
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	8.5	38.5	2	Open Hole (Basalt)	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	8.5		~~Neat Cement~~ Bentonite	~~234~~ lbs. ____ lbs.

Grouting Method Tremie Grout (PerHand)
Drilling Method Hollow Stem Augers, NX CORE

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0-8.5' Fill: cmf Sand, sm cf gravel, sm silt / BN, moist
8.5-18.5' Basalt - grey, hard rock, highly-moderately weathered, closely-moderately spaced joints, vertical & horizontal
18.5-38.5' Basalt - grey, hard rock, slightly weathered / closely spaced joints, vertical & horizontal

* See Attachments To Permit/Approved Prior To Drilling *

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company CRAIG TEST BORING CO. INC.
Well Driller (Print) TOM WARD
Driller's Signature Tom Ward
Registration No. J-1334 Date 9/25/01

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller D-1390 Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 46181
Atlas Sheet Coordinates 26 : 03 .531

OWNER IDENTIFICATION - Owner N.J. D.O.T.
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW 3-2
County BERGEN Municipality SADDLE BROOK TW Lot No. NA Block No. NA
Address RT. 80 WESTBOUND Date well started 11/20/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 11/20/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 908-565-0112

WELL CONSTRUCTION

Total depth drilled 22 ft.
Well finished to 20 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	20	1.25	sch 40 pvc - 020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	8	22	4	#2 morie
Annular Seal/Grout	0	8	4	Bensed
Method of Grouting	Tremi with Pump			

Static water level after drilling 12 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 21306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 6" Blk Top
6" to 1' Bluestone
1' to 22' Red Brn Silt Tr Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/21/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 45843
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. S1-10
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 10/10/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10/11/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 908-562-2222

WELL CONSTRUCTION

Total depth drilled 51 ft.
Well finished to 50 ft.
Borehole diameter: Top 5 in. Bottom 5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	40	1.25	Sch 40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	40	50	1.25	Sch 40 pvc .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	35	51	5	#2 morie
Annular Seal/Grout	0	35	5	Bentonite Bensal
Method of Grouting	Tremi with pump			

Static water level after drilling 11 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig CME 75
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 51306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Brn f/Sd & Silt Tr Roots
5' to 20' Red Brn f/Sd & Silt Tr gravel
20' to 25' Rd Brn f/Sd & Silt
25' to 31' Rd Silt w/Sd & gravel
31' to 51' Decomposed Red Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature [signature] Date 11/16/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 45841
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW3-11
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ROUTE 80 WESTBOUND Date well started 10/25/96
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 10/25/96
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Gannett Fleming Tele. # 1-908-582-0112

WELL CONSTRUCTION

Total depth drilled 31.5 ft.
Well finished to 30 ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 7' ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig Ackmadt
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J1306
Name of Drilling Company JERSEY BORING

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	25	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	25	30	1.25	Sch 40 PVC .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	23	31.5	4	#2 morie
Annular Seal/Grout	0	23	4	Bee Seal
Method of Grouting	Tremi with Pump			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 1' Concrete
1' to 15' Red Brn Grnd Sand, Silt
15' to 20' Red Brn Sty m/FSD
20 to 25.5' Red Brn Sty m/FSD Tr gravel
25.5' to 31.5' Red Brn Sty m/F SD

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/21/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 45842
Atlas Sheet Coordinates 26 : 03 : 531

OWNER IDENTIFICATION - Owner NJ DOT
Address PARKWAY AVE
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address.
County BERGEN Municipality SADDLE BROOK TW Owner's Well No. S1-2-1
Address ROUTE 80 WESTBOUND Lot No. N/A Block No. N/A
TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well started 10/30/96
Regulatory Program Requiring Well N/A Date well completed 10/31/96
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Garrett Flemming Case I.D. # N/A Tele. # 908-5652012

WELL CONSTRUCTION

Total depth drilled 55 ft.
Well finished to 48' ft.
Borehole diameter: Top 4 in. Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	38	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	38	48	1.25	Sch 40 PVC .020
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	35	55	4	#2 Morie
Annular Seal/Grout	0	35	4	BenSeal
Method of Grouting	Tremi with pump			

Static water level after drilling 17 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig AckerADII
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. J 1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG

(Copies of other geologic logs and/or geophysical logs should be attached.)

0" to 6" Black Top
6" to 31' Brn clfsd Sm mF gravel Little Silt
31' to 36' Brn gry Blk, white mfsd Sm Slt Tr gravel
36' to 40' Lt Brn clay Silt
40' to 45' Rd Brn clfsd Lt Silt
45' to 55' Rd Weathered Sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature George Thornhill Date 12/21/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

DMR

MONITORING WELL RECORD

Well Permit No. 26 - 41618
Atlas Sheet Coordinates 26 : 03 : 532

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-9
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 8/18/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 37 ft.
Well finished to 25 ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: [X] above grade [ ] flush mounted
If finished above grade, casing height (stick up) above land surface 1 ft.
Was steel protective casing installed? [ ] Yes [X] No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	20	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	20	25	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	19	26	4.5	#2 Morie
Annular Seal/Grout	0	19	4.5	Benseal
Method of Grouting	Tremi With Pump			

Note: from 26' to 39' Borehole grouted with Benseal

Static water level after drilling 12.5 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? [ ] Yes [X] No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CMESS
Name of Driller George Thornhill
Health and Safety Plan submitted? [ ] Yes [X] No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Brn f/sd Lt grnd Tr cobbles
5' to 10' Brn Clayey Silt
10' to 25' Brn C/FSd Some grnd W/ Rock Fragments
25' to 37' Rock

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9/9/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0427

RW-5

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41619
Atlas Sheet Coordinates 26 : 03 : 532

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-5
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 9/29/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 29.5 ft.
Well finished to 29 ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	24	1.25	Sch40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	24	29	1.25	Sch40 PVC .020 Slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	23	29.5	4	#2 Morie
Annular Seal/Grout	0	23	4	Cement/Bentonite
Method of Grouting	Tremi with pump			

Static water level after drilling 11.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig Acker AD II
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'to5' Brn f/Sd m/F gravel Tr Cobbles Tr concrete (FILL)
5'to9' Brn c/FSd c/F gravel Tr cobbles
9'to13' DK gray clayey silt & gray c/FSd Tr m/F gravel
13'to15' Brn f/Sd Lt c/F gravel Tr silt
15'to25' Red Brn clayey silt
25'to29'6" Brn c/FSd Sm c/F gravel Tr Rock Frag & Cobbles

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 11/11/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0128

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

BS-16
Draft

MONITORING WELL RECORD

Well Permit No. 26 - 41620
Atlas Sheet Coordinates 26 : 03 : 532

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-16
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 8/21/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 1-609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 10 ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	1.25	Sch40 pvc
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	5	10'	1.25	Sch40 pvc .020slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	3	10	4.5	#2 morie
Annular Seal/Grout	0	3	4.5	Cement/Bentonite
Method of Grouting	Tremi with pump			

Note: Bore hole Sealed with Bentseal from 10' to 15'

Static water level after drilling DRY ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method mud Rotary
Drilling Fluid N/A Type of Rig CMES5
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 21306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 4' (FILL) Brn fl sd Sm s.lt Tr fl grnd Tr wood & concrete
4' to 10' Red Brn Cly Silt Tr fl Sand
10' to 15' Decomp-Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9/16/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151 0425

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 41621
Atlas Sheet Coordinates 26 : 03 : 532

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RW-3 (Blankett)
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ROUTE 80 E.B. LOCAL

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 10/16/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 43 ft.
Well finished to N/A ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling 15.5 ft.
Water level was measured using TAPE
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid Bentonite Type of Rig Acker Hillbilly
Name of Driller Frank Kastreva
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. B0011
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 2' Brn STY f/sd Tr Roots
2' to 13' Brn M/FSD Lt Silt Trgravel Tr Crushed Stone (FILL)
13' to 17' Red Brn M/FSD Lt Silt Tr rock fragments
17' to 36' Gray Brown C/FSD Tr Silt
36' to 41' Brown f/sd Lt Silt
41' to 43' Red Brown f/sd & Silt With Rock Fragments

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 11/7/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

BS-5

DMR

MONITORING WELL RECORD

Well Permit No. 26 - 41617
Atlas Sheet Coordinates 26 : 03 : 532

OWNER IDENTIFICATION - Owner N.J. DOT
Address PARKWAY AVE.
City TRENTON State NJ Zip Code 08625

WELL LOCATION - If not the same as owner please give address. Owner's Well No. BS-5
County BERGEN Municipality SADDLE BROOK TW Lot No. N/A Block No. N/A
Address ~~ROUTE 80 E.B. LOCAL~~

TYPE OF WELL (as per Well Permit Categories) PIEZOMETER Date well completed 8/24/95
Regulatory Program Requiring Well N/A Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Parsons Brinckerhoff Tele. # 609-734-7000

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 4.5 in.
Bottom 4.5 in.
Well was finished: ☒ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface .5 ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	10	1.25	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	N/A	N/A	N/A
Screen (Note slot size)	10	15	1.25	Sch 40 PVC .020 slot
Tail Piece	N/A	N/A	N/A	N/A
Gravel Pack	7	15	4.5	#2 morie
Annular Seal/Grout	0	7	4.5	Bnseal
Method of Grouting	Tremi with pump			

Static water level after drilling 12 ft.
Water level was measured using Tape
Well was developed for N/A hours at N/A gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Mud Rotary
Drilling Fluid N/A Type of Rig CME 55
Name of Driller George Thornhill
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1306
Name of Drilling Company JERSEY BORING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 to 5' org Rd Brn m/f Sd Little f gravel
5 to 8.5' Brn m/f Sd Little Silt
8.5' to 15' Brn m/f Sd m/f gravel Tr Shale Frags

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature George Thornhill Date 9/9/95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

E
LP

Well Permit No. 26 - 39247
Atlas Sheet Coordinates 26 : 03 : 298

OWNER IDENTIFICATION - Owner TURLICK, MARK
Address 20 SUN FIRE AVE.
City CAMP HILL State PA Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 9
County BERGEN Municipality MAYWOOD BORO Lot No. 52 Block No. 107
Address 9 Brook Ave., Maywood, NJ

TYPE OF WELL (as per Well Permit Categories) RECOVERY Date well completed 01 /09 95
Regulatory Program Requiring Well UST Case I.D. # 90-06-15-1693
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) E. S. A. Tele. # (908) 469-8888

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3	4	sch 40 pvc
Outer Casing (Not Protective Casing)	none			
Screen (Note slot size)	3	15	4	.020 slot sch 40 pvc
Tail Piece	none			
Gravel Pack	2	15		#2 well gravel
Annular Seal/Grout	0	2		bentonite/cement
Method of Grouting	gravity placement			

Static water level after drilling 5 ft.
Water level was measured using steel tape
Well was developed for 1 hours at 2 gpm
Method of development centrifugal pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity Pump not installed at this time gpm
Pump type: N/A
Drilling Method hollow stem auger
Drilling Fluid none Type of Rig Diedrich D50
Name of Driller Allen J. Wilson
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C
N.J. License No. ~~XXXX~~ JD1278
Name of Drilling Company WILSON DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' to 5' Fill material
5' to 15' Silty sands
water at 5'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Allen J. Wilson Date 02-27-95

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Form DWR- 138
11/80

26-7526 to 26-7530

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. _____

APPLICATION NO. _____

COUNTY 26.03.296

WELL RECORD

1. OWNER Morton Thiokol, Inc. ADDRESS 355 McLean BLVD. Paterson, N.J. 07504
   Owner's Well No. 1, 2, 3, 4, 5, SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION above
3. DATE COMPLETED 3/21/85 DRILLER Moretrench American Corp
4. DIAMETER: Top 6" inches Bottom 6" inches TOTAL DEPTH 18' Feet
5. CASING: Type Steel Diameter 1¼ Inches Length 15 Feet
6. SCREEN: Type Well point steel Size of Opening wire mesh Diameter 1½ Inches Length 3 Feet
   Range in Depth { Top 15' Feet; Bottom 18' Feet } Geologic Formation Sandy silty clay
   Tail Piece: Diameter None Inches Length _____ Feet
7. WELL FLOWS NATURALLY NO Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 3/21/85 Yield 2 + Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Well point system AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG open (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.) Are samples available? _____
13. SOURCE OF DATA Driller
14. DATA OBTAINED BY Moretrench American Corp Date 4/16/85

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 0465

26-7526
26.03.296

0-8 Fill

8-17 sand silty gray clay

17-18 Black silty clay

RECEIVED
APR 22 1985
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
WATER SUPPLY & WATERSHED MGT. ADM.

RECEIVED
JUL 1 1983
MORETRENCH AMERICAN
ROCKAWAY, N. J.

FORM 87

26.03.559 [D]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 56-2891
Application No. _____
County _____

WELL RECORD

1. OWNER Lake Developers ADDRESS 101 N. Beverwyck Rd., Lake Hiawatha N.J
Owner's Well No. _____ SURFACE ELEVATION 170 Feet (Above mean sea level)

2. LOCATION Route 46, Saddle Brook, N. J.

3. DATE COMPLETED Dec. 3, 1963 DRILLER Soren Nelson Jr.

4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 81 Feet

5. CASING: Type 19.45 # Drive Diameter 6 Inches Length 44'6" Feet

6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet
Tail piece: Diameter _____ Inches Length _____ Feet

Geologic Formation Qsd Sand & gravel to 15', clay to 31', water bearing fine sand to 37', hardpan to rock at 41', sand stone to 62', shale to 78', sand stone to bottom.

