Formerly Utilized Sites Remedial
Action Program (FUSRAP)

Maywood Chemical Company Superfund Site

ADMINISTRATIVE RECORD

Document Number

MISS – 174

US Army Corps
of Engineers®

Annual Environmental Monitoring Report, 2001

New York District
Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

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for:
US Army Corps of Engineers - Kansas City District
Formerly Utilized Sites Remedial Action Program
Contract No. DACW41-99-D-9001

US Army Corps
of Engineers

June 2002

ANNUAL ENVIRONMENTAL MONITORING REPORT, 2001

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND ROCHELLE PARK, NEW JERSEY

SITE-SPECIFIC ENVIRONMENTAL RESTORATION
CONTRACT No. DACW41-99-D-9001
TASK ORDER 0001
WAD 02, WBS 07

Submitted to:

Department of the Army
U.S. Army Engineer District, Kansas City
Corps of Engineers
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Department of the Army
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Issued to: ______________________________ Date: ________________

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ABBREVIATIONS AND ACRONYMS

AEC	Atomic Energy Commission
AL	Action Level
ANL	Argonne National Laboratory
ASTM	American Society for Testing and Materials
BEE	Baseline Ecological Evaluation
bgs	Below Ground Surface
BNI	Bechtel National, Incorporated
Bq	Becquerel
CAA	Clean Air Act
CAP88-PC	Clean Air Act Assessment Package 1988 – Personal Computer
CFR	Code of Federal Regulations
cm	Centimeter
DOE	Department of Energy
DTW	Depth to Water
EMP	Environmental Monitoring Program
EPA	U.S. Environmental Protection Agency
ft	Feet
FUSRAP	Formerly Utilized Sites Remedial Action Program
g	Gram
gal	Gallon
GWQC	Groundwater Quality Criteria
GWRI	Groundwater Remedial Investigation
ha	Hectare
IG	Instruction Guides
in.	Inches
kg	Kilogram
km	Kilometers
L	Liters
lb	Pound
LEL	Lowest Effect Level
LNAPL	Light, non-aqueous phase Liquid
m	Meters
m^3	Cubic meters

ABBREVIATIONS AND ACRONYMS

mg/l	Milligrams per liter
mi	Miles
MCL	Maximum Contaminant Level
MCW	Maywood Chemical Works
MDA	Minimum Detectable Activity
MISS	Maywood Interim Storage Site
ml	Milliliter
mSv	Millisievert
mrem	Millirem
mrem/yr	Millirem per year
MSL	Mean Sea Level
N/A	Not Applicable
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NE	Not Established
NESHAPS	Nation Emission Standards for Hazardous Air Pollutants
NRC	Nuclear Regulatory Commission
oz	Ounces
pCi	Picocurie
pCi/g	Picocuries per gram
pCi/l	Picocuries per liter
ppm	Parts per million
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SCC	Soil Cleanup Criteria
SEL	Severe Effects Level
SDWA	Safe Drinking Water Act
SD	Sediment
SMCL	Secondary Maximum Contaminant Level
SOR	Sum of Ratios
SQL	Sample Quantitation Limit
SW	Surface Water
TBD	To Be Determined
TCRA	Time Critical Removal Action
TETLD	Tissue-equivalent Thermo-luminescent Dosimeter
TOR	Top of Riser
μg	Micrograms
USACE	U. S. Army Corps of Engineers

ABBREVIATIONS AND ACRONYMS

VOC	Volatile Organic Compound
VP	Vicinity Property
WL	Working Level
yd^3	Cubic yard (also cy)

EXECUTIVE SUMMARY

This report presents and interprets analytical results and measurements obtained from the 2001 Environmental Monitoring Program (EMP) for the Maywood Interim Storage Site (MISS) under the Formerly Utilized Sites Remedial Action Program (FUSRAP). The FY 1998 Energy and Water Appropriations Bill, signed into law on October 13, 1997, transferred management of FUSRAP from the U.S. Department of Energy (DOE) to the U.S. Army Corps of Engineers (USACE). Consistent with USACE policy, the U.S. Nuclear Regulatory Commission (NRC) and U. S. Environmental Protection Agency (EPA) criteria for radionuclides have been used to evaluate analytical results. DOE criteria for radionuclides have been retained when the criteria are either agreed to by EPA, are site specific, or are not available from the EPA or NRC.

In the early history of the site, from 1916 to 1959, Maywood Chemical Works (MCW) extracted radioactive thorium from monazite sand resulting in contamination of the property with low levels of thorium and lower levels of uranium and radium. The EMP for the site includes sampling of air, water, and streambed sediment to aid in the evaluation of potential hazards to the off-site population presented by these materials. This report compares the results taken in the year 2001 of external gamma radiation measurements, radon gas measurements, and samples of environmental media to the historical background conditions and to regulatory and other criteria.

Federal and State regulations and other criteria are used to evaluate concentrations of radioactive constituents and doses at the site (see References 5 & 6). The calculated dose to the hypothetically maximally exposed individual from direct gamma radiation at the MISS in 2001, based on the measured Tissue-equivalent Thermo-luminescent Dosimeter (TETLD) results, is 6.72 mrem. This is well below the NRC standard of 100 mrem. Measured radon-222 concentrations for 2001 ranged from non-detect to 0.3 pCi/l, which is well below the 4 pCi/l EPA action level. Radon-220 concentrations ranged from non-detect to a maximum of 3.18 pCi/l, which is also below the EPA action level.

The airborne particulate dose to the hypothetically maximally exposed individual in 2001 was 0.0014 mrem/year, which is well below the 10 mrem/year standard specified in 40CFR61, Subpart H. No radiological parameter exceeded relevant criteria, except as discussed below.

- The measured concentration of various radionuclides in sediment samples collected in Lodi Brook exceeded the DOE/EPA soil cleanup criteria at four locations (SWSD008, SWSD006, SWSD007 and SWSD005). The maximum concentrations of radium-228 (5.10 pCi/g) and thorium-228 (6.30 pCi/g) were found at location SWSD008. The maximum concentrations of thorium-230 (6.64 pCi/g) and thorium-232 (6.91 pCi/g) occurred at locations SWSD007 and SWSD005, respectively. In the absence of regulatory criteria for sediment, the limits established by the DOE/EPA agreement are used to evaluate concentrations of radioactive constituents in shallow streambed sediment. Further downstream at SWSD010 and SWSD015 along Lodi Brook, detected concentrations of all analyzed radionuclides were below the soil cleanup criteria. The concentrations of all analyzed radionuclides were below the soil cleanup criteria for sediment samples collected in Westerly Brook in 2001. Results for 2001 are within the historical range for these radionuclides and confirm the presence of radiological contamination in the streambed sediment of the eastern tributary of Lodi Brook and downstream locations along Lodi Brook.

- Conservative Federal and State drinking water standards for radiological contaminants were used as criteria to evaluate monitoring results for surface water. No surface water samples collected in 2001 exceeded any radiological criteria on Lodi Brook or on Westerly Brook.

- The same conservative Federal and State drinking water Standards for radiological contaminants (as outlined in section 2.2 in the summary table of radiological criteria for water and sediment) were used as criteria to evaluate monitoring results for groundwater. There was no exceedance for either the radium or thorium criteria for groundwater samples collected in 2001. There was one exceedance of the uranium criteria with a measured uranium concentration of 52.87 pCi/L (74.53 µg/L) for monitoring well MISS05A. There were five exceedances of the gross alpha criteria with the highest measured concentration of 42.00 pCi/L for monitoring well B38W18D. All other gross alpha exceedances ranged from 16.13 to 32.73 pCi/L. There were also seven exceedances of the gross beta with the highest measured concentration of 355.75 pCi/L for monitoring well B38W19D. Results for 2001 are within the historical range for radium, thorium and uranium (gross alpha and gross beta have been monitored only in the past two years).

The Federal and State standards for chemical contamination in soil and water were conservatively used as criteria to evaluate monitoring results for streambed sediments, surface water, and groundwater. Some metals exceeded the New Jersey soil cleanup criteria in sediment samples. Some metals exceeded Federal and State standards in surface water. Some metals and volatile organic compounds (VOCs) in groundwater samples exceeded the State and Federal standards:

- The concentration of lead in sediment from Lodi Brook (SWSD007) was above the State soil cleanup criteria. This was the only location along Lodi Brook where the sediment concentration of any metal exceeded the State soil cleanup criteria. There were no exceedances of the State proposed soil cleanup criteria in Westerly Brook. There were exceedances of the Severe Effects Level (SEL) for chromium, copper, and lead in Lodi Brook at location SWSD007. An exceedance at the SEL for lead was also found at SWSD006. There were also several exceedances of the Lower Effects Level (LEL) for cadmium, lead, copper, zinc, chromium, and nickel in both Lodi Brook and Westerly Brook. Elevated concentrations of metals are expected given the generally industrialized nature of the area surrounding the site. Off-site contributors of these metals are likely. Concentrations of heavy metals at upstream and downstream environmental monitoring locations have frequently exceeded the New Jersey soil cleanup criteria. The somewhat sporadic nature of the fluctuations in metal concentrations implies that contaminants present in local areas are dispersed during heavy runoff.
- Federal Safe Drinking Water Act (SDWA) maximum contaminant levels (MCLs) and New Jersey Groundwater Quality Standards for Class II A aquifers were used as conservative criteria to evaluate monitoring results for chemical contaminants in surface water. Metals that exceeded both the Federal and State standards in Lodi Brook and Westerly Brook include iron, manganese, and thallium. Arsenic exceeded State standards in Westerly Brook.
- Arsenic exceeded the SDWA MCLs and New Jersey Groundwater Quality Standards for Class IIA aquifers in many wells. Arsenic was detected in both on-site and off-site wells. Although groundwater at the MISS is not used as a public drinking water supply, State groundwater quality limits and Federal drinking water standards were used as a conservative basis of comparison for chemical concentrations in groundwater.
- The detection of VOCs in groundwater in 2001 is consistent with historical results. The detected VOCs in groundwater at the MISS are tetrachloroethene and its degradation products: trichloroethene, dichloroethenes, and vinyl chloride. VOCs are present in both on-site (primarily in bedrock) and off-site (shallow and bedrock) groundwater. The presence of VOCs in downgradient monitoring wells B38W14D, B38W14S, B38W15D and MISS01B is due to either groundwater movement or infiltration from Westerly Brook to these wells.

The results described above are comparable to results reported in previous years. No significant changes were observed.

1.0 INTRODUCTION

The Maywood Interim Storage Site (MISS) is located in Bergen County, New Jersey, approximately 20 km (12 mi) northwest of New York City and 21 km (13 mi) northeast of Newark, New Jersey (Figure 1). The Maywood site includes the 4.7-ha (11.7 acres) federally-owned MISS and over 85 vicinity properties (VPs) in Maywood, Lodi, and Rochelle Park. The site is bordered to the west by State Route 17, to the north by the New York Susquehanna and Western Railroad line and to the south and east by commercial and industrial properties.

The Maywood Chemical Works (MCW) site was constructed in 1895. During the years 1916 to 1959, MCW extracted radioactive thorium and rare earth metals from monazite sand for production of mantles for gas lanterns. The waste materials generated during this process contained thorium-232 and associated decay products, with lesser amounts of radionuclides in the uranium-238 decay series. Slurry containing waste from these operations was pumped into two earthen-diked retention ponds west of the plant. These ponds were subsequently capped. Some process waste sands were combined with tea and coca leaves from other MCW operations, and then removed from the site and used as mulch and fill material on nearby properties. Additional waste was transported off-site by the Lodi Brook, which ran southward along the facility property line and into the Borough of Lodi. Thorium residues in the brook settled onto adjacent properties where buildings and residences were subsequently built. In 1959, the MCW facility was sold to the Stepan Company. The Stepan Company has never processed radioactive material (DOE 1992).