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date Dec. 3, 1963 Yield 30 Gallons per minute
Static water level before pumping 13 Feet below surface
Pumping level 25 feet below surface after 3 hours pumping
Drawdown 25 Feet Specific Capacity 30 Gals. per min. per ft. of drawdown
How Pumped Suction pump How measured 5 gal. pail and watch.
Observed effect on nearby wells No

9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR Hamburger Stand AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER Sample to be taken. Sample: Yes ___ No. ___
Taste good Odor none Color clear Temp. 55 °F

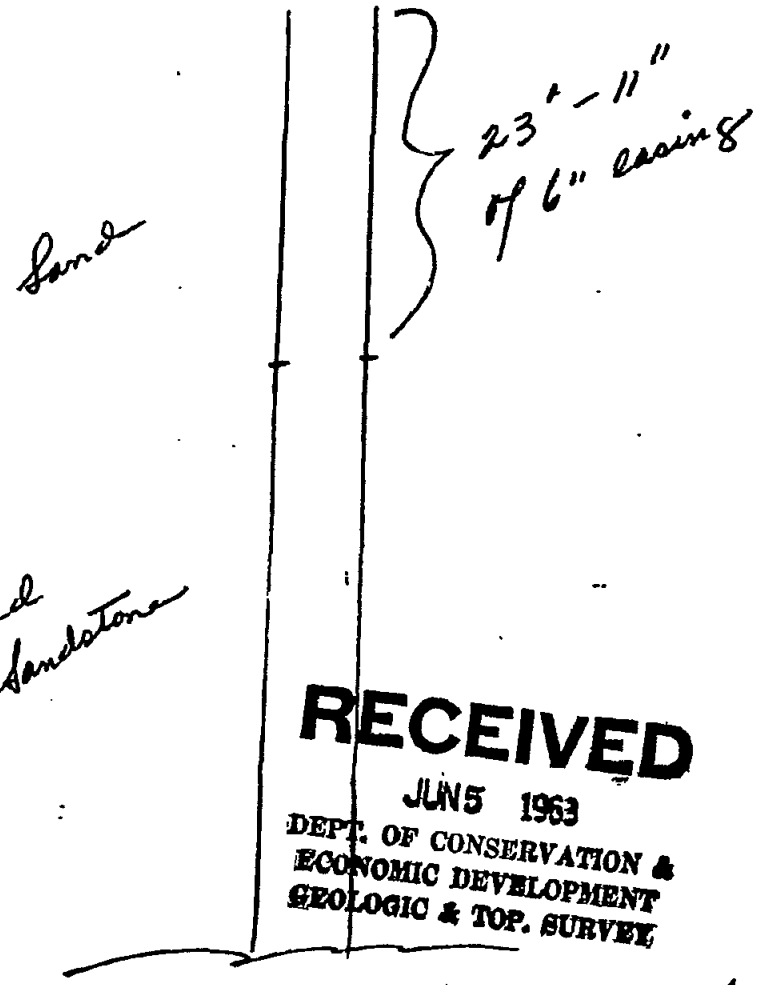
12. LOG _____ Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

13. SOURCE OF DATA Well site

14. DATA OBTAINED BY Pine Brook Well Drillers Date Dec. 3, 1963.

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

26.03.298
26-2776



RECEIVED
JUN 5 1963
DEPT. OF CONSERVATION &
ECONOMIC DEVELOPMENT
GEOLOGIC & TOP. SURVEY

Total depth 100 feet

WELREC 085 0468

Handex®

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751

BORING LOG

Well No. W-3 Permit No. 2616426-4 Coordinate # 26.03.5.69

Date Drilled 3/28/89 County Bergen Use monitoring

Location Block 114A, Lot 3 (behind 445 Route 17 South), Hackensack, New Jersey

Owner Amoco Oil Company Address P.O. Box 87707, Chicago, Illinois 60680

Drilling Method augers Sampling Method split-spoon

Hole Diameter 8" Total Depth 16'

CASING: Type PVC Schedule 40 Diameter 4" Length 4'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 12'

Gravel Pack Size #1 Casing Seal cement/bentonite Static Water Level 8.95'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			CASING	0'-7' Red/brown SILT and medium to fine SAND, trace gravel and wood fragments
5'				
	S-1 3'-5'	5,5,7,3	WELL SCREEN	7'-12' Black SILT, some (-) clay, little (-) fine sand and gravel
10'	S-2 8'-10'	22,27,10,13		12'-16' Red/brown coarse to medium SAND and SILT, little (-) clay
15'				NOTE: 14'6" - Boulders

Handex

HANDEX CORP., 703 Ginesi Drive, Morganville, New Jersey 07751

BORING LOG

Well No. W-2 Permit No. 2616425-6 Coordinate No. 26.03.5.69

Date Drilled 3/28/89 County Bergen Use monitoring

Location Block 114A, Lot 3 (behind 445 Route 17 South), Hackensack, New Jersey

Owner Amoco Oil Company Address P.O. Box 87707, Chicago, Illinois, 60680

Drilling Method augers Sampling Method split-spoon

Hole Diameter 8" Total Depth 12'

CASING: Type PVC Schedule 40 Diameter 4" Length 2'

SCREEN: Type PVC Schedule 40 Slot 20 Diameter 4" Length 10'

Gravel Pack Size #1 Casing Seal cement/bentonite Static Water Level 6.13'

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
				0'-3' Red/brown coarse to medium to fine SAND and (-) SILT, little (-) gravel
				3'-5' Brown SILT and fine SAND with (-) clay, little (-) gravel
5'			WELL SCREEN	5'-12' Red/brown coarse to medium SAND, little (-) silt and fine gravel, trace (+) clay
	S-1			
	5'-7'	14,19,18,50		NOTE: 7'6" - boulders
10'				
15'				

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26-03-556
PERMIT NO. 26/2156
APPLICATION NO. _____
COUNTY Bergen

FOR MONITORING PURPOSES ONLY **WELL RECORD**

1. OWNER Curtiss-Wright ADDRESS 1 Passaic St. Woodridge N.J.
Owner's Well No. # 10 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 1 Passaic St. Woodridge, N.J.
3. DATE COMPLETED 2-18-88 DRILLER Wm. Stafaloff
4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 90 Feet
5. CASING: Type 19lb steel Diameter 6 Inches Length 29'6" Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 2-18-88 Yield 4 Gallons per minute
Static water level before pumping 20 Feet below surface
Pumping level 90 feet below surface after 1 hours pumping
Drawdown 70 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped Air How measured 5 gal Pail
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-17' Overburden 17-90' Red Sandstone Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA William Stothoff Co. Inc.
14. DATA OBTAINED BY Driller James Cottrell J-1365 Date 1-10-89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

(1140)

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26-03-556
PERMIT NO. 26/219
APPLICATION NO. _____
COUNTY Bergen

FOR MONITORING PURPOSES ONLY

WELL RECORD

1. OWNER Curtiss-Wright ADDRESS 1 Passaic St. Woodridge, N.J.
   Owner's Well No. #9 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 1 Passaic St. Woodridge, N.J.
3. DATE COMPLETED 2-1-88 DRILLER Stothoff, William
4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 105 Feet
5. CASING: Type 1/16 Steel Diameter 6 Inches Length 31 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 2-1-88 Yield 5 Gallons per minute
   Static water level before pumping 20 Feet below surface
   Pumping level 105' feet below surface after 1 hours pumping
   Drawdown 85' Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped Air How measured 5gal Pail
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-25' overburden 25'-105 Red Sandstone Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA William Stothoff Co. Inc.
14. DATA OBTAINED BY Driller James Cottrell J-1365 Date 1-10-88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated)

FORM 67

26-03-556

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3529
Application No. _____
County _____

WELL RECORD

1. OWNER Steve Kovacs, Sr. ADDRESS Garfeild, N.J.
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Semuel Ave., Garfeild, N.J.
3. DATE COMPLETED Oct.6,1965 DRILLER John Lauritsen
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 140 Feet
5. CASING: Type steel drive casing Diameter 6 Inches Length 14 Feet
6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation Redshale
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
RECORD OF TEST: Date Oct.6,1965 Yield 20 Gallons per minute
Static water level before pumping 24 Feet below surface
Pumping level 50 feet below surface after 8 hours pumping
Drawdown 50 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Submersible Pump How measured 5 gallon Pail
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Household AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No. ____
Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG _____ Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch ...

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.03.556
PERMIT NO. 26/12/95
APPLICATION NO. _____
COUNTY Bergen

FOR MONITORING PURPOSES ONLY

WELL RECORD

1. OWNER Curtiss-Wright ADDRESS 1 Passaic St. Woodridge N.J.
   Owner's Well No. 8 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 1 Passaic St. Woodridge N.J.
3. DATE COMPLETED 2-19-88 DRILLER Stothoff, William
4. DIAMETER: Top 10 inches Bottom 6 inches TOTAL DEPTH 100 Feet
5. CASING: Type 1916 Steel Diameter 6 Inches Length 30 Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 2-19-88 Yield 25 Gallons per minute
   Static water level before pumping 20 Feet below surface
   Pumping level 100 feet below surface after 1 hours pumping
   Drawdown 80 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped Air How measured 5 gal Pail
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG 0-27½ Overburden 27½-100 hard Red Sandstone Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Wm. Stothoff Co. Inc.
14. DATA OBTAINED BY Driller J. Cottrell J-1365 Date 1-10-89

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

D-4/9

DWR-138 M
6/89

let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26746
Atlas Sheet Coordinates 26 : 03 : 528

OWNER IDENTIFICATION - Owner ~~De GIACOMO, NICK~~
Address 131 MARKET ST.
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #1
County BERGEN Municipality ~~SADDLE BROOK TW~~ Lot No. 7 Block No. 609
Address GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 08 / 91
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~90-07-03-1510~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BERTIN ENGINEERING ASSOC., INC. Tele. # (201) 288-6414

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 30 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	GRADE	15'	4"	JOHNSON FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	15'	30'	4"	SLOT .020 JOHNSON FLUSHMOUNT
Tail Piece				
Gravel Pack	13'	30'	ANNULUS	#1 MORIE - BAGGED
Annular Seal/Grout	GRADE	13'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	GRAVITY			

Static water level after drilling APRX. 19 ft.
Water level was measured using STEEL TAPE
Well was developed for ½ hours at < 1 gpm
Method of development ~~BAILING~~
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig CANTERRA CT450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date OCT. 16, 1991

D-1411

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

LUTZ ENVIRONMENTAL CO., INC.

2020 CLINTON STREET • LINDEN, NEW JERSEY 07036 • (908)862-8888

RING LOG:

LL NO. MW #1 COORDINATE NO. 26 03 528 PERMIT NO. 26-26746

TE DRILLED OCTOBER 8, 1991 COUNTY BERGEN USE MONITOR

CATION GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

'NER NICK DEGIACOMO ADDRESS 131 MARKET STREET, SADDLEBROOK, NJ

ILLING METHOD AIR ROTARY SAMPLING METHOD SPLIT SPOON

ILE DIA. 8" TOTAL DEPTH 30'

SING:

PE JOHNSON FLUSHMOUNT SLOT DIA. 4" LENGTH 15'

:REEN:

PE JOHNSON FLUSHMOUNT SLOT .020 DIA. 4" LENGTH 15'

RAVEL PACK SIZE #1 MORIE/BAGGED CASING SEAL BENTONITE/CEMENT

'ATIC WATER LEVEL APPROX. 19' GEOLOGIC FORMATION UNCONSOLIDATED

DEPTH BELOW URFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			CEMENT	STEEL MANHOLE SET IN TANK PAD
		N	GROUT	
		O		
		N		
5-7'	1	E		
		R		
		E		
		C		
		O		0" - 20' FINE-COARSE SANDS & GRAVELS WITH SOME SILTY CLAY (RED/BROWN) & SAND STONE-COBBLES
10-12	2	R		
		D	BENT	
		E		
		D		
15-17	3		15' SOLID CASING	
				20' - 30' BEDROCK
20-22	4		#1 WELL GRAVEL	
			15' WELL SCREEN (.020)	WELL FINISHED TO 30'

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26747
Atlas Sheet Coordinates 26 : 03 : 528

OWNER IDENTIFICATION - Owner De GIACOMO, NICK
Address 131 MARKET ST.
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #2
County BERGEN Municipality ~~SADDLE BROOK TW~~ Lot No. ~~7~~ Block No. ~~609~~
Address GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 15 / 91
Regulatory Program Requiring Well UST Case I.D. # 90-07-03-1510
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BERTIN ENGINEERING ASSOC, INC Tele. # (201) 288-6414

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 30 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE TANK PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	GRADE	13'	4"	JOHNSON FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	13'	28'	4"	SLOT .020 JOHNSON FLUSHMOUNT
Tail Piece				
Gravel Pack	5'	28'	ANNULUS	#1 MORIE/BAGGED
Annular Seal/Grout	GRADE	5'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	GRAVITY			

Static water level after drilling ~~APRX. 18~~ ft.
Water level was measured using STEEL TAPE
Well was developed for ½ hours at < 1 gpm
Method of development BAILING
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig CANTERRA CT450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date OCT. 16, 1991

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1413

LUTZ ENVIRONMENTAL CO., INC.

2020 CLINTON STREET · LINDEN, NEW JERSEY 07036 · (908)862-8888

RING LOG:

L NO. MW #2 COORDINATE NO. 26 03 528 PERMIT NO. 26-26747

E DRILLED OCTOBER 15, 1991 COUNTY BERGEN USE MONITOR

CATION GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

NER NICK DEGIACOMO ADDRESS 131 MARKET STREET, SADDLEBROOK, NJ

ILLING METHOD AIR ROTARY SAMPLING METHOD SPLIT SPOONS

LE DIA. 8" TOTAL DEPTH 30'

SING:

PE JOHNSON FLUSHMOUNT SLOT ____ DIA. 4" LENGTH 13'

REEN:

PE JOHNSON FLUSHMOUNT SLOT .020 DIA. 4" LENGTH 15'

AVEL PACK SIZE #1 MORIE/BAGGED CASING SEAL BENTONITE/CEMENT

ATIC WATER LEVEL APPROX. 18' GEOLOGIC FORMATION UNCONSOLIDATED

DEPTH BELOW SURFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			CEMENT	STEEL MANHOLE SET IN TANK PAD
			GROUT BNT	0" - 5' RED/BROWN MED-COARSE SANDS, LITTLE SILTS, COBBLES
5-7	1	NOT RECORDED	13' SOLID CASING	5'-7' RED/BROWN MED.-COARSE SAND, SOME FRACTURED ROCK PIECES
7-10	NO	SPOONS	#1 MORIE WELL GRAVEL	7' - 10' RED/BROWN MED-COARSE SAND, SOME FRACTURED ROCK PIECES
10-12	2	NOT RCRD		10 -12' RED/BROWN MED-COARSE SAND GRADING DOWN TO BEDROCK
12-28				12' - 28' BEDROCK - SHALE
		N O S P O O N S	15' SCREEN (.020)	
28-30				SET WELL AT 28' BEDROCK
				DRILLED TO 30'

DWR-138 M
6/89

let's protect our earth

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 26748
Atlas Sheet Coordinates 26 : 03 : 528

OWNER IDENTIFICATION - Owner De GIACOMO, NICK
Address 131 MARKET ST.
City SADDLE BROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #3
County BERGEN Municipality SADDLE BROOK TW Lot No. 7 Block No. 609
Address GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10 / 08 / 91
Regulatory Program Requiring Well UST Case I.D. # 90-07-03-1510
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) BERTIN ENGINEERING ASSOC., INC. Tele. # (201) 288-6414

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 30 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	15'	4"	JOHNSON FLUSHMOUNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	15'	30'	4"	SLOT .020 JOHNSON FLUSHMOUNT
Tail Piece				
Gravel Pack	13'	30'	ANNULUS	#1 MORIE/BAGGED
Annular Seal/Grout	GRADE	13'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	GRAVITY			

Static water level after drilling APX. 19 ft.
Water level was measured using STEEL TAPE
Well was developed for ½ hours at < 1 gpm
Method of development BAILING
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig CANTERRA CT450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover Date OCT. 16, 1991

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1415

LUTZ ENVIRONMENTAL CO., INC.