In 1961, the Atomic Energy Commission (AEC) issued a radioactive material license to the Stepan Company for radioactive material storage and remediation of the facility. Between 1966 to 1968, contaminated material was removed from the property west of New Jersey Route 17 and buried in three pits on the Stepan Company site.

In 1983, the Environmental Protection Agency (EPA) added the Maywood site to the National Priorities List and the following year cleanup of radioactive contamination at the Maywood Site was assigned to DOE by Congress. To expedite remediation of the Maywood site and its VPs, DOE purchased a 4.7-ha (11.7 acre) portion of the Stepan Company property for use as an interim storage facility for radioactively-contaminated materials (DOE 1992). This property was referred to as the MISS. On October 13, 1997, the FY 1998 Energy and Water Appropriations Bill transferred management of FUSRAP from DOE to USACE. The USACE became a successor to the DOE as of March 17, 1999. FUSRAP activities presently continue with USACE.

1.1 MEASURED PARAMETERS

The key elements of the 2001 EMP program at the MISS were:

- Measurement of external gamma radiation - continuous monitoring.
- Measurement of radon gas concentrations in air (from radon-220 and radon-222) - continuous monitoring.
- Measurement of radon flux for soil stockpile at MISS – as required.

- Sampling and analysis of streambed sediment for radioactive constituents and metals - annual monitoring.

- Sampling and analysis of surface water for radioactive constituents and metals – annual sampling.

- Sampling and analysis of groundwater for radioactive constituents, metals, and VOCs – annual sampling.

1.2 CALCULATED ELEMENTS

As part of the environmental monitoring program, calculations were performed to determine the dose to the hypothetically maximally exposed individual (offsite) from external gamma radiation at the MISS as well as airborne particulate dose to the hypothetical maximally exposed individual (offsite) from airborne particulates generated from activities associated with the MISS. In addition, the cumulative dose to the hypothetical maximally exposed individual from external gamma radiation at MISS as well as airborne particulates generated by activities associated with MISS was calculated.

The following briefly describes the methodology for performing the above calculations and the results. More detailed discussions of these calculations and the results with regard to regulatory compliance issues are provided in Sections 5.0 and 6.0 and Appendix C.

- External gamma radiation dose rates are measured continuously at various locations at MISS using tissue-equivalent thermoluminescent dosimeters (TETLDs). When the readings are corrected for shelter/absorption and background concentration, and normalized to exactly one year's exposure, these detectors provide a measurement of the annual external gamma radiation at that location.

- The corrected readings from the TETLDs are used to calculate the external gamma radiation dose to a hypothetical maximally exposed individual conservatively assumed to be located 50 ft from the side of the property with the highest radiation readings. This is a conservative approach since the nearest receptor is located over 200 ft from the monitoring location with the highest radiation readings.

- The computer program used to model potential offsite exposure from airborne emissions is the Clean Air Act Assessment Package - 1988 Personal Computer (CAP88-PC) program (Version 2.0). Airborne emissions contributing to offsite exposure can occur from areas where the radioactively contaminated soil is exposed to the elements and from operations that generate airborne emissions.

- The CAP88-PC model determines the hypothetical maximally exposed individual based on the radionuclide emissions, local meteorological data and other factors. The model can calculate the effective dose equivalent for any receptor of interest (e.g., residences, schools, workers).

- Although the emission of radon gas is not considered in this analysis, the daughters of radon gas generated by the decay of radon-226 in dust off-site are accounted for by the model in the computation of the effective dose equivalents for the various internal and external exposure pathways.

1.3 UNIT CONVERSIONS

The following tables list the units of measurement and appropriate abbreviations used in this document. Conventional units for radioactivity are used because the regulatory guidelines are generally provided in these terms; Système Internationale (SI) units of measurement are used in the discussion of all other parameters. Unit conversions are provided in the text for water level information only.

Table 1-1
Units of Measurement and Conversion Factors - Radioactivity

Parameter	Conventional Units	SI Units	Conversion Factor
Dose	millirem (mrem)	MilliSievert (mSv)	1 mrem = 0.01 mSv
Activity	picocurie (pCi)	Becquerel (Bq)	1 pCi = 0.037 Bq

Table 1-2
Units of Measurement and Conversion Factors - Mass, Length, Area, and Volume

Parameter	SI Units	English Units	Conversion Factor
Mass	gram (g)	ounce (oz)	1 g = 0.035 oz
	kilogram (kg)	pound (lb)	1 kg = 2.2046 lb
Length	centimeter (cm)	inch (in.)	1 cm = 0.394 in.
	meter (m)	foot (ft)	1 m = 3.281 ft
	kilometer (km)	mile (mi)	1 km = 0.621 mi
Area	hectare (ha)	Acre	1 ha = 2.47 acres
Volume	Milliliter (mL)	fluid ounce (fl oz)	1 mL = 0.0338 fl oz
	liter (L)	gallon (gal)	1 L = 0.264 gal
	cubic meter (m^3)	cubic yard (yd^3)	1 m^3 = 1.307 yd^3

2.0 EVALUATION CRITERIA

Regulatory and other criteria used to evaluate the results of the 2001 EMP program at the MISS are summarized as follows, categorized by media and parameters.

2.1 EXTERNAL GAMMA RADIATION AND AIR (RADON GAS AND AIRBORNE PARTICULATES)

Criteria for evaluating calculated maximum doses from external gamma radiation and inhalation of radioactive particulates, and measured concentrations of radon gas are as follows:

- **10CFR20**
  Dose limits for members of the public from NRC licensed activities are presented in this NRC standard. While the Maywood FUSRAP project is not licensed by the NRC, the project is contractually required to meet the requirements of 10CFR20. The primary dose limit is expressed as a total effective dose equivalent. The limit of 100-mrem total effective dose equivalent above background from all sources for a period of a year is specified in this standard. External gamma radiation dose and the calculated doses from all releases are included in the calculation of the total effective dose equivalent. The 100-mrem total effective dose equivalent above background specified in this standard includes all pathways.

- **40CFR192**
  The applicable limit for radon in air is provided in this standard as 0.02 Working Levels (WLs), including background. A working level is any combination of short-lived radon decay products in 1 liter of air that will result in the ultimate emission of 1.3×10^5 Mev of potential alpha energy. The WL of 0.02 is applied to buildings only, where ventilation and other effective methods could be provided to maintain this limit. EPA guidance documents related to radon in homes refer to an Action Level (AL) of 4pCi/L. Radon concentrations that exceed the AL of 4 pCi/L require mitigation (EPA 1992d).

- **40CFR61, Subparts H & Q**
  Section 112 of the Clean Air Act authorized EPA to promulgate the National Emission Standards for Hazardous Air Pollutants (NESHAPs), which is applicable at the MISS under Subpart H (i.e., for non-radon, radioactive constituents) and Subpart Q (for radon emissions). Compliance with Subpart H is verified by applying the EPA-approved Clean Air Act Assessment Package 1988-Personal Computer (CAP88-PC) model-version 2.0 (DOE 1997). Until the storage pile was removed in 1996, compliance with subpart Q was verified by semi-annual monitoring for radon-222 flux. Radon flux monitoring was resumed in 2000 for the storage pile created as a result of a Time Critical Removal Action(TCRA) for the swale, remediation and restoration of the Ballod property and operation of the pilot facility. Radon flux monitoring was not performed during the year 2001 since the new soil stockpiles at MISS remained on-site for only a short period of time.

Table 2-1
Summary of Radiological Criteria Used
External Gamma Radiation and Air

Parameter	NRC Standard	EPA Standard or Guideline
Radon-222	10 pCi/L[h]	4 pCi/L [a]
Radon-220	20 pCi/L[h]	--[b]
Radon Flux		20 $pCi/m^2/s$ [g]
Radionuclide Emissions (airborne particulates and radioactive gases)	10 mrem/yr[c]	10 mrem/yr[d]
Total Effective Dose Equivalent (total contribution from all sources [e])	100 mrem/yr[f]	

Notes:
[a] EPA standard from 40 CFR 192.
[b] Provisions applicable to radon-222 shall apply to radon-220 (40CFR192.41, provisions).
[c] NRC standard from 10CFR20.1301(d) for particulate and radon-220 emissions only; excludes radon-222.
[d] EPA standard from 40CFR61, Subpart H, for particulate emissions only; excludes radon-222 and radon-220.
[e] Contributing sources at the MISS consist of external gamma radiation exposure, radionuclide emissions listed above, and ingested radionuclides in water and soil/sediment.
[f] NRC standard from 10CFR20.1301(a); background is excluded in the calculation of dose.
[g] EPA standard 40CFR61, Subpart Q.
[h] NRC 10CFR20 Appendix B assuming no radon daughters are present.

2.2 SEDIMENT, SURFACE WATER AND GROUNDWATER - RADIOACTIVE CONSTITUENTS

Criteria for evaluating the measured concentrations of radionuclides in sediment, surface water, and groundwater at the MISS are:

- **Soil Cleanup Criteria for the Maywood Site**
  The criteria for radionuclides in soil were agreed to by DOE and EPA in 1994 (DOE 1994a). At Phase I properties, the radiological soil cleanup criteria for radium and thorium are 5 pCi/g above background regardless of depth. The EMP does not include analysis of on-site soils; however, because there are no standards for sediment, the soil cleanup criteria are used as a basis for evaluating the analytical results for sediment. The MISS site-specific soil cleanup criterion for total uranium, developed at Argonne National Laboratory (ANL) for DOE, is 100 pCi/g above background (DOE 1994b). For mixtures of radionuclides, the data are evaluated by the sum-of-ratios method. By this method, the above-background concentration of each of the radioisotopes (radium-226 or thorium-230, whichever is greater; thorium-232 or radium-228, whichever is greater; and total uranium) is divided by its respective criterion values, and the ratios are summed. If the result is greater than 1, the mixture of radionuclides fails the sum-of-ratios (SOR) test and is thereby considered to exceed the soil guidelines. This SOR calculation is used for the purpose of this report and is a conservative approach.

- **40CFR141**
  The regulations in 40CFR141 set maximum permissible levels of organic, inorganic, radiological, and microbial contaminants in drinking water by specifying the maximum contaminant level (MCL) for each. MCLs have been promulgated for total uranium, combined concentrations of radium-226 and radium-228, and gross alpha. Although groundwater at the MISS is not a public drinking water supply, the MCLs for drinking water are considered relevant and appropriate and are used as a conservative basis for evaluating analytical results. New Jersey drinking water

regulations (New Jersey Administrative Code [NJAC] 7:10) incorporate, by reference, all the Federal drinking water standards unless a more stringent State standard for a hazardous contaminant has been promulgated. New Jersey has adopted all the MCLs, and they have added a maximum contaminant level for gross beta of 50 pCi/L. MCLs for drinking water were also used to conservatively evaluate surface water. Sampling was performed for specific radiological contaminants known to exist at the MISS (Gross alpha, Gross Beta, Rad-226/228, Th-230/232, and Total Uranium). With respect to Th-230/232, comparisons will be made to the gross alpha MCL of 15 pCi/L. For total uranium, comparisons will be made to the Federal/State MCL (N.J.A.C. 7:9-6) of 30 μg/L (20pCi/L).