2020 CLINTON STREET · LINDEN, NEW JERSEY 07036 · (908)862-8888

RING LOG:

L NO. MW #3 COORDINATE NO. 26 03 528 PERMIT NO. 26-26748

E DRILLED OCTOBER 8, 1991 COUNTY BERGEN USE MONITOR

CATION GULF S/S, 131 MARKET STREET, SADDLEBROOK, NJ

NER NICK DEGIACOMO ADDRESS 131 MARKET STREET, SADDLEBROOK, NJ

ILLING METHOD AIR ROTARY SAMPLING METHOD none

LE DIA. 8" TOTAL DEPTH 30'

SING:

PE JOHNSON FLUSHMOUNT SLOT ____ DIA. 4" LENGTH 15'

REEN:

PE JOHNSON FLUSHMOUNT SLOT .020 DIA. 4" LENGTH 15'

AVEL PACK SIZE #1 MORIE/BAGGED CASING SEAL BENTONITE/CEMENT

ATIC WATER LEVEL APPROX. 19' GEOLOGIC FORMATION UNCONSOLIDATED

DEPTH BELOW URFACE	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	IDENTIFICATION OF SOILS/REMARKS
			CEMENT	STEEL MANHOLE SET IN CONCRETE TANK PAD
			GROUT	
			15' SOLID CASING	
			BENT	
			#1 MORIE WELL GRAVEL	
			15' WELL SCREEN (.020)	
				0" - 21' FINE/COARSE SANDS & GRAVELS WITH SOME SILTS & CLAYS AND SANDSTONE COBBLES
				21' - 30' BEDROCK
				WELL FINISHED TO 30'

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60104

Atlas Sheet Coordinates 26 : 03 619

OWNER IDENTIFICATION - Owner RR ASSOC/ACURA OF OCEAN
Address 320 RIVER ST
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5A
County BERGEN Municipality HACKENSACK CITY Lot No. 1,5,7,33 Block No. 4D2A
Address 320-332 RIVER ST

DATE WELL STARTED 1/9/01
DATE WELL COMPLETED 1/9/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) The Whitman Companies Tele. # 732/390-5858

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 10.25 in.
Bottom 10.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up above land surface) ____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 7' BTOC

Water level was measured using TAPE

Well was developed for 1/2 hours at 1 gpm

Method of development Pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	4	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ SAND FILTER	3	15		#1 SAND FILTER	
Gravel Pack	2	3		#00 SAND SEAL	
Grout	0	2		Neat Cement Bentonite	100 lbs. 25 lbs.

Grouting Method Tremie
Drilling Method HS Auger

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig Dailey

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.

Driller (Print) Roger Logel

Driller's Signature Roger Logel

Registration No. M1166 Date 2/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

1" asphalt
1" - 2' - Gravel
2' - 8' - Moist to wet F-M SAND
8' - 15' - wet Silty F-M SAND some clay

D-1417

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WR-138 M
/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60013

Atlas Sheet Coordinates 26 : 03 619

OWNER IDENTIFICATION - Owner R.R. ASSOC./ACURA OF OCEA
Address 320 RIVER STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4A
County BERGEN Municipality HACKENSACK CITY Lot No. 1-5,7,33 Block No. 402A
Address 320-332 RIVER ST.

DATE WELL STARTED 1/9/01
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 1/9/01
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) The Whitman Companies Tele. # 732/390-5858

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 10.25 in.
Bottom 10.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 4.8 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	4	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ SAND FILTER	3	15		#1 SAND FILTER	
Gravel Pack	2	3		#00 SAND SEAL	
Grout	0	2		Neat Cement Bentonite	100 lbs. 80 lbs.

Grouting Method tremie
Drilling Method HS Auger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

1" asphalt
1'-2' - gravel
2'-8' - moist to wet F-M SAND
8'-15' - wet Silt, F-SAND, some clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Well Driller (Print) Roger Logel
Driller's Signature Roger Logel
Registration No. M1166 Date 2/5/01

D-1418

COPIES: White - DEP Canary - Driller Pink - Owner Gold - Consultant

WR-138 M
1/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60011

Atlas Sheet Coordinates 26 03 619

OWNER IDENTIFICATION - Owner R.R. ASSOC./ACURA OF OCEA
Address 320 RIVER STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-2A
County BERGEN Municipality HACKENSACK CITY Lot No. 1-5,7,33 Block No. 402A
Address 320-332 RIVER ST.

DATE WELL STARTED 1/9/01
DATE WELL COMPLETED 1/9/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) The Whitman Companies Tele. # 732/390-5858

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 10.25 in.
Bottom 10.25 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed? ☑ Yes ☐ No

Static water level after drilling 6.5 ft.

Water level was measured using TAPE

Well was developed for 1/2 hours at 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig Geoprobe

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	4	PVC	40
Blank Casings (No. Used)	—				
~~Tail Piece~~ SAND FILTER	3	15		#1 sand filter	
Gravel Pack	2	3		#00 SAND SEAL	
Grout	0	2		Neat Cement Bentonite	100 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method HSAuger

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

1" asphalt
1'-2' - Gravel
2'-8' - Moist Dark F-M SAND
8'-15' - Wet Silty F Sand, some Clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING, INC.
Driller (Print) ROGER LOGEL
Driller's Signature Roger Logel
Registration No. M1166 Date 2/5/01

D-1419

COPIES: White - BFR Canary - Driller Pink - Owner Goldenrod - Consultant

NR-138 M
/98

E
MES

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60012

Atlas Sheet Coordinates 26 : 03 : 619

WNER IDENTIFICATION - Owner R.R. ASSOC./ACURA OF OCEA
ddress 320 RIVER STREET
ity HACKENSACK State NJ Zip Code

/ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3A
ounty BERGEN Municipality HACKENSACK CITY Lot No. 1-5,7,33 Block No. 402A
ddress 320-332 RIVER ST.

YPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL STARTED 1/9/01
egulatory Program Requiring Well Case I.D.# DATE WELL COMPLETED 1/9/01

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) The Whitman Companies Tele. # 732/390-5858

WELL CONSTRUCTION

otal depth drilled 17 ft.
Vell finished to 15 ft.

lorehole diameter:
Top 10.25 in.
Bottom 10.25 in.

Vell was finished: ☐ above grade
☑ flush mounted

f finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☑ Yes ☐ No

tatic water level after drilling 7 ft.

Water level was measured using TAPE

Vell was developed for 1/2 hours
t 1 gpm

Method of development Pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid — Type of Rig Auger

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	4	PVC	40
Middle Casing (for triple cased wells only)	—				
Outer Casing (largest diameter)	—				
Open Hole or Screen (No. Used 10)	5	15	4	PVC	40
Blank Casings (No. Used)	—				
Tail Piece SAND FILTER	3	17		#1 SAND FILTER	
Gravel Pack	2	3		#00 SAND SEAL	
Grout	0	2		Neat Cement 100 lbs. Bentonite 50 lbs.	

Grouting Method tremie
Drilling Method HSA Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations:

Drilling Company ADVANCED DRILLING, INC.

Well Driller (Print) Roger Logel

Driller's Signature Roger Logel

Registration No. M1166 Date 2/5/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

1" Asphalt
1'-7' - Moist to wet F-M SAND, tr of wood
7'-14' - wet F-M SAND
14'-17' - wet Silt, F-SAND, some clay

COPIES: White - DEP Canary - Driller Pink - Contractor

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

930

MONITORING WELL RECORD

Well Permit No. 26 - 38059
Atlas Sheet Coordinates 26 : 03 : 651

OWNER IDENTIFICATION - Owner KINGSO ASSOCIATES
Address 505 MAIN ST.
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-11
County BERGEN Municipality HACKENSACK CITY Lot No. 37 Block No. 349
Address 433 Passaic St

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/22/94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) JH Crow Tele. #

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5	20	4	Sch 40 PVC .020
Tail Piece				
Gravel Pack	3	20		Morie #1
Annular Seal/Grout	0	3		Portland
Method of Grouting	Gravity			

Static water level after drilling 11.5 ft.
Water level was measured using Tape
Well was developed for 1 hours at 2 gpm
Method of development Pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig B-57
Name of Driller John Voigt
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J-1544
Name of Drilling Company SUMMIT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

See attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature John Voigt Date 9-26-94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 151.0048

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

WELL: MW11 DATE DRILLED: 9/22/1994 COORD #: 26.03.651 PERMIT #: 26-38059
SITE: Hackensack Chevron, 433 Passaic Street, , Hackensack, NJ 07601
OWNER: King Co. Associates, 505 Main Street, , Hackensack, NJ 07601

COUNTY: Bergen
XSTREET:
USE: Monitoring

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Auger
SAMPLING METHOD: N/A
HOLE DIAMETER: 10"
TOTAL DEPTH: 20'

SET WELL: 20'
GRAVEL PK SZ: Morie #1
DRILLER: John Vogt
SURFACE COMPLETION: M

GAL PER MIN: 2
STAT H2O LVL: 11.5'
DEVELOPMENT METHOD: Pump

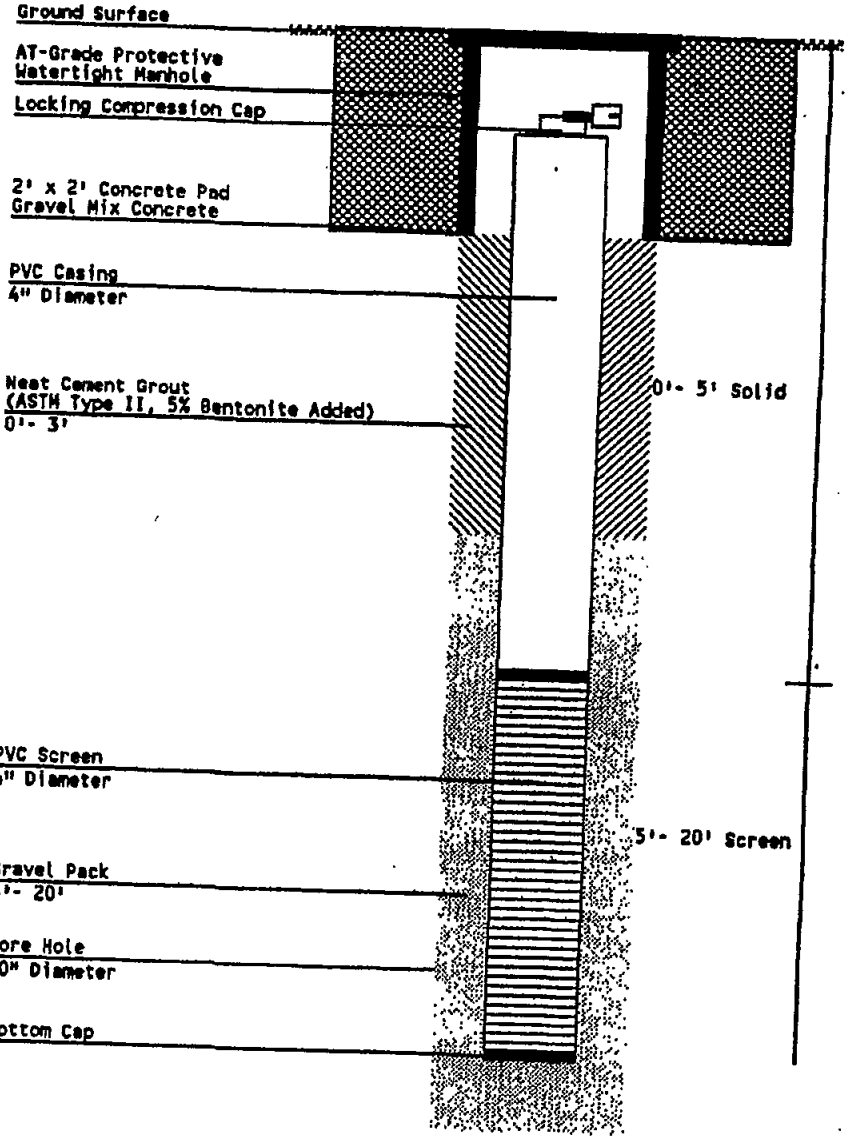
OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE, FROM - TO

BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0' - 5' Red sand fill.
5' - 11' Fine red sand.
11' - 17' Decomposed rock.
17'- 20' Bedrock, shale.



DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 35560
Atlas Sheet Coordinates 26 : 03 : 643

OWNER IDENTIFICATION - Owner HACKENSACK BOARD OF EDUCA
Address 355 STATE STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #1
County BERGEN Municipality HACKENSACK CITY Lot No. 1 Block No. 231
Address HACKENSACK HIGH SCHOOL, FIRST & BEECH, HACKENSACK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 01 / 17 / 94
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) HUDSON ENV. SERVICES Tele. # (908) 686-5959

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☒ Yes ☐ No STEEL MANHOLE SET IN CONCRETE PAD

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	GRADE	5'	4"	PVC, BEDROCK FLSHMNT
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5'	20'	4"	PVC, SLOT .020 BEDROCK FLUSHMOUNT
Tail Piece				
Gravel Pack	2.5'	20'	ANNULUS	#1 MORIE WELL GRAVEL
Annular Seal/Grout	GRADE	2.5'	ANNULUS	BENTONITE/CEMENT
Method of Grouting	TREMMY			

Static water level after drilling APRX. 7.5 ft.
Water level was measured using STEEL TAPE
Well was developed for ½ X hours at < 3 gpm
Method of development PUMPING
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AIR ROTARY
Drilling Fluid N/A Type of Rig CANTERRA CT450
Name of Driller TIMOTHY WESTOVER
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. M1444
Name of Drilling Company LUTZ ENVIRONMENTAL INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

SEE ATTACHED

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Timothy Westover M1444 Date 1-26-94

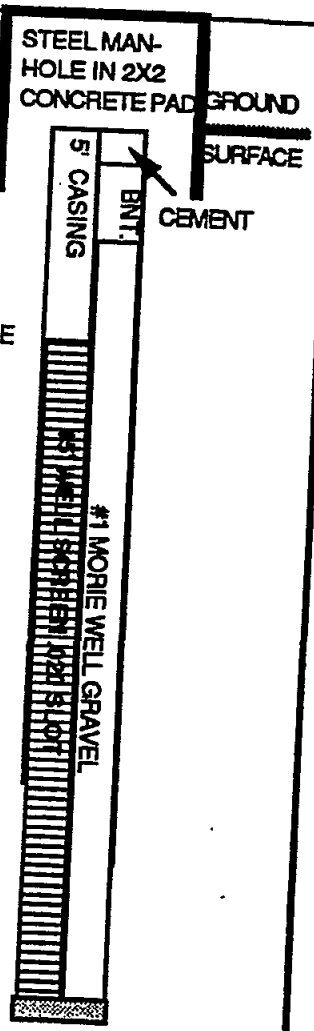
COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