Table 2-2
Summary of Radiological Criteria Used Water and Sediment

Parameter	New Jersey Groundwater Quality Standards	EPA Drinking Water Standard	Sediment Criteria
Gross Alpha	15 pCi/L	15 pCi/L	
Gross Beta		50 pCi/L[e]	
Radium-226	5 pCi/L[a]	5 pCi/L[a]	5 pCi/g[c]
Radium-228	5 pCi/L[a]	5 pCi/L[a]	5 pCi/g[c]
Thorium-230	15 pCi/L[b]		5 pCi/g[c]
Thorium-232	15 pCi/L[b]		5 pCi/g[c]
Total Uranium	30 μg/L (20 pCi/L)[f]	30 μg/L (20 pCi/L)[f]	100 pCi/g[d]

Notes:
[a] Current SDWA, MCL for the combined concentration of radium-226 and radium-228 in drinking water.
[b] Total thorium is compared to the Gross Alpha criteria of 15 pCi/L.
[c] Soil cleanup criteria established by DOE and EPA are used as a basis for evaluating analytical results for sediment.
[d] Site-specific soil cleanup criteria developed by ANL for DOE.
[e] If the gross beta particle activity exceeds 50 pCi/L, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated (40CFR141.26). Naturally occuring potassium-40 beta particle activity may be excluded from the calculation of Gross Beta activity per Federal register Vol. 65 No. 236.
[f] The NJDEP has established a MCL for total uranium in drinking water of 30 μg/L or 20 pCi/L; thus, regulatory compliance was determined by comparing the measured values for total uranium to the MCL expressed in both of the above units. Since the results of the laboratory analyses for surface water and groundwater are reported in pCi/L, the initial determination of regulatory compliance was made by comparing the reported values to the NJDEP MCL for total uranium in drinking water of 20 pCi/L. To further evaluate compliance, the reported U-238 concentration in pCi/L was divided by the specific activity of U-238 (0.3365 pCi/μg) to obtain the total uranium in μg/L and then compared to the equivalent NJDEP MCL for total uranium in drinking water of 30 μg/L.

2.3 SEDIMENT - CHEMICAL PARAMETERS

Criteria for evaluating the detected concentrations of chemical parameters in sediment at the MISS are as follows:

- **New Jersey Proposed Cleanup Standards for Contaminated Sites**
  These standards are currently being provided as guidance by the New Jersey Department of Environmental Protection (NJDEP). Because there are no standards for sediment, the New Jersey proposed cleanup standards for residential and nonresidential properties were used as a conservative basis for evaluating results of analyses for metals in sediment (NJDEP 1992).

- **Sediment Screening Values for use in the Baseline Ecological Evaluation (BEE) (NJDEP 1998)**
  To aid in the identification of contaminants of potential ecological concern, site-related sediment data are compared to established screening level criteria in the Baseline Ecological Evaluation

(BEE). An exceedance above the Lowest Effect Level (LEL) in the BEE indicates a potential risk (not cleanup) to the benthic community and a need for further investigation.

2.4 GROUNDWATER AND SURFACE WATER - CHEMICAL PARAMETERS

Although the groundwater at the MISS is not used as a public drinking water supply, Federal standards for contaminated soils on drinking water and State groundwater standards are used in this document as a conservative basis for comparison of chemical analytical results.

- **40CFR141**
  As noted above, the SDWA is the primary Federal law applicable to the operation of a public water system and the development of drinking water quality standards. The regulations establish MCLs for organic, inorganic, and microbial contaminants in drinking water. In some cases, secondary maximum contaminant levels (SMCLs), which are not Federally enforceable (40CFR143), are provided as guidelines for the various states. MCLs for drinking water were used to conservatively evaluate groundwater and surface water monitoring results.

- **New Jersey Groundwater Quality Criteria - Class IIA**
  Groundwater in New Jersey is classified according to its hydrogeological characteristics and uses. The primary designated use for Class IIA groundwater is as a potable water supply, although Class IIA uses also include agricultural and industrial water. NJAC7:9-6 lists groundwater quality criteria (GWQC) and practical quantitation limits (PQLs).

3.0 SAMPLING LOCATIONS AND RATIONALE

Contamination at the MISS is present in the former retention ponds, on the ground surface, and in on-site structures. Exposure to members of the public by this radioactively-contaminated material at the MISS is unlikely because of site access restrictions (e.g., fences) and engineering controls (e.g., pile covers). Potential pathways include direct exposure to external gamma radiation, inhalation of radon or radioactively-contaminated particulates in air, and contact with or ingestion of contaminated streambed sediments, surface water, or groundwater. The EMP at the MISS has been developed in order to evaluate and monitor these potential exposure routes through periodic sampling and analysis for radioactive and chemical constituents. Figures 2, 3-A and 3-B show the EMP sampling locations at the MISS and vicinity properties, and indicate the type of media sampled at each location. Table 1 summarizes the 2001 monitoring program at the MISS for external gamma radiation, radon gas, surface water, sediment, and groundwater.

Measurements of external gamma radiation are taken along fence line locations surrounding the MISS in order to assess potential exposure levels to the public and site workers (Figure 2).

Atmospheric monitoring of radon gas is conducted on-site, both in known areas of contamination and at fence line locations (Figure 2).

Surface water and sediment sampling includes the analysis for radioactive constituents and metals along Westerly Brook and Lodi Brook (Figure3-A, and 3-B). Sampling locations along Lodi and Westerly Brook are used to assess both upstream and downstream conditions. Because Lodi Brook receives drainage from areas of known contamination, sampling is also conducted along the eastern and western tributaries of this stream.

Water level measurements and groundwater samples from monitoring wells enable the assessment of groundwater flow patterns and are used to evaluate groundwater quality upgradient and downgradient of the site, in the source area and at the MISS / Stepan Company boundary (Figure 2). Groundwater in both the surficial unconsolidated sediments and bedrock is monitored at the MISS.

4.0 MONITORING METHODOLOGY

Under the MISS EMP conducted in 2001, standard analytical methods approved and published by EPA and the American Society for Testing and Materials (ASTM) were used for chemical (i.e., all non-radiological) analyses. The laboratories conducting the radiological analyses adhere to EPA-approved methods and procedures developed by the Environmental Measurements Laboratory (EML) and ASTM. All laboratories analyzing FUSRAP chemical samples are certified by NJDEP. A detailed listing of the specific procedures and the data quality objectives for the monitoring conducted in 2001 program is provided in the FUSRAP Chemical Data Quality Management Plan (CDQMP).

Environmental monitoring activities at the MISS in 2001 were conducted in accordance with the Chemical Data Quality Management Plan (CDQMP) and Standard Operating Procedures (SOPs) listed in the following table. The monitoring activities are based on guidelines provided in *RCRA Ground Water Monitoring: Draft Technical Guidance* (EPA 1992b); *Test Methods for Evaluating Solid Waste, Physical / Chemical Methods,* SW-846 (EPA 1992c); and *A Compendium of Superfund Field Operations Methods* (EPA 1987). Groundwater samples were collected using the USEPA Region II memo dated March 20, 1988, titled *Final USEPA Region II Low Stress (Low Flow) Groundwater Sampling Standard Operating Procedure (EPA, 1988).*

Table 4-1
FUSRAP Instruction Guides Used for Environmental Monitoring Activities

SOP Number	SOP Title
SW-MWD-410-0	Groundwater Level Measurements (CDQMP,1999)
SW-MWD-506-0	Decontamination of Field Sampling Equipment at FUSRAP Sites (CDQMP, 1999)
SW-MWD-302-0	Surface Water Sampling (CDQMP, 1999)
SW-MWD-301-0	Sediment sampling (CDQMP, 1999)
191-IG-029	Radon / Thoron and TETLD Exchange (BNI 1993b)
SW-MWD-304-0	Groundwater Sampling Activities (CDQMP,1999)

5.0 ANALYTICAL DATA AND INTERPRETATION OF RESULTS

This section presents the data and interpretation of results for the 2001 EMP at the MISS. Data for 2001 are presented in Tables 2 through 13.

The most precise analytical method for analysis of total uranium yields results in values expressed as µg/L and µg/g for water and sediment samples, respectively. To allow direct comparison of results to relevant standards and the DOE / EPA soil cleanup criteria, the data must be converted to pCi/L and pCi/g units, as appropriate. The NJDEP has established a MCL for total uranium in drinking water of 30 µg/L or 20 pCi/L. Regulatory compliance was determined by comparing the measured valued for total uranium to the MCL expressed in both of the above values. Since the results of the laboratory analyses for surface water and groundwater are reported in pCi/L, the initial determination of regulatory compliance was made by comparing the reported values to the NJDEP MCL for total uranium in drinking water of 20 pCi/L. To further evaluate compliance, the reported U-238 concentration in pCi/l was divided by the specific activity of U-238 (0.3365 pCi/µg) to obtain the total uranium in µg/L and then compared to the equivalent NJDEP MCL for total uranium in drinking water of 30 µg/L. The historic data for sediment and groundwater are presented in Appendices A-1, A-2, A-3, and A-4.

5.1 EXTERNAL GAMMA RADIATION

External gamma radiation dose rates are measured using tissue-equivalent thermoluminescent dosimeters (TETLDs) in place at the MISS continuously throughout the year. Location of TETLDs are shown on Figure 2. Each TETLD measures a cumulative dose over the period of exposure (approximately one year). When corrected for shelter / absorption and background, and normalized to exactly one year's exposure, these detectors provide a measurement of the annual external gamma radiation dose at that location. TETLD results for the 2001 external gamma radiation dose (i.e., both raw and corrected data) are summarized in Table 2.

The corrected data are used to calculate the external gamma radiation dose to a hypothetical maximally exposed individual conservatively assumed to be located 50 ft from the fenceline. Identification of this hypothetical individual is a function of the fenceline dose, the distance of the individual from the fenceline, and the amount of time that the individual spends at the specific location. The data from the side of the site displaying the highest radiation readings (i.e., location 21) are averaged, and the external gamma dose rate at the distance to individuals at the nearest commercial / industrial facility or residence is then determined**.** The calculated dose to the hypothetical maximally exposed individual from direct gamma radiation at the MISS in 2001 was 6.72 mrem/yr (Calc 08575-0207-003). The calculated dose to the hypothetical maximally exposed individual from direct gamma radiation at the MISS in 2000 and 1999 was 7.15 mrem/yr and 7.31 mrem/yr, respectively.

5.2 RADON-220 AND RADON-222

Results of the 2001 monitoring for radon gas (radon-220 and 222) are presented in Table 3; detector locations are shown on Figure 2. At each location, two types of detectors are exposed. One detector type, the RadTrack®, allows both isotopes of radon to enter. The other detector type, the RadTrack®-modified, contains a membrane that specifically excludes radon-220. Radon-222 results are reported as received from the laboratory (i.e., the data are obtained directly from the RadTrack®-modified detectors). Radon-220 concentrations are calculated using the RadTrack® and RadTrack®-modified data.

Radon-222 concentrations for 2001 ranged from non-detect to 0.3 pCi/L, below the EPA AL of 4 pCi/L. Radon-220 concentrations ranged from non-detect to a maximum of 3.18 pCi/L (location 31). The maximum concentration of Radon-222 and Radon-220 combined is 3.48 pCi/L (location 31). While there is undoubtedly a probability that the population of values represented by the 3.18 pCi/l value exceed the action level of 4 pCi/L, this value is the highest of 15 values. The next highest values are 2.89 and 2.77 pCi/L.

As with most low concentrations of gases in an open, unconfined area, the radon emitted from this area dissipates quickly and does not significantly affect the general population, located off-site. The closest residential inhabitants live to the northeast. Locations 32 and 33 (Figure 2) were installed in 1996 in order to examine radon gas concentrations in this area. Radon-220 results at these two locations were well below the EPA AL and were significantly lower than the concentrations detected on-site.

5.3 AIRBORNE PARTICULATE DOSE

To determine the annual effective dose from airborne emissions of radioactive particulates generated during the year 2001 at the MISS and adjacent properties, multiple potential sources were considered:

- in situ wind erosion at the MISS
- Spring soil load-out
- installation of sound barriers along Interstate 80
- installation of a water line
- Fall soil load-out
- operation of the exhaust system for the soil sample preparation laboratory

The particulate release rates from the in situ wind erosion at the MISS and the soil excavations and transfers associated with the Spring and Fall soil load-outs; the water line installation; and the Interstate 80 sound barrier installation were calculated using the methodology contained in the “Industrial Wind Erosion” section of EPA’s AP-42 (EPA 1995). The emissions of particulate matter from the exhaust system for the soil sample preparation laboratory was determined based on the number of soil samples prepared, the average quantity of particulate emissions resulting from the grinding of the samples, and the removal efficiency of the High Efficiency Particulate Air (HEPA) filter.