LUTZ ENVIRONMENTAL CO., INC. 2020 CLINTON STREET, LINDEN, NJ 07036
(908)862-6633

WELL LOG

PROJECT: HACKENSACK HIGH SCHOOL	DATE DRILLED: 01/17/94		COORDINATE: 28 03 643
LOCATION: FIRST & BEECH STREETS HACKENSACK, NJ	PERMIT #: 26-35560	WELL NO: MW #1	DEPTH: 20
	STATIC WATER LEVEL: APPROX. 7.5'		HOLE DIA: 8"
OWNER: HACKENSACK BD ED	ADDRESS: 355 STATE STREET, HACKENSACK, NJ		COUNTY: BERGEN
DRILLING RIG: CT-450	DRILLER: TIMOTHY WESTOVER		DRILL FLUID/METHOD: AIR ROTARY
CASING TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4	SLOT: N/A	LENGTH: 5'
SCREEN TYPE: BEDROCK FLUSHMOUNT (PVC)	DIA: 4	SLOT: .020	LENGTH: 15'
SAMPLING METHOD: SPLIT SPOON		FORMATION: UNCONSOLIDATED	
GRAVEL PACK SIZE: #1 MORIE/BAGGED		SEAL: BENTONITE/CEMENT	

DEPTH	SAMPLE NUMBER	BLOWS PER 6" ON SAMPLER	WELL DESIGN	
			0" - 1'	ASPHALT & ROADSTONE
			1' - 4'	ORANGE/BROWN SILTY SAND
4'-6'			4' - 6'	YELLOW FINE-MEDIUM SANDS, LITTLE SILTS (FILL)
	#1	5-4-3-4		
6'-8'			6' - 8'	BLACK ORGANICS, SILTS & CLAY, CONCRETE BETEEN 9-10"
	#2	6-4-4,50/3		
			8" - 20'	YELLOW/ORANGE SILTY SANDS WITH LITTLE (+) SILTS
		NO		
		S		
		P		
		O		
		O		
		N		
		S		



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DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30104
Atlas Sheet Coordinates 26 : 03 : 651

OWNER IDENTIFICATION - Owner KINGS ASSOCIATES
Address 505 MAIN STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality HACKENSACK CITY Lot No. 37 Block No. 349
Address 433 Passaic St.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/17/92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling ft.
Water level was measured using TAPE
Well was developed for hours at gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type: N/A
Drilling Method N/A
Drilling Fluid Type of Rig B-80
Name of Driller Sean Conroy
Health and Safety Plan submitted? ■ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1522
Name of Drilling Company SUMMIT WELL DRILLING

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	PVC .020
Tail Piece	N/A			
Gravel Pack	4	15		morie #2
Annular Seal/Grout	0	4		B-Pellets/Portland
Method of Grouting	Gravity			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached logs

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 8-4-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2130

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW-5
Date Drilled 7/17/92
Coordinate No. 26.03.651 Permit No. 26-30104
County Bergen Use Monitor
Site Hackensack Chevron, 433 Passaic Street, Hackensack, New Jersey 07601
Owner King Co. Associates, 505 Main Street, Hackensack, New Jersey 07602
Drilling Method Air Sampling Method SS
Hole Diameter 8" Total Depth 15'
Casing: Type PVC Diameter 4" Length 5'
Screen: Type PVC Slot .020 Diameter 4" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets/Grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
4'-6'	1	not recorded
6'-8'	2	not recorded
10'		
20'		
30'		
40'		

Well Design

0' - 3'	GROUT	0' - 1'	Asphalt and stone
0' - 5'	SOLID	1' - 5'	Rd.-br. silty sand
3' - 4'	PELLETS		
4' - 15'	GRAVEL		
5' - 15'	SCREEN	5' - 15'	Red shale
	OPEN HOLE		
15'	SET WELL		
	GPH		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
	DEV.		

Identification of Soils / Remarks

WELREC 085 2153

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30105
Atlas Sheet Coordinates 26 - 03 - 651

OWNER IDENTIFICATION - Owner [illegible] ASSOCIATES
Address 505 MAIN STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-6
County Bergen Municipality Lot No. 37 Block No. 349
Address 433 PASSAIC ST. HACKENSACK CITY

TYPE OF WELL (as per Well Permit Categories)
Date well completed 7/17/92
Regulatory Program Requiring Well MONITORING UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	PVC .020
Tail Piece	N/A			
Gravel Pack	4	15		morie #2
Annular Seal/Grout	0	4		B. Pellets Portland
Method of Grouting	gravity			

Static water level after drilling N/A ft.
Water level was measured using TAPE
Well was developed for hours at gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type: N/A
Drilling Method AIR
Drilling Fluid Type of Rig B-80
Name of Driller Sean Conroy
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1522
Name of Drilling Company [illegible] WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached logs

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 8-4-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2132

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

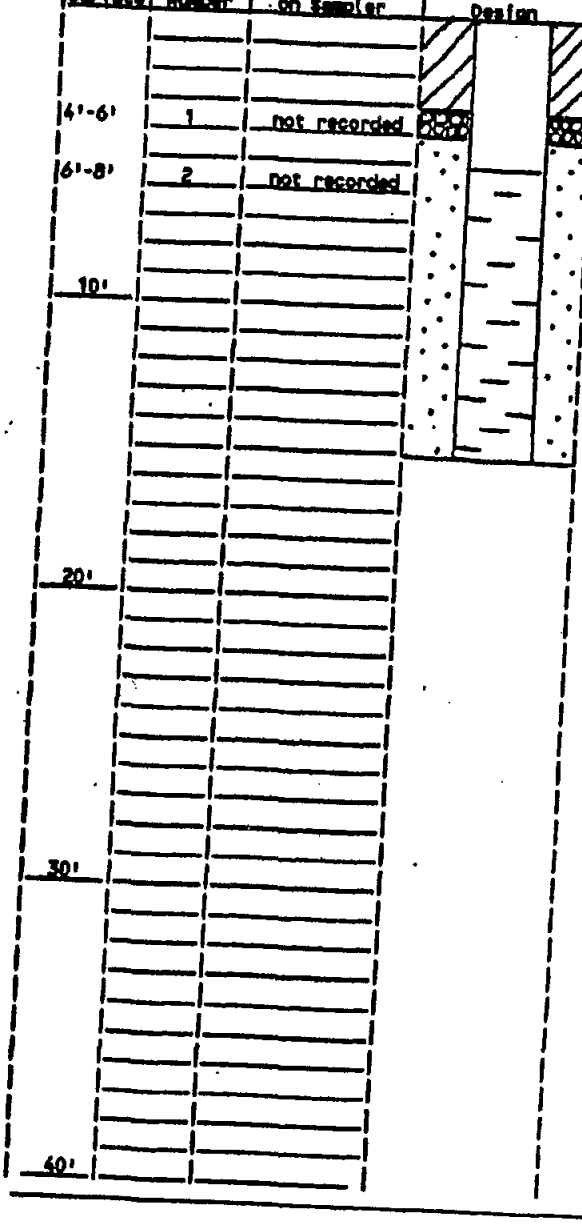
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW-6
Coordinate No. 26.03.651
Permit No. 26-30105
Date Drilled 7/17/92
County Bergen
Use Monitor
Site Hackensack Chevron, 433 Passaic Street, Hackensack, New Jersey 07601
Owner King Co. Associates, 505 Main Street, Hackensack, New Jersey 07602
Drilling Method Air
Hole Diameter 8"
Sampling Method SS
Casing: Type PVC
Diameter 4"
Total Depth 15'
Screen: Type PVC
Slot .020
Diameter 4"
Length 5'
Gravel Pack Size Morie #2
Casing Seal Pellets/Grout
Length 10'
Static Water Level
Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
4'-6'	1	not recorded
6'-8'	2	not recorded



Well Design

0' - 3'	GROUT	0' - 1'	Asphalt and stone
0' - 5'	SOLID	1' - 5'	Rd.-br. silty sand
3' - 4'	PELLETS		
4' - 15'	GRAVEL		
5' - 15'	SCREEN	5' - 15'	Red shale
	OPEN HOLE		
15'	SET WELL		
	CPH		
	STMDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
	DEV.		

Identification of Soils / Remarks

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 30106
Atlas Sheet Coordinates 26 : 05 : 651

OWNER IDENTIFICATION - Owner ~~KINGS ASSOCIATES~~
Address 505 MAIN STREET
City HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7
County Bergen Municipality HACKENSACK CITY Lot No. 37 Block No. 349
Address 433 PASSAIC Street

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/17/92
Regulatory Program Requiring Well ~~UST~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling N/A ft.
Water level was measured using tape
Well was developed for hours at gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type: N/A
Drilling Method AIR
Drilling Fluid Type of Rig B-80
Name of Driller SEAN CONROY
Health and Safety Plan submitted? ■ Yes ☒ No
Level of Protection used on site (circle one) None D (C) B A
N.J. License No. 1522
Name of Drilling Company ~~SIMMLT~~ WELL DRILLING

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	4	14	4	PVC .020
Tail Piece	N/A			
Gravel Pack	3	14		Morie #2
Annular Seal/Grout	0	3		B. Pellets/Portland
Method of Grouting	GAVITY			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Please see attached log

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 8-4-92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2134

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

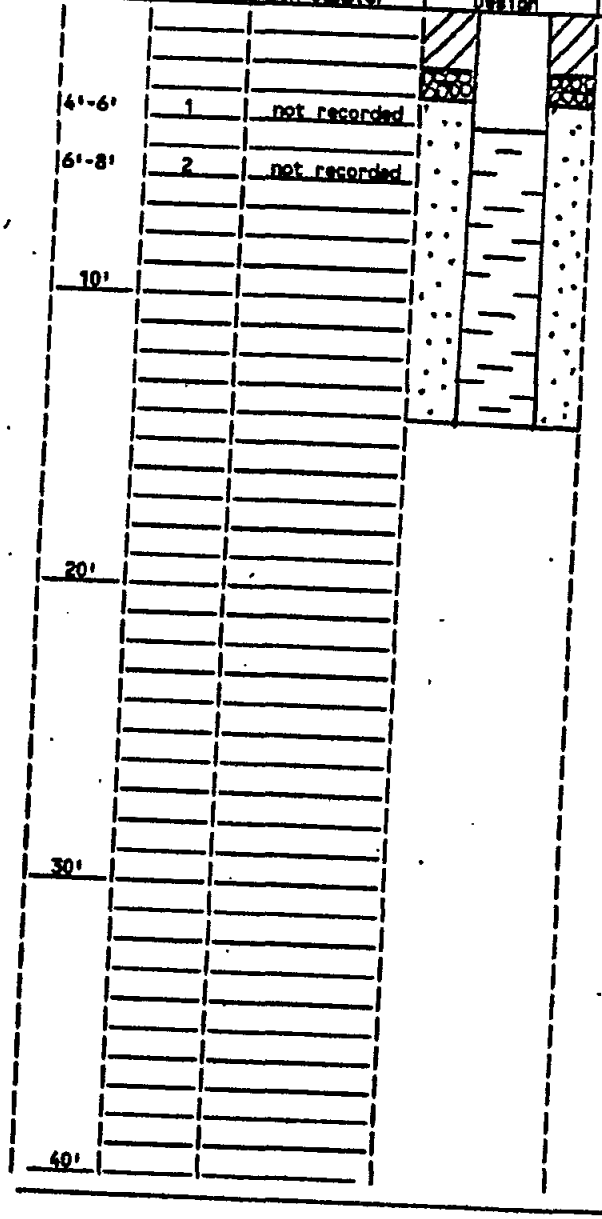
489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-9698

WELL LOG

Well No. MW-7
Coordinate No. 26.03.651 Permit No. 26-30106
Date Drilled 7/17/92 County Bergen Use Monitor
Site Hackensack Chevron, 433 Passaic Street, Hackensack, New Jersey 07601
Owner King Co. Associates, 505 Main Street, Hackensack, New Jersey 07602
Drilling Method Air Sampling Method SS
Hole Diameter 8" Total Depth 14'
Casing: Type PVC Diameter 4" Length 4'
Screen: Type PVC Slot .020 Diameter 4" Length 10'
Gravel Pack Size Morie #2 Casing Seal Pellets/Grout
Static Water Level Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
4'-6'	1	not recorded
6'-8'	2	not recorded



Well Design

0' - 2'	GROUT	0' - 1'	Asphalt and stone
0' - 4'	SOLID	1' - 5'	Rd.-br. silty sand
2' - 3'	PELLETS		
3' - 14'	GRAVEL		
4' - 14'	SCREEN	5' - 14'	Red shale
	OPEN HOLE		
14'	SET WELL		
	OPN		
	STNDP.		
X	MANHOLE		
	VAULT		
	GRIPPER		
	NONE		
	DEV.		

Identification of Soils / Remarks

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 25426-3
Atlas Sheet Coordinates 26 : 03 : 851

OWNER IDENTIFICATION - Owner ABEX CORPORATION
Address 65 SPRING VALLEY ROAD
City [illegible] State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. RC-2
County Municipality HACKENSACK CITY Lot No. 42&31A Block No. 90,95
Address former Abex Signal Stat., 205 S. Newman ST., Hackensack

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/11/91
Regulatory Program Requiring Well UST Case I.D. # 91-04-03-1552-0

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 4 ft.
Well finished to 4 ft.
Borehole diameter:
Top 12 in.
Bottom 12 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2 ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	+2	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	0	4	4	PVC/.020
Tail Piece				
Gravel Pack	0	4		Morie #2
Annular Seal/Grout	0	2'		Portland/B. Pellets
Method of Grouting	Gravity			

Static water level after drilling 6" ft.
Water level was measured using Tape
Well was developed for .5 hours at 2 gpm
Method of development Bail
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Air
Drilling Fluid Type of Rig Mobile B-80
Name of Driller Sean Conroy
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1522
Name of Driller Company ROBERT WELL DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Sean Conroy Date 6/20/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2128

DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-42[illegible]
Toll Free: (800) 242-6648
FAX: (908) 356-1009

WELL LOG

Well No. RC - 2 Coordinate No. 26.03.6.51 Permit No. 26-25426-3
Date Drilled 06/11/91 County Bergen Use Recovery
Location Former Abex Signal Stat. 205 South Newman Street, Hackensack, NJ
Owner Abex Corporation, 65 Ramapo Valley Road, Mahwah, NJ 07430-0610
Drilling Method Air Sampling Method n/a
Hole Diameter 12" Total Depth 4'
Casing: Type PVC Diameter 4" Length 2'
Screen: Type PVC Slot .020 Diameter 4" Length 4'
Gravel Pack Size #2 Casing Seal pellets
Static Water Level 6" Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler	Well Design
10'			
20'			
30'			
40'			

	GROUT	0' - 4"	asphalt & concrete
0' - +2'	SOLID	4" - 4'	pea gravel
+1' - 2'	PELLETS		
0' - 4'	GRAVEL		
0' - 4'	SCREEN		
	OPEN HOLE		
4'	SET WELL		
	GPM		
X	STNDP.		
	MANHOLE		
	VAULT		

Identification of Soils / Remarks

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 28 - 24658
Atlas Sheet Coordinates 26 : 03 : 642

OWNER IDENTIFICATION - Owner ILY PROPERTIES
Address ROUTE 17
City SOUTH HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W.5
County Bergen Municipality S. HACKENSACK T Lot No. 5,6,1A Block No. 134B,27
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/5/91
Regulatory Program Requiring Well UST Case I.D. # 90-10-01-1004
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	grade	2'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	same 20slot
Tail Piece				
Gravel Pack	1'	12'	6"	#2 Morie
Annular Seal/Grout	grade	1'	6"	Benseal
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 3 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1'	Asphalt & Trap Rock
1-2'	Sand, F, brown
2-5'	Sand, F, gray silty
5-7'	Boulders, Sand, black peat
7-12'	Sand, F, red & red weathered sandstone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 6/5/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2104

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 24857
Atlas Sheet Coordinates 26 : 03 : 642

OWNER IDENTIFICATION - Owner ~~ILY PROPERTIES~~
Address ROUTE 17
City SOUTH HACKENSACK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. M.W.6
County Bergen Municipality S. HACKENSACK T Lot No. 5,6,1A Block No. 194B,27
Address

TYPE OF WELL (as per Well Permit Categories)
Regulatory Program Requiring Well ~~MONITORING~~ UST Case I.D. # ~~90-10-01-1004~~
Date well completed 6 / 5 / 91
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Whitman Companies Tele. # (201)390-5858

WELL CONSTRUCTION

Total depth drilled 12' ft.
Well finished to 12' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	grade	2'	4"	Sch.40 PVC FJ
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4"	same 20slot
Tail Piece				
Gravel Pack	1'	12'	6"	#2 Morie
Annular Seal/Grout	grade	1'	6"	Benseal
Method of Grouting	Pressure Pumped			

Static water level after drilling 7' ft.
Water level was measured using Contact Meter
Well was developed for 1 hours at 3 gpm
Method of development Sub. Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HSA
Drilling Fluid none Type of Rig Top Head Drive
Name of Driller Mark McGinnis
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1285
Name of Drilling Company MCGINNIS DRILLING

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1'	Asphlat & Trap Rock
1-2'	Sand, F, brown
2-5'	Sand, F, gray silty
5-7'	Peat, black, Sand, F-C
7-12'	Weathered sandstone, Sand, F, red

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 6/5/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
-6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22439
Atlas Sheet Coordinates 26 : 03 : 451

OWNER IDENTIFICATION - Owner RAIA INDUSTRIES INC.
Address 305 WEST FORT LEE ROAD
City BOGOTA State NJ Zip Code 07603

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-60
County BERGEN Municipality BOGOTA BORO Lot No. 1 Block No. 3
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/16/91
Regulatory Program Requiring Well EDNA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) FIRST ENVIRONMENT Tele. # 201-646-9700

WELL CONSTRUCTION

Total depth drilled 30 ft.
Well finished to 25 ft.
Borehole diameter:
Top 14 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No
Static water level after drilling 12.5 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AUGER
Drilling Fluid N/A Type of Rig ROTARY
Name of Driller A. BOUTOILLE
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 34606
Name of Drilling Company CONSTRUCTION DRILLING SERVICES

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	15	2	SCH 40 PVC.
Outer Casing (Not Protective Casing)	0	13	8	SCH 80 STEEL
Screen (Note slot size)	15	25	2	SCH 40 PVC. .010 SLOT
Tail Piece	—	—	—	—
Gravel Pack	13	25	8	MORIE #1
Annular Seal/Grout	0.5 25	10.0 30	8 8	BENT-PORTLAND BENT-PORTLAND
Method of Grouting	TREMIE			

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3' CONCRETE
3-10' SILTY SAND + GRAVEL - FILL
10-13 MEADOW MAT
13-18 F-M SAND
18-30 CHUNKY SILT + SAND

WELL SEALED ....10-15-93....

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature A. Boutoille Date 1/19/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2126

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22940
Atlas Sheet Coordinates 26 : 03 : 451

OWNER IDENTIFICATION - Owner RAIA INDUSTRIES INC.
Address 305 WEST FORT LEE ROAD
City BOGOTA State NJ Zip Code 07603

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-4
County BERGEN Municipality BOGOTA BORO Lot No. 1 Block No. 3
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 1/18/91
Regulatory Program Requiring Well ECRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) FIRST ENVIRONMENT Tele. # 201-646-9200

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to 19 ft.
Borehole diameter:
Top 14 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	14	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	0	11	8	SCH 80 STEEL
Screen (Note slot size)	14	19	2	SCH 40 PVC .010 SLOT
Tail Piece	—	—	—	—
Gravel Pack	12	19	8	MORIE # 1
Annular Seal/Grout	19.5	27.14	8	BENT.-PORTLAND
Method of Grouting	Tremie			

Static water level after drilling 10.5 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method AUGER
Drilling Fluid N/A Type of Rig ROTARY
Name of Driller A. BOUCHILLE
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1466
Name of Drilling Company CONSTRUCTION DRILLING SERVICES

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-3 Concrete
3-9 Silty Sand + Gravel-Fill
9-11 Clayey Meadow Mat
11-25 F-M Sand
25-27 Clay

WELL SEALED 10-16-93

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 1/19/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22549 - 2
Atlas Sheet Coordinates 26 : 03 : 619

OWNER IDENTIFICATION - Owner HOLOCARBON PRODUCTS CORP
Address P.O. BOX 6360
City NORTH AUGUSTA State SC Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW3
County Bergen Municipality Lot No. Block No.
Address HACKENSACK CITY 26,28,28 526

TYPE OF WELL (as per Well Permit Categories) Date well completed 10/22/90
Regulatory Program Requiring Well MONITORING Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Bill Lyon @ WWC Tele. # 201-785-0700

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2	17	4	PVC Slot .010
Tail Piece				
Gravel Pack	1.5	17	—	Sand
Annular Seal/Grout	1	1.5	—	Bentonite
Method of Grouting	Tremie			

Static water level after drilling 3 ft.
Water level was measured using W.L./ND
Well was developed for 20 MIN hours at 5 gpm
Method of development Centrifugal
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Acker AD II
Name of Driller Matt Raab
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Log attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matt Raab Date 10/30/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
10-22-90		-0-	17'		

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. 14W-3

GRD. ELEV. 2622549 2603619

PROJECT Halocarbon

LOCATION Hackensack N.J.

Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										2" Asph-FT		
										6" Gravel road Bed		
										Red brown coarse sand w/gravel		
										-3' Black very Fine sand w/Peat - 3'-water		
										-7' gray Fine sand w/Silt & some Clay		
14-16	1	7	7									
			7	10								
										T.D. 17'		
										Set 4" PVC		
										well @ 17'		

NOTATION: SIZE AUGERS / CASING 6 1/4" SIZE SPOON 2"

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 2'" WITH 1/4 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22550 - 6
Atlas Sheet Coordinates 26 : 03 : 619

OWNER IDENTIFICATION - Owner HOLOCARBON PRODUCTS CORP
Address P.O. BOX 6369
City NORTH AUGUSTA State SC Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4
County Bergen Municipality HACKENSACK CITY Lot No. 26,28,28 Block No. 526
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 10/22/90
Regulatory Program Requiring Well MONITORING
RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Bill Lyon @ WWC Tele. # 201-785-0700

WELL CONSTRUCTION
Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2	17	4	PVC Slot .010
Tail Piece				
Gravel Pack	1.5	17	—	Sand
Annular Seal/Grout	1	1.5	—	Bentonite
Method of Grouting	Tremie			

Static water level after drilling 3 ft.
Water level was measured using WL/ND
Well was developed for 32 Min hours at 3 gpm
Method of development Centrifugal
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid Type of Rig Ackerman
Name of Driller Matt Kaabe Van
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No.
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Log Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Matt Kaabe Date 10/30/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2027

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
10-22-90		-0-	17		

EMPIRE SOILS INVESTIGATIONS INC.

FIELD LOG

HOLE NO. MW-4

GRD. ELEV. 2602550 2603619

PROJECT Halocarbon

LOCATION Hackensack

Sheet ____ of ____

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										asphalt		
										2" gravel		
										Red brown coarse sand + gravel		
										-3' Black V. Fine sand w/ peat - water - 3'		
										-7' Gray Fine sand w/ silt & clay		
14-16	1	6	7	9	11							

T.D. 17'

Set 4" PVC well @ 17'

NOTATION: SIZE AUGERS / CASING 6" SIZE SPOON 2"

SIZE THIN-WALLED TUBE ____ SIZE CORE ____

N = NO. OF BLOWS TO DRIVE 2" "SPOON 2" "WITH 140 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE ____ "CASING ____" WITH ____ lb. WEIGHT FALLING ____ PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 22551 -4
Atlas Sheet Coordinates 26 : 03 : 619

OWNER IDENTIFICATION - Owner HOLOCARBON PRODUCTS CORP
Address P.O. BOX 6369
City NORTH AUGUSTA State SC Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-5
County Bergen Municipality HACKENSACK CITY Lot No. 26,28,28 Block No. 526
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 10,23,90
Regulatory Program Requiring Well RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Bill Lyon@WWC Tele. # 201-785-0700

WELL CONSTRUCTION
Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2	4	PVC
Outer Casing (Not Protective Casing)	—	—	—	
Screen (Note slot size)	2	17	4	PVC Slot .010
Tail Piece	—	—	—	
Gravel Pack	1.5	17	—	Sand
Annular Seal/Grout	1	1.5	—	Bentonite
Method of Grouting	Tremie			

Static water level after drilling 3 ft.
Water level was measured using WLIND
Well was developed for 7HR hours at 4 gpm
Method of development Centrifugal
Was permanent pumping equipment installed? ☒ Yes ☒ No
Pump capacity — gpm
Pump type:
Drilling Method Auger
Drilling Fluid — Type of Rig [illegible]
Name of Driller Matt Laab
Health and Safety Plan submitted? ☒ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company EMPIRE SOILS INVESTIGATIONS

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

Log Attached

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Matt Laab Date 10/

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 2029

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
10-20-90		-0-	17'		

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. MW-5

GRD. ELEV. 202255J 2603619

PROJECT Halocarbon

LOCATION Hackensack

Sheet ____ of ____

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA	WELL DETAILS
										Asphalt		
										2' Red Brown Coarse Sand w/Stone		
										3' Black Fine Sand w/Peat		
										7' Gray Fine Sand w/Silt + Clay		
14-16	1	10	10									
			9	12								

T.D. 17'
Set 4" PVC well
to 17'

Note! Made 3 attempts to get thru concrete rubble all borings within 5' of each other

1st attempt 3½'
2nd " 6'
3rd " 17' set well

NOTATION: SIZE AUGERS / CASING 6" SIZE SPOON 2"
SIZE THIN-WALLED TUBE ____ SIZE CORE ____

N = NO. OF BLOWS TO DRIVE 2" SPOON 2 "WITH 140 lb. WEIGHT FALLING 30" PER BLOW
C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

WELREC 085 2020

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED ...10-1-93...

Well Permit No. 26 - 20961
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 5 U
County _____ Municipality SADDLE BROOK TP Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 496 LANZA AVE., SADDLE BROOK, NJ.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/2/90
Regulatory Program Requiring Well OSRCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2.0 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4.0	9.0	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	4.0	9.0		
Annular Seal/Grout	0	4.0		
Method of Grouting	TREMIE			

Static water level after drilling 2.5' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller _____
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

DEC 01 92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

perratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site
Saddle Brook, New Jersey
DATE STARTED: 7/2/90 DATE COMPLETED: 7/2/90

HOLE NO. MW-5L
~~SURF. EL.~~ 26-20960
26:08:562
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 1.2'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE – HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
WL ▼	0.0'–	1*		5/6		Brown moist medium dense to very dense to dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	2.0'			11/11	17		
	2.0'–	2*		22/34			
	4.0'			51/32	85		
5.0	4.0'–	3*		10/22			
	6.0'			25/14	47		5.5'
	6.0'–	4		14/15		Gray-brown moist dense fine to coarse SAND, some silt, little fine to medium gravel	
	8.0'			18/16	33		7.0'
	8.0'–	5		6/8		Red-brown wet dense to medium dense medium fine to coarse SAND, little silt, trace fine gravel	
10.0	10.0'			8/8	16		11.0'
	10.0'–	6*		14/16		Red-gray wet hard SILT, little fine sand, little clay	
	12.0'			21/22	37		12.0'
	12.0'–	7*		20/22		Red wet very dense fine to coarse SAND, some fine to medium gravel, little silt	
	14.0'			61/30	83		14.5'
15.0	14.0'–	8*		26/100-.2'		Red wet very dense weathered SHALE	
	14.7'					Bottom of Boring	15.0'

Note: Installed 2" stainless steel 10 slot screen 15.0' to 11.0', 2" stainless steel riser to surface with locking standpipe cover.
* indicates 3" diameter sample spoon.

WELREC 095 1754

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED ....10-1-93.....

Well Permit No. 26 - 20980
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5L
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 446 LANZA AVE. SADDLEBROOK, NJ.

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 7/2/90
Regulatory Program Requiring Well MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/4937402

WELL CONSTRUCTION

Total depth drilled 150 ft.
Well finished to 150 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2.0 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	110'	150	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	11.0	150		
Annular Seal/Grout	0	11.0		
Method of Grouting	TREMIE			

Static water level after drilling 1.2 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Michael Ellingworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

perratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site
Saddle Brook, New Jersey
DATE STARTED: 7/1/90 DATE COMPLETED: 7/2/90

HOLE NO. TW-5
~~SURF. EL.~~ 26-20459
26: 03; 522
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 4.7'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		40/42		Brown moist very dense to dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	2.0'			51/100	93		
	2.0'-	2*		50/51			
	4.0'			60/34	111		
5.0 ▼	4.0'-	3		13/17			4.5'
WL	6.0'			22/24	39	Brown-gray-red moist dense to very dense fine to coarse SAND, little silt, little fine to medium gravel	
	6.0'-	4		36/36			
	8.0'			42/47	78		
	8.0'-	5		11/9			8.0'
10.0	10.0'			7/6	16	Brown-red wet medium dense fine to coarse SAND, some coarse to fine gravel, little silt	
						Bottom of Boring	10.35'

Note: Installed 2" stainless steel 10 slot screen 10.35' to 5.35', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

WELREC 085 1752

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

Received 7/10/90

MONITORING WELL RECORD

Well Permit No. 26 - 20959
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW5
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 496 LANZA AVE, SADDLE BROOK, NJ.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/2/90
Regulatory Program Requiring Well GEOLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.35 ft.
Well finished to 10.35 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.35	10.35	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.35	10.35		
Annular Seal/Grout	0	5.35		
Method of Grouting	TREMIE			

Static water level after drilling 4.71 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

02° 01 02?