The radionuclide emission rates were based on the particulate release rates and the average radionuclide source concentrations obtained from soil measurements for each of the above operations. Specifically, the source concentrations for isotopes of uranium (U-238), radium (Ra-226), and thorium (Th-232) were based on the average values obtained from the measurements of these radionuclides in surface soil samples for the in situ soil (BNI 1987), and average values measured in soil samples for the spring and fall soil load-outs, the water line installation, and the Interstate 80 sound barrier installation.Unknown radionuclide source concentrations were based on the known source concentrations assuming secular equilibrium in the decay chains (Shlein 1992).

Although the emission of radon gas is not considered in this analysis, the daughters of radon generated by the decay of radon-226 in dust off-site is accounted for by the model in the computation of the effective dose equivalents for the various internal and external exposure pathways. The radionuclide emissions for the year from each of the above sources were entered into the "Clean Air Assessment Package-1988 personal computer"(CAP88-PC) program (Version 2.0) to perform the following two calculations:

1. Estimation of the hypothetical doses from airborne radioactive particulates at downwind distances corresponding to individuals located at the nearest residences and nearest commercial / industrial facilities as measured from the centers of the above sources. Analyses were performed separately for the spring soil load-out, the water line installation, the Interstate 80 sound barrier installation and the fall soil load-out given the differences in receptor locations most affected by each of these areas. The in situ wind erosion and the exhaust hood emissions were found to be negligible, and thus were not included in the modeling analyses. Where individual receptors are affected by more than one emission source, doses caused by those sources were added. The hypothetical doses were based on the CAP88-PC default assumption that the receptor occupies the location 100% of the time (i.e., 24 hours per day, 7 days per week, 52 weeks per year). The occupancy factor of 100%, although conservative, is considered to be appropriate for a resident. To estimate the dose to an employee working normal hours, an occupancy factor of 24% (i.e., 8 hours per day, 5 days per week, 52 weeks per year) was applied to the CAP88-PC result. The hypothetical individual receiving the highest of these calculated doses was then identified as the individual maximally-exposed to the airborne particulate dose. Since this dose is based in part on wind direction and not simply the distance from the site, this hypothetical maximally–exposed individual may not be the same as the person identified in the dose calculation for external gamma radiation (Section 5.1).
2. The hypothetical collective dose from airborne radioactive particulates for the population within 80 km of the site was estimated using a population file (generated from county population densities) to determine the number of people in graduated, concentric grid sections radiating outward to 80 km from the center of the site.

The CAP88-PC model determines the maximally exposed individual based on the radionuclide emissions, local meteorological data, and other factors. The model can calculate the effective dose equivalent for any receptor of interest (e.g., residences, schools, workers).

The CAP88-PC program computes radionuclide concentrations in air, rates of deposition on ground surfaces, concentrations in food, and intake rates to people from ingestion of food produced in the assessment area. By coupling the output of the atmospheric transport models with terrestrial food chain models from the U.S. Nuclear Regulatory Commission Regulatory Guide 1.109 ("Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10CFRPart 50, Appendix I"), the program estimates the radionuclide concentrations in produce, leafy vegetables, milk, and meat consumed by humans. The population distribution array used in the computer model was calculated from known land surrounding the site and year 2000 census figures. The program calculates the effective dose equivalent by combining the inhalation and ingestion intake rates and the air and ground surface concentrations with dose conversion factors, using the weighting factors in "Recommendations of the International Commission on Radiological Protection" (ICRP publication 26, 1977). CAP88-PC calculates dose to the gonads, breast, lungs, red marrow, thyroid, and endosteum in addition to the 50-year effective dose equivalent. Doses can be tabulated as a function of radionuclide, pathway, location, and organ as shown in the calculation presented in Appendix C.

The hypothetical maximally-exposed individual in 2001 was a worker with 24% occupancy time located approximately 25 m south of the water line installation in the parking area for the administrative / engineering trailer complex for MISS. The 2001 airborne particulate dose to that individual, considering all site contributions throughout the year**,** was 0.0014 mrem/yr, which is well below the 10 mrem/yr standard specified in 40CFR61, Subpart H. The second calculation indicates that the hypothetical airborne particulate collective dose to the population in 2001, within 80 km of the site, was 0.003 person-rem/yr.

5.4 SURFACE WATER AND SEDIMENT

Surface water courses and drainage near the MISS include Westerly and Lodi Brooks (Figure 3A, 3B). Westerly Brook flows through a culvert after it enters the northwestern corner of the MISS. The subsurface culvert redirects Westerly Brook to the west, south, and then to the west again, along the northern and western property boundaries. After leaving the MISS, the culvert remains below grade for approximately 335 m before it terminates. At this point, Westerly Brook reemerges and resumes its westward course. Ultimately, Westerly Brook discharges into the Saddle River. Lodi Brook begins on the Sears property in a low marshy area that collects runoff from the Sears and Stepan properties; from there it flows southward under Route 17 remaining underground most of its course. Exceptions to this are small sections on both sides of Interstate 80 and a small section along Route 17. From this area, the Brook flows approximately 1.8 miles downstream of the confluence of Westerly Brook and the Saddle River before joining the Saddle River.

5.4.1 Surface Water

Sampling locations in 2001 (Figure 3-A, 3-B) included SWSD004, SWSD002 and SWSD001 (downstream of the site along Westerly Brook); SWSD005 (at the confluence of the eastern and western tributaries of Lodi Brook); SWSD010, SWSD011, SWSD012, SWSD013, and SWSD014 (downstream of the site along Lodi Brook). Locations SWSD006, SWSD007, SWSD008, and SWSD009 were not sampled due to stagnant water. The western branch of Lodi Brook drains portions of the MISS, Stepan Company, and Sears properties. Location SWSD015, which is not shown in Figures 3-A or 3-B, was also sampled (where Lodi Brook meets the Saddle River). Background sampling was conducted in Westerly Brook, upstream (north) of the site, at SWSD003.