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC 085 1751

perrett wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED: 7/1/90 DATE COMPLETED: 7/1/90

HOLE NO. TW-4
~~SURF. EL~~ 26-20458 26:03:522
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 4.8'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'–	1*		23/110		Brown moist very dense to medium dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	1.0'						
	2.0'–	2*		7/50			
	4.9'			31/49	81		
5.0 ▼	4.0'–	3		1/2			
WL	6.0'			13/21	15		
	6.0'–	4		12/18			
	8.0'			49/27	67		7.0'
	8.0'–	5		8/8		Red-brown wet very dense to medium, dense fine to coarse SAND, little silt, trace fine gravel, trace cobbles	
10.0	10.0'			8/10	16		8.5'
						Red-brown wet medium dense fine SAND, some silt	
						Bottom of Boring	10.4'
15.0						Note: Installed 2" stainless steel 10 slot screen 10.4' to 5.4', 2" stainless steel riser to surface. * indicates 3" diameter sample spoon.	

WELREC 085 1750

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

Received 7/8/90

MONITORING WELL RECORD

Well Permit No. 25 - 20958
Atlas Sheet Coordinates 26 : 09 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW4
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 416 LANZA AVE SADDLE BROOK, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/1/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/ 4637/4629

WELL CONSTRUCTION

Total depth drilled 10.4 ft.
Well finished to 10.4 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.4	10.4	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.4	10.4	2"	
Annular Seal/Grout	0	5.4		
Method of Grouting	TREMIE			

Static water level after drilling 4.8 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12111
Name of Driller Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

02° 01 ⊂2

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

WELREC085 1749

perrett wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED: 6/30/90 DATE COMPLETED: 6/30/90

HOLE NO. TW-3
~~SURF. EL.~~ 26-20967 26:03:562
JOB NO. 9053
GROUND WATER DEPTH WHILE DRILLING 4.8'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		16/32		Black-brown moist very dense fine to medium SAND, trace glass, trace metals, trace wood, trace ashes, trace concrete	
	2.0'			45/76	77		
	2.0'-	2*		64/52			
	3.5'			110	162		
5.0 ▼	4.0'-	3		5/6			4.0'
WL	6.0'			16/22	22	Brown moist dense fine to medium SAND, some silt	5.0'
	6.0'-	4		23/25			
	8.0'			32/20	57	Red-brown moist dense to very dense fine to coarse SAND, little coarse to fine gravel, little silt	6.5'
	8.0'-	5		5/7			
10.0	10.0'			9/7	16	Red-brown wet very dense to medium dense medium fine to coarse SAND, trace silt, trace fine gravel	9.0'
						Brown wet medium dense fine SAND, some silt	
						Bottom of Boring	10.0'

Note: Installed 2" stainless steel 10 slot screen 10.0' to 5.0', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

WELREC 085 1748

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

7/9/90

MONITORING WELL RECORD

Well Permit No. 26 - 20957
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW 3
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 416 LANZA AVE SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/30/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.0 ft.
Well finished to 10.0 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.0	10.0	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.0	10.0		
Annular Seal/Grout	0	5.0		
Method of Grouting	TREMIE			

Static water level after drilling 4.8' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12/1
Name of Drilling Company MICHAEL ELLINGWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

DEC 01 '92

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Michael Ellingworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

perratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT — Consolidated Edison Company
LOCATION — Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED — 7/1/90 DATE COMPLETED — 7/1/90

HOLE NO. TW-2
~~SURF. EL.~~ 26-20956 26:03:582
JOB NO. 9053

GROUND WATER DEPTH WHILE DRILLING 6.6'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		10/18		Brown moist dense to very dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood	
	2.0'			27/75	45		
	2.0'	1A*		60-.0'/18			
	2.5'-	2*		32/70-.2			3.0'
5.0	3.7'					Brown moist very dense to medium dense fine to coarse SAND, some fine to coarse gravel, little silt, trace ashes	
WL ▼	4.0'-	3		8/7			
	6.0'			11/11	18		5.8'
	6.0'-	4		7/8		Gray-brown moist medium dense fine SAND, little sitl, trace clay	
	8.0'			22/23	30		7.5'
10.0	8.0'-	5		11/9		Red moist medium dense fine to coarse SAND, little silt	
	10.0'			7/7	16		9.0'
						Gray-red wet very stiff SILT, some fine to coarse sand, little fine gravel	
						Bottom of Boring	10.3'

Note: Installed 2" stainless steel 10 slot screen 10.3' to 5.3', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

sealed 7/9/90

MONITORING WELL RECORD

Well Permit No. 28 - 20856
Atlas Sheet Coordinates 28 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW 2
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 486 LANZA AVE SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/11/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/4371429

WELL CONSTRUCTION

Total depth drilled 10.3 ft.
Well finished to 10.3 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.3	10.3	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.3	10.3		
Annular Seal/Grout	0	5.3		
Method of Grouting	TREMIE			

Static water level after drilling 6.6' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12H
Name of Drilling Company MICHAEL ELLINGWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable state rules and regulations.

Driller's Signature Michael Ellingworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED: 6/30/90 DATE COMPLETED: 6/30/90

HOLE NO. TW-1
~~SURF. EL.~~ 26-20955 26:03:82
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 4.6'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		6/19		Black-brown moist hard to very stiff SILT, little fine to coarse sand, trace wood, trace glass, trace metal, trace rubber	2.5'
	2.0'			34/27	53		
	2.0'-	2*		14/8			
	4.0'			10/19	18		
5.0	4.0'-	3		9/12			
WL	6.0'			13/13	25	Brown moist medium dense fine to coarse SAND, little silt, trace fine gravel	7.0'
	6.0'-	4		8/8			
	8.0'			10/10	18	Brown wet medium dense fine SAND, some silt	8.0'
	8.0'-	5		9/10			
10.0	10.0'			14/16	24	Brown-red wet very stiff SILT, little fine sand	9.5'
						Red wet medium dense weathered SHALE	
						Bottom of Boring	10.3'

Note: Installed 2" stainless steel 10 slot screen 10.3' to 5.3', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

WELREC 085 1741

DWR 138A
1/84

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 2617674
APPLICATION NO _____
COUNTY Bergen
COORD. 26 03 647

WELL RECORD

1. OWNER Croman Development ADDRESS 589 Central Ave. E. Orange
   Owner's Well No. B-2 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hackensack NJ
3. DATE COMPLETED 11-1-89 DRILLER M&R Soil Investigation,
4. DIAMETER. Top 4 inches Bottom 4 inches TOTAL DEPTH 11 Feet
5. CASING. Type Sch. 40 PVC Diameter 4 inches Length 1 Feet
6. SCREEN. Type Sch. 40 PVC Size of Opening .010 Diameter 4 inches Length 10 Feet
   Range in Depth { Top 3 Feet / Bottom 11 Feet } Geologic Formation Cohansey
   Tail Piece: Diameter N/A inches Length _____ Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST Date N/A Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type N/A Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR test boring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See Attached
    (Give details on back of sheet or on separate sheet. If existing log was made, please furnish copy.) Are samples available? _____
13. SOURCE OF DATA Driller's Log
14. DATA OBTAINED BY Doug Walker Date 11-30-89

NOTE Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 2115

26-03-647
26-17673

DWR 138A
1/84

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO 26/17673
APPLICATION NO
COUNTY Bergen
COORD. 2623 1647

WELL RECORD

1. OWNER Conrad Development ADDRESS 589 Central Ave. E. Orange N.J.
Owner's Well No. MW1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hackensack, N.J.
3. DATE COMPLETED 11-1-89 DRILLER M & J Soil Investigations
4. DIAMETER. Top 4 inches Bottom 4 inches TOTAL DEPTH 11 Feet
5. CASING. Type Sch 40 PVC Diameter 4 inches Length 1 Feet
6. SCREEN. Type Sch 40 PVC Size of Opening .010 Diameter 4 inches Length 10 Feet
Range in Depth { Top 1 Feet / Bottom 11 Feet } Geologic Formation _____
Tail Piece: Diameter N/A inches Length _____ Feet
7. WELL FLOWS NATURALLY N/A Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST Date N/A Yield _____ Gallons per minute
Static water level before pumping _____ Feet below surface
Pumping level _____ feet below surface after _____ hours pumping
Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped _____ How measured _____
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type N/A Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR Monitoring AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ___ No ___
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG See Attached
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.) Are samples available? _____
13. SOURCE OF DATA Driller's Log
14. DATA OBTAINED BY Doug Wheeler Date 11/30/89

Well is a flow

NOTE Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELREC 085 2113

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED ...10-1-93...

Well Permit No. 26 - 20961
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 5U
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 446 LANZA AVE., SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 7/21/90
Regulatory Program Requiring Well MONITORING CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGSWORTH Tele. # 315/4371429

WELL CONSTRUCTION

Total depth drilled 9 ft.
Well finished to 9 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2.0 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	4.0	9.0	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	4.0	9.0		
Annular Seal/Grout	0	4.0		
Method of Grouting	TREMIE			

Static water level after drilling 2.5' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller _____
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

D-1457

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site
Saddle Brook, New Jersey
DATE STARTED: 7/2/90 DATE COMPLETED: 7/2/90

HOLE NO. MW-5L
~~SURF. EL.~~ 26-2096
26:03:562
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 1.2'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
WL ▼	0.0'-	1*		5/6		Brown moist medium dense to very dense to dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	2.0'			11/11	17		
	2.0'-	2*		22/34			
	4.0'			51/32	85		
5.0	4.0'-	3*		10/22			
	6.0'			25/14	47		5.5'
	6.0'-	4		14/15		Gray-brown moist dense fine to coarse SAND, some silt, little fine to medium gravel	
	8.0'			18/16	33		7.0'
	8.0'-	5		6/8		Red-brown wet dense to medium dense medium fine to coarse SAND, little silt, trace fine gravel	
10.0	10.0'			8/8	16		11.0'
	10.0'-	6*		14/16		Red-gray wet hard SILT, little fine sand, little clay	
	12.0'			21/22	37		12.0'
	12.0'-	7*		20/22		Red wet very dense fine to coarse SAND, some fine to medium gravel, little silt	
	14.0'			61/30	83		14.5'
15.0	14.0'-	8*		26/100-.2'		Red wet very dense weathered SHALE	
	14.7'					Bottom of Boring	15.0'

Note: Installed 2" stainless steel 10 slot screen 15.0' to 11.0', 2" stainless steel riser to surface with locking standpipe cover.
* indicates 3" diameter sample spoon.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED ....10-1-93.....

Well Permit No. 26 - 20960
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~CONSOLIDATED EDISON CO.~~
Address ~~4 IRVING PLACE~~
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW5L
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 440 LANZA AVE. SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 7/2/90
Regulatory Program Requiring Well ~~CERCLA~~ MONITORING Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/493-1429

WELL CONSTRUCTION

Total depth drilled 15.0 ft.
Well finished to 15.0 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 2.6 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	11.0'	15.0	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	11.0	15.0		
Annular Seal/Grout	0	11.0		
Method of Grouting	TREMIE			

Static water level after drilling 1.2 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

D-1459

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT — Consolidated Edison Company
LOCATION — Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED — 7/1/90 DATE COMPLETED — 7/2/90

HOLE NO. TW-5
~~SURF. EL.~~ 26-20959 26:03;562
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 4.7'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		40/42		Brown moist very dense to dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	2.0'			51/100	93		
	2.0'-	2*		150/51			
	4.0'			60/34	111		
5.0 ▼	4.0'-	3		13/17			4.5'
WL	6.0'			22/24	39	Brown-gray-red moist dense to very dense fine to coarse SAND, little silt, little fine to medium gravel	
	6.0'-	4		36/36			
	8.0'			42/47	78		8.0'
	8.0'-	5		11/9		Brown-red wet medium dense fine to coarse SAND, some coarse to fine gravel, little silt	
10.0	10.0'			7/6	16		
						Bottom of Boring	10.35'

Note: Installed 2" stainless steel 10 slot screen 10.35' to 5.35', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

Received 7/10/90

MONITORING WELL RECORD

Well Permit No. 26 - 20959
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~CONSOLIDATED EDISON CO.~~
Address ~~4 IRVING PLACE~~
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW5
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 496 LANZA AVE, SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/2/90
Regulatory Program Requiring Well ~~CERCLA~~ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.35 ft.
Well finished to 10.35 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.35	10.35	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.35	10.35		
Annular Seal/Grout	0	5.35		
Method of Grouting	TREMIE			

Static water level after drilling 4.71 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED: 7/1/90 DATE COMPLETED: 7/1/90

HOLE NO. TW-4
~~SURF. EL.~~ 26-20958 26:03:522
JOB NO. 9053
GROUND WATER DEPTH WHILE DRILLING 4.8'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		23/110		Brown moist very dense to medium dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood, trace metal, trace concrete	
	1.0'						
	2.0'-	2*		7/50			
	4.0'			31/49	81		
5.0 ▼	4.0'-	3		1/2			
WL	6.0'			13/21	15		
	6.0'-	4		12/18			7.0'
	8.0'			49/27	67	Red-brown wet very dense to medium, dense fine to coarse SAND, little silt, trace fine gravel, trace cobbles	
	8.0'-	5		8/8			8.5'
10.0	10.0'			8/10	16	Red-brown wet medium dense fine SAND, some silt	
						Bottom of Boring	10.4'
15.0							

Note: Installed 2" stainless steel 10 slot screen 10.4' to 5.4', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site, Saddle Brook, New Jersey
DATE STARTED: 6/30/90 DATE COMPLETED: 6/30/90

HOLE NO. TW-3
~~SURF. EL.~~ 26-20957 26:03:562
JOB NO. 9053
GROUND WATER DEPTH
WHILE DRILLING 4.8'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		16/32		Black-brown moist very dense fine to medium SAND, trace glass, trace metals, trace wood, trace ashes, trace concrete	4.0'
	2.0'			45/76	77		
	2.0'-	2*		64/52			
	3.5'			110	162		
5.0 ▼	4.0'-	3		5/6			
WL	6.0'			16/22	22	Brown moist dense fine to medium SAND, some silt	5.0'
	6.0'-	4		23/25			
	8.0'			32/20	57	Red-brown moist dense to very dense fine to coarse SAND, little coarse to fine gravel, little silt	6.5'
	8.0'-	5		5/7			
10.0	10.0'			9/7	16	Red-brown wet very dense to medium dense medium fine to coarse SAND, trace silt, trace fine gravel	9.0'
						Brown wet medium dense fine SAND, some silt	
						Bottom of Boring	10.0'

Note: Installed 2" stainless steel 10 slot screen 10.0' to 5.0', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 20958
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO.
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW4
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL 416 LANZA AVE SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/1/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.4 ft.
Well finished to 10.4 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.4	10.4	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.4	10.4	2"	
Annular Seal/Grout	0	5.4		
Method of Grouting	TREMIE			

Static water level after drilling 4.8 ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12/1
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

Received 7/9/90

MONITORING WELL RECORD

Well Permit No. 26 - 20957
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner ~~CONSOLIDATED EDISON CO.~~
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW 3
County _____ Municipality SADDLE BROOK TW Lot No. 3 Block No. 4
Address CIRCLO SCRAP METAL 146 LANZA AVE SADDLE BROOK, NJ

TYPE OF WELL (as per Well Permit Categories) _____ Date well completed 6/30/90
Regulatory Program Requiring Well MONITORING ~~CERCLA~~ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.0 ft.
Well finished to 10.0 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.0	10.0	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.0	10.0		
Annular Seal/Grout	0	5.0		
Method of Grouting	TREMIE			

Static water level after drilling 4.8' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1211
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

Sealed 7/9/90

MONITORING WELL RECORD

Well Permit No. 26 - 20956
Atlas Sheet Coordinates 26 : 03 : 562

OWNER IDENTIFICATION - Owner CONSOLIDATED EDISON CO
Address 4 IRVING PLACE
City NEW YORK State NY Zip Code 10003

WELL LOCATION - If not the same as owner please give address. Owner's Well No. TW2
County _____ Municipality ~~SADDLE BROOK TW~~ Lot No. 3 Block No. 4
Address CURCIO SCRAP METAL, 416 LANZA AVE SADDLE BROOK, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/11/90
Regulatory Program Requiring Well CERCLA Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) M. ELLINGWORTH Tele. # 315/437-1429

WELL CONSTRUCTION

Total depth drilled 10.3 ft.
Well finished to 10.3 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
☐ ished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	5.3	10.3	2"	10 SLOT STAINLESS STEEL
Tail Piece				
Gravel Pack	5.3	10.3		
Annular Seal/Grout	0	5.3		
Method of Grouting	TREMIE			

Static water level after drilling 6.6' ft.
Water level was measured using STRING
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method HOLLOW STEM AUGER
Drilling Fluid _____ Type of Rig ROTARY
Name of Driller M. ELLINGWORTH
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 12M
Name of Drilling Company MICHAEL ELLINGSWORTH

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael Ellingsworth Date 8/1/90

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Consolidated Edison Company
LOCATION: Curcio Scrap Metal Inc. Site
Saddle Brook, New Jersey
DATE STARTED: 7/1/90 DATE COMPLETED: 7/1/90

HOLE NO. TW-2
~~SURF. EL.~~ 26-20956
26:03:562
JOB NO. 9053

GROUND WATER DEPTH
WHILE DRILLING 6.6'
BEFORE CASING REMOVED
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER
DRILLER'S FIELD LOG

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1*		10/18		Brown moist dense to very dense fine to coarse SAND, trace ashes, trace fine gravel, trace wood	3.0'
	2.0'			27/75	45		
	2.0'	1A*		60-.0'/18			
	2.5'-	2*		32/70-.2'			
5.0	3.7'					Brown moist very dense to medium dense fine to coarse SAND, some fine to coarse gravel, little silt, trace ashes	5.8'
WL ▼	4.0'-	3		8/7			
	6.0'			11/11	18		
	6.0'-	4		7/8		Gray-brown moist medium dense fine SAND, little sitl, trace clay	7.5'
	8.0'			22/23	30		
10.0	8.0'-	5		11/9		Red moist medium dense fine to coarse SAND, little silt	9.0'
	10.0'			7/7	16		
						Gray-red wet very stiff SILT, some fine to coarse sand, little fine gravel	
						Bottom of Boring	10.3'

Note: Installed 2" stainless steel 10 slot screen 10.3' to 5.3', 2" stainless steel riser to surface.
* indicates 3" diameter sample spoon.

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

WELL SEALED 6/20/90

Well Permit No. 26 - 20945
Atlas Sheet Coordinates 26 : 03 : 561

OWNER IDENTIFICATION - Owner GETTY PETROLEUM CORP.
Address 86 DOREMUS AVENUE
City NEWARK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. SB-1
County Municipality GARFIELD CITY Lot No. 5 Block No. 2160
Address

TYPE OF WELL (as per Well Permit Categories) BORING Date well completed 6 / 20/ 90
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) GeoEngineering, Inc. Tele. #201/361-3600

WELL CONSTRUCTION

Total depth drilled 17' ft.
Well finished to N/A ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade N/A ☐ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☐ No N/A

N/A	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing				
Outer Casing (Not Protective Casing)				
Screen (Note slot size)				
Tail Piece				
Gravel Pack				
Annular Seal/Grout				
Method of Grouting				

Static water level after drilling N/A ft.
Water level was measured using N/A
Well was developed for N/A hours at ---- gpm
Method of development N/A
Was permanent pumping equipment installed? ☐ Yes ☐ No N/A
Pump capacity N/A gpm
Pump type: ---
Drilling Method HSA
Drilling Fluid ---- Type of Rig Mobile B-57
Name of Driller Martin A. Pepper
Health and Safety Plan submitted? ☐ Yes ☐ No N/A
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1405
Name of Drilling Company B & B DRILLING, INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

DEPTH	FORMATION
0 - 3"	Blacktop
3"-6"	Roadstone, cynders
6"-2.5'	F/C sand, Br., little silt, Tr. F gravel
2.5'-4'	Dr. Br. to Br., F/C.sand some silt, Tr. F gravel
4'-6'	Br. F/C sand, black clay, tr. silt, organic mat., tr. gravel
6'-8';	Br. M/C sand, some silt little F/M gravel
8'-11'	Rd. Br. F/C sand, some clayey silt, some F/C gravel

SEE ATTACHMENT NO. 1

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Martin A. Pepper Date July 10, 1990

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ATTACHMENT NO. 1

Well Permit No. 26-20945
Well Coordinate No. 26-03-561

DEPTH	FORMATION
12' - 14'	Br. F/C sand, little silt, tr. F/C gravel,
14' - 16'	SAB
16' - 17'	Red F/C sand, some clay, little F/C gravel
17-17.5'	Shale, Red

FORM 87

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-2891
Application No. _____
County _____

WELL RECORD

1. OWNER Lake Developers ADDRESS 101 N. Beverwyck Rd., Lake Hiawatha N.J
Owner's Well No. _____ SURFACE ELEVATION 170 Feet (Above mean sea level)

2. LOCATION Route 46, Saddle Brook, N. J.

3. DATE COMPLETED Dec. 3, 1963 DRILLER Soren Nelson Jr.

4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 81 Feet

5. CASING: Type 19.45 # Drive Diameter 6 Inches Length 44'6" Feet

6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet

Range in Depth { Top _____ Feet / Bottom _____ Feet

Tail piece: Diameter _____ Inches Length _____ Feet

Geologic Formation Qcg Sand & gravel to 15', clay to 31', water bearing fine sand to 37', hardpan to rock at 41', sand stone to 62', shale to 78', sand stone to bottom.

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date Dec. 3, 1963 Yield 30 Gallons per minute
Static water level before pumping 13 Feet below surface
Pumping level 25 feet below surface after 3 hours pumping
Drawdown 25 Feet Specific Capacity 30 Gals. per min. per ft. of drawdown
How Pumped Suction pump How measured 5 gal. pail and watch.
Observed effect on nearby wells No

9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ Inches

10. USED FOR Hamburger Stand AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER Sample to be taken. Sample: Yes ____ No. ____
Taste good Odor none Color clear Temp. 55 °F

12. LOG _____ Are samples available? No
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)

13. SOURCE OF DATA Well site

14. DATA OBTAINED BY Pine Brook Well Drillers Date Dec. 3, 1963.

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

FORM 87

26-03-554 [7]

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 26-3528
Application No. _____
County _____

WELL RECORD

1. OWNER William Bigoss ADDRESS Garfield, N.J.
Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Semuel Ave., Garfield, N.J.
3. DATE COMPLETED Nov.15,1965 DRILLER John Lauritsen
4. DIAMETER: top 6 Inches Bottom 6 Inches TOTAL DEPTH 100 Feet
5. CASING: Type Steel Drive Casing Diameter 6 Inches Length 30 Feet
6. SCREEN: Type _____ Size of Opening ___ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation Hardpan & Redshale
Tail piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Nov,15,1965 Yield 20 Gallons per minute
Static water level before pumping 20 Feet below surface
Pumping level 50 feet below surface after 5 hours pumping
Drawdown 50 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Submersible Pump How measured 5 Gallon Pail
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ Inches
10. USED FOR Household AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No. ____
Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG _____ Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA _____
14. DATA OBTAINED BY _____ Date _____

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

D-9472

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 31774
Atlas Sheet Coordinates ~~26~~ : ~~03~~ : 556

OWNER IDENTIFICATION - Owner ZUCKERBERG'S INDUSTRIAL P
Address 280 MIDLAND AVENUE
City ~~SADDLE BROOK~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality SADDLE BROOK TW Lot No. 32 Block No. 1202
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 21 / 92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Woodward Clyde Consultants Tele. #

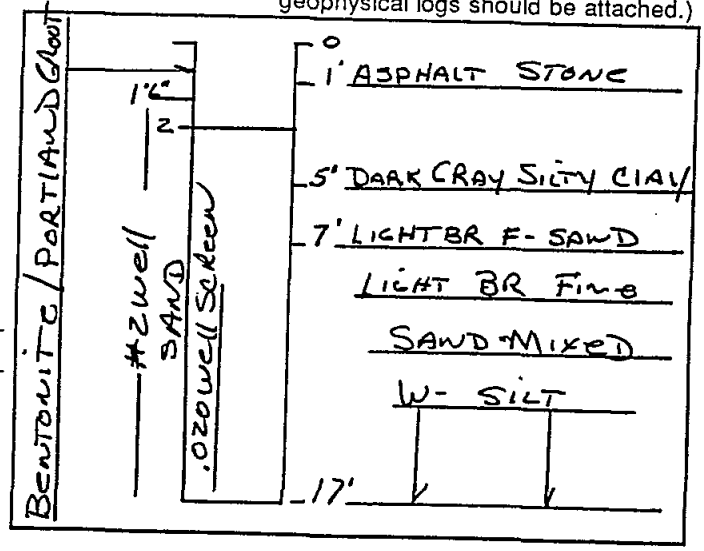
WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	17'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	1' - 6"	17'		#2 Sand
Annular Seal/Grout	6"	1' - 6"		Bentonite Pellets/ Neat Cement
Method of Grouting	Grout Pump			

Static water level after drilling 6 ft.
Water level was measured using electric tape
Well was developed for 1 hours at 5 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity gpm
Pump type:
Drilling Method Air Rotary
Drilling Fluid Type of Rig TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No.
Name of Drilling Company ~~SBI ENVIRONMENTAL INC.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Joseph Goldenrod Date 1-26-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1473

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

E

MONITORING WELL RECORD

Well Permit No. 26 31775
Atlas Sheet Coordinates ~~26~~ ~~02~~ 556 : : :

OWNER IDENTIFICATION - Owner ZUCKERBERG'S INDUSTRIAL P
Address 280 MIDLAND AVENUE
City ~~SADDLE BROOK~~ State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No.
County Municipality SADDLE BROOK TW Lot No. 32 Block No. 1202
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 12 / 22 / 92
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Woodward Clyde Consultants Tele. #

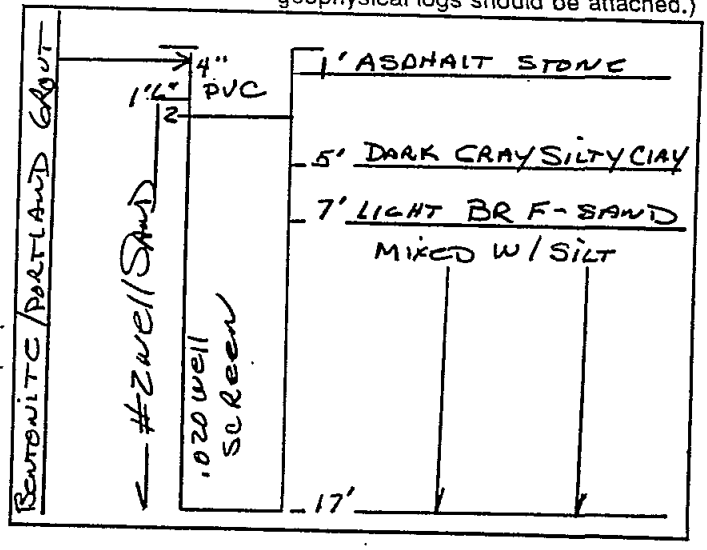
WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	17'	4"	.020 slot PVC
Tail Piece				
Gravel Pack	1' - 6"	17'		#2 Sand
Annular Seal/Grout				Bentonite/Portland
Method of Grouting	Grout Pump			

Static water level after drilling 6 ft.
Water level was measured using electric tape
Well was developed for 1 hours at 5 gpm
Method of development sub pump
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Air Rotary
Drilling Fluid ____ Type of Rig TH60
Name of Driller John Nemetz
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1330
Name of Drilling Company SBI ENVIRONMENTAL INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Joseph Sorlucco Date 1-26-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34465
Atlas Sheet Coordinates 26 : Ø3 : 556

OWNER IDENTIFICATION - Owner ~~U-HAUL RENTAL CENTER~~
Address 210 ROUTE 46 EAST
City SADDLEBROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW #7
County BERGEN Municipality SADDLE BROOK TW Lot No. 182A Block No. 12A
Address 210 ROUTE 46 EAST SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/8/93
Regulatory Program Requiring Well ~~UST~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) MARCOR of PA. / JOHN VAN WAGENEN Tele. (215) 269-3250

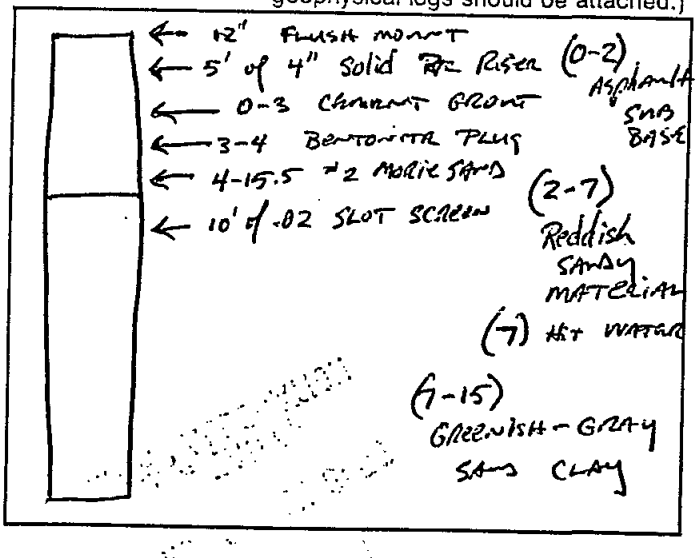
WELL CONSTRUCTION

Total depth drilled 15.5 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	NONE	DRILL CAP	installed AT	15'
Gravel Pack	4	15.5	—	#2 MORIE GRAVEL
Annular Seal/Grout	3 0	4 3		BENTONITE PLUG PORTLAND CEMENT
Method of Grouting	GROUTING WITH TREMIE			

Static water level after drilling 7 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .5 gpm
Method of development Centrifugal Pump
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid NONE Type of Rig MOBILE B-90
Name of Driller DENNIS C. MOORE
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. J 1471
Name of Drilling Company MARCOR OF PA.
~~DENNIS C. MOORE~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dennis C Moore Date 9-23-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1475

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34466
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner U-HAUL RENTAL CENTER
Address 210 ROUTE 46 EAST
City SADDLEBROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW # B
County BERGEN Municipality SADDLE BROOK TW Lot No. 182A Block No. 12A
Address 210 ROUTE 46 EAST SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/9/93
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) MARCOR of PA / JOHN VAN IMAGENAN Tele. # (215) 269-3250

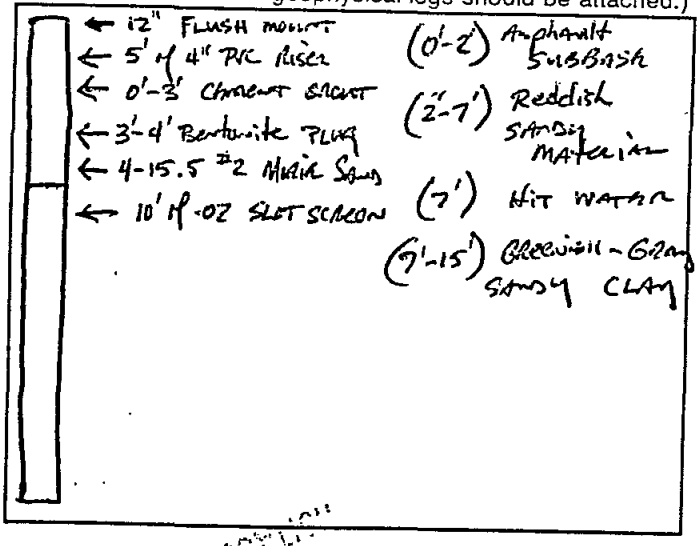
WELL CONSTRUCTION

Total depth drilled 15.5 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	sch. 40 PVC
Outer Casing (Not Protective Casing)	N/A	~~5~~	~~4~~	~~sch. 40 PVC~~
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	NONE	DRILL	CAP	installed AT 15'
Gravel Pack	4	15.5	—	#2 MARIE GRAVEL
Annular Seal/Grout	3 0	4 3		BENTONITE PLUG PORTLAND CEMENT
Method of Grouting	GROUTING WITH TREMIE			

Static water level after drilling 7 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .25 gpm
Method of development CENTRIFUGAL PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HOLLOW STEM AUGER
Drilling Fluid NONE Type of Rig MOBILE B-90
Name of Driller BILL WALSH / UNDER DENNIS C. MOORE SUP.
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 31471
Name of Drilling Company MARCOR of PA
~~DENNIS C. MOORE~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 9-23-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

D-1476

M

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34468
Atlas Sheet Coordinates 26 : 03 : 556

R IDENTIFICATION - Owner ~~U HAUL RENTAL CENTER~~
s 210 ROUTE 46 EAST
SADDLEBROOK State NJ Zip Code

LOCATION - If not the same as owner please give address. Owner's Well No. MW# 10
Municipality SADDLE BROOK TW Lot No. 182A Block No. 12A
s BERGEN 210 ROUTE 46 EAST SADDLEBROOK, NJ

OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/8/93
ory Program Requiring Well UST Case I.D. #
ILTING FIRM/FIELD SUPERVISOR (if applicable) MACCOR of PA / JOHN VAN WAGENEN Tele. # (215) 269-3250

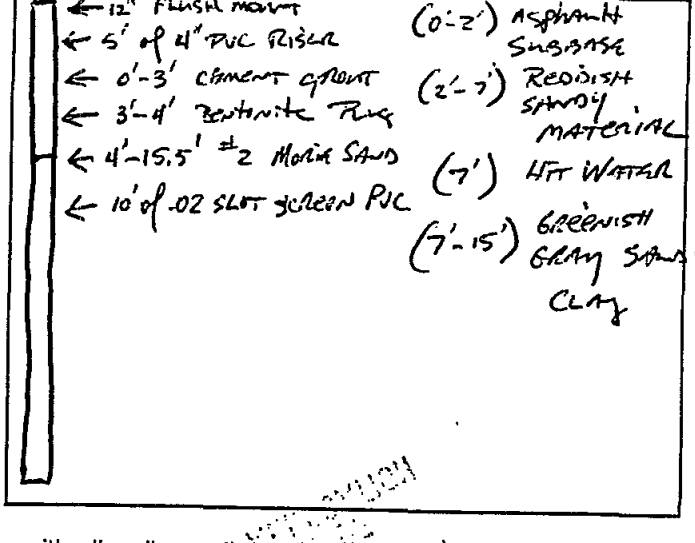
CONSTRUCTION

epth drilled 15.5 ft.
ished to 15 ft.
ie diameter:
o 10 in.
i 10 in.
is finished: ☐ above grade
☒ flush mounted
e ve grade, casing
stick up) above land
ft.
eel protective casing installed?
s ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	~~15~~	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	N/A	—	—	—
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	NONE DRILL CAP installed AT 15			
Gravel Pack	4	15.5	—	#2 Morie GRAVEL
Annular Seal/Grout	3 0	4 3		Bentonite Plug PORTLAND CEMENT
Method of Grouting	GROUTING WITH TREMIE			

ater level after drilling 7 ft.
evel was measured using STEEL TAPE
s developed for 1 hours at .25 gpm
of development Centrifugal Pump
rmanent pumping equipment installed? ☐ Yes ☒ No
apacity N/A gpm
ype: N/A
Method Hollow Stem Auger
Fluid NONE Type of Rig MOBILE B-90
f Driller Dennis C. Moore
and Safety Plan submitted? ☐ Yes ☒ No
Protection used on site (circle one) None (D) C B A
ense No. J 1471
f Drilling Company MACCOR of PA
~~PETER C. MOORE~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable
ule d regulations.

Driller's Signature Dennis C. Moore Date 9-23-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

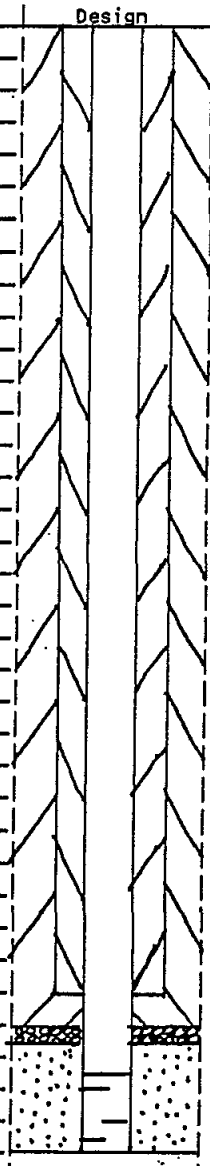
2544D Morningside Dr.
West Columbia, SC 29169
Telephone: (803) 739-9853
Toll Free: (800) 242-6648
FAX: (803) 796-969

WELL LOG

ell # MW - 7D Date Drilled 1/12/93 Coordinate # 26.03.557 Permit # 26-32202 County Bergen
se Vapor Extraction Owner Sidney Barlow, 85 Arnot Street, Lodi, NJ 07644
ite Mark - Tex Corporation, 85 Arnot Street, Lodi, NJ 07644
rilling Method N/A Sampling Method N/A Hole Diameter see below Total Depth 70'
ravel Pack Size Morie #1 & 2 Static Water Level n/a Casing Seal Portland & Pellets Open Hole
nner Casing PVC Diameter 2" Length 65' Outer Casing Steel Diameter 6" Length 60'
creen Type PVC Slot .020 Diameter 2" Length 5' Geologic Formation

Depth Below Surface	Sample Number	Blows per 6" on Sampler
20'		
40'		
60'		
80'		

Well Design



0'- 62'	GROUT
0'- 65'	IN. CASING
0'- 60'	OUT CASING
62'-63'	PELLETS
63'-70'	GRAVEL
65'-70'	SCREEN
	OPEN HOLE
70'	SET WELL
	GPM
none	DEVELOPMENT
	TIME
	STANDPIPE
X	FLUSHMOUNT
	VAULT

Identification of Soils / Remarks

2" PVC well set in previously drilled 70' steel cased open hole

Hole diameter : 0'- 60' .. 10"
60'-70' .. 6"

Drilled by: John Vogt

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34469
Atlas Sheet Coordinates 26 : 03 : 556

OWNER IDENTIFICATION - Owner U-HAUL RENTAL CENTER
Address 210 ROUTE 46 EAST
City SADDLEBROOK State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW#11
County BERGEN Municipality SADDLE BROOK TW Lot No. 182A Block No.
Address 210 Route 46 East SADDLEBROOK, NJ

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/9/93
Regulatory Program Requiring Well UST Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) MARCOR of PA / JOHN VAN WAGENEN Tele. # (215) 265-

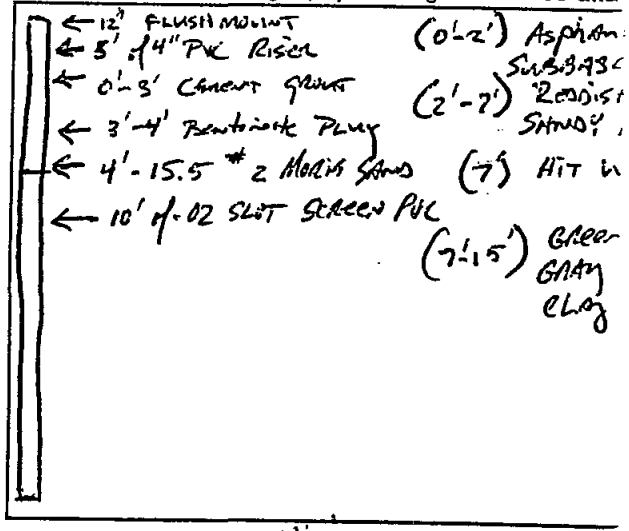
WELL CONSTRUCTION

Total depth drilled 15.5 ft.
Well finished to 15 ft.
Borehole diameter:
Top 10 in.
Bottom 10 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Materia
Inner Casing	0	5	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	NONE	DRILL	CAP	installed AT
Gravel Pack	4	15.5	—	#2 Morie Gra
Annular Seal/Grout	3 0	4 3		Bentonite Pe Portland Ce
Method of Grouting	GROUTED WITH TREMIE			

Static water level after drilling 7 ft.
Water level was measured using STEEL TAPE
Well was developed for 1 hours at .25 gpm
Method of development CENTRIFUGAL PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method Hollow Stem Auger
Drilling Fluid NONE Type of Rig Mobile B-90
Name of Driller Dennis C. Moore
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 51471
Name of Drilling Company MARCOR of PA
DENNIS C. MOORE

GEOLOGIC LOG (Copies of other geologic logs a: geophysical logs should be atta



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Dennis C Moore Date 9-23-9

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

/R-138 M
91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 34469
Atlas Sheet Coordinates 26 : 03 : 556

WNER IDENTIFICATION - Owner U-HAUL RENTAL CENTER
ldress 210 ROUTE 46 EAST
y SADDLEBROOK State NJ Zip Code

ELL LOCATION - If not the same as owner please give address. Owner's Well No. MW#11
unty BERGEN Municipality SADDLE BROOK TW Lot No. 182A Block No. 12A
dress 210 ROUTE 46 EAST SADDLEBROOK, NJ

PE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/9/93
gulatory Program Requiring Well UST Case I.D. #

ONSULTING FIRM/FIELD SUPERVISOR (if applicable) MARCOR of PA / JOHN VAN WAGENEN Tele. # (215) 205-3250

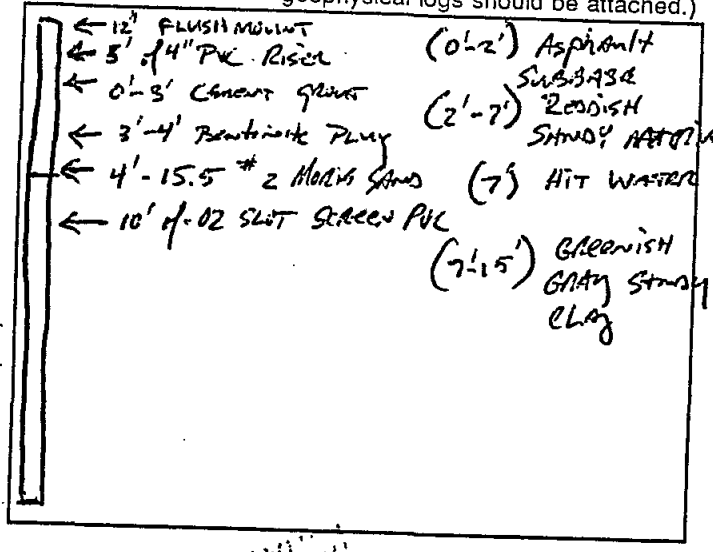
ELL CONSTRUCTION

tal depth drilled 15.5 ft.
ell finished to 15 ft.
rehole diameter:
Top 10 in.
ttom 10 in.
ell was finished: ☐ above grade
☒ flush mounted
nished above grade, casing
ght (stick up) above land
face _____ ft.
s steel protective casing installed?
☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	5	15	4	.02 SLOT
Tail Piece	NONE	DRILL	CAP	INSTALLED AT 15
Gravel Pack	4	15.5	—	#2 MORIE GRAVEL
Annular Seal/Grout	3 0	4 3		BENTONITE PLUG PORTLAND CEMENT
Method of Grouting	GROUTED WITH TREMIE			

tic water level after drilling 7 ft.
ter level was measured using STEEL TAPE
ll was developed for 1 hours at .25 gpm
hod of development CENTRIFUGAL PUMP
s permanent pumping equipment installed? ☐ Yes ☒ No
mp capacity N/A gpm
mp type: N/A
ing Method Hollow Stem Auger
ing Fluid NONE Type of Rig MAGIL B-90
ne of Driller Dennis C. Mann
lth and Safety Plan submitted? ☐ Yes ☒ No
el of Protection used on site (circle one) None (D) C B A
License No. J 1471
ne of Drilling Company MARCOR of PA
~~DENNIS C. MOORE~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



rtify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable
e rules and regulations.

Driller's Signature Dennis C Mann Date 9-23-93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.