Surface water samples in 2001 were collected and analyzed for metals and radioactive constituents. According to the 1992 Environmental Surveillance Report submitted by BNI, the radiological results for surface water samples were at background levels for the previous five (5) years (1986-1991). Thus, surface water sampling for radionuclides and metals (except for lithium) was discontinued at that time. However, because the surface water samples collected during the Groundwater Remedial Investigation (GWRI) in 1999 indicated the presence of contamination in both Lodi and Westerly Brook, the surface water sampling was resumed. In addition, it is a prudent and protective practice to sample surface water during the ongoing remedial activities which started in 1999. All samples were analyzed for gross alpha, gross beta, radium, thorium, uranium, and metals.

Radioactive Constituents

Surface water samples collected in 2001 at Westerly Brook (SWSD001, SWSD002, SWSD003, and SWSD004) and Lodi Brook (SWSD005, SWSD010, SWSD011, SWSD012, SWSD013, SWSD014, and SWSD015) did not exhibit elevated concentrations of the analyzed radionuclides (Figure 3-A and 3-B). Results for these locations were below the State and Federal drinking water standards and the results are comparable to background measurements at SWSD003 (Table 4).

Metals

Federal drinking water and New Jersey groundwater standards are used for evaluating metal concentrations in surface water. Although surface water is not used as a source of potable water, Federal and State drinking water standards are used as a conservative basis for evaluation of the results. These regulatory standards are provided in Table 5 along with detected concentrations of metals in surface water.

Monitoring results revealed elevated concentrations in surface water for iron and manganese above the Federal and State Criteria. Most locations sampled (on Lodi Brook or Westerly Brook) had an exceedance for at least one of these metals and several locations had exceedances of the two metals.

The state Criteria for arsenic was exceeded in Westerly Brook at SWSD001 (8.9 µg/L), SWSD002 (14.1 µg/L) and SWSD004 (22.9 µg/L). The Federal and State Criteria for aluminum were also exceeded in Westerly Brook with a concentration of 298 µg/L at SWSD001 (where Westerly Brook meets the Saddle River) downstream of the MISS.

5.4.2 Sediment

The sediment sampling program was extended in 2001 to include more sample locations downstream of both Westerly and Lodi Brook to identify the pattern of contaminant migration downstream from MISS. As shown on Figures 3-A and 3-B, sediment samples were collected at one upstream location (SWSD003) and two downstream locations (SWSD001, SWSD002) in Westerly Brook, and one upstream location and five downstream locations in Lodi Brook. Sediment samples could not be collected (unavailable sediment due to significant flow) at locations SWSD009, SWSD011, SWSD012, SWSD013, and SWSD014 in Lodi Brook and SWSD004 in Westerly Brook.

Radioactive Constituents

- Consistent with historical results, the sediment samples collected in Westerly Brook (SWSD001, SWSD002) were below the soil cleanup criteria and comparable to background measurements at SWSD003 (see Table 6). The detected concentration of radium-228 (1.57 pCi/g) at SWSD001 was above background, but below the soil cleanup criteria of 5 pCi/g.
- In the eastern tributary of Lodi Brook (see Figure 3-A), the measured concentrations of thorium-230 (6.64 pCi/g) and thorium-232 (6.56 pCi/g) at SWSD007 exceeded the soil cleanup criteria. At SWSD006, the sum-of-ratios criterion for mixtures of radionuclides was exceeded. At an upstream location on Lodi Brook (SWSD008), the detected concentrations of radium-228 (5.10 pCi/g), thorium-228 (6.30 pCi/g) and thorium-232 (5.81 pCi/g) exceeded the soil cleanup criteria. Although there have been frequent exceedances over the years of the soil cleanup criteria for various radionuclides in sediment collected in Lodi Brook, there were no exceedances of the soil cleanup criteria last year for the various measured radionuclides at either SWSD006 or SWSD007. SWSD008 is a new monitoring location and thus, no historical comparisons can be made.
- Downstream, at location SWSD005, results of sample analyses exceeded the soil cleanup criteria for thorium-228 (6.21 pCi/g) and thorium-232 (6.91 pCi/g). All other detected radionuclides were above background, but below the soil cleanup criteria. Although there have been occasional exceedances over the years of the soil cleanup criteria for radium-228 and thorium-232, there were no exceedances of the soil cleanup criteria last year for the various measured radionuclides at SWSD005.

- Further downstream at SWSD010 and SWSD015 (Figure 3-A, 3-B) in Lodi Brook, detected concentrations of all analyzed radionuclides were below the soil cleanup criteria. The detected concentrations of radium-228 at SWSD010 (3.46 pCi/g) and SWSD015 (1.61 pCi/g) were above background, but below the soil cleanup criteria of 5 pCi/g. SWSD010 and SWSD015 are new monitoring locations; thus, no historical comparisons can be made.

Results for 2001 confirm the presence of localized contamination in the streambed sediment of the eastern tributary of Lodi Brook. Variation of sediment concentrations from one year to another is typical and due to factors, such as local disturbances during and prior to sampling, and the time since the last rainfall event.

Metals

Metals concentrations in sediment are compared to the proposed New Jersey Soil Cleanup Criteria (SCC), and to the Sediment Screening Values in the BEE (NJDEP 1998).

The New Jersey residential, and less stringent nonresidential, soil cleanup standards provide a basis for evaluating metal concentrations in sediment for the mixed land use area around MISS (NJDEP 1992). These standards, as appropriate for the zoning of a given sampling location, are provided in Table 6-A along with the detected concentrations of metals in sediment. Sampling locations SWSD003 (background), SWSD005, SWSD006, SWSD007, SWSD008, SWSD010, and SWSD015 are in areas zoned as light industrial (nonresidential), while sampling locations SWSD001 and SWSD002 are in areas zoned for residential use.

Only the concentrations of lead at location SWSD007 exceeded the New Jersey Soil Cleanup Criteria. There were no exceedances of the soil cleanup criteria in Westerly Brook. The sampling results for each 2001 sampling location are summarized as follows.

- Consistent with the past several years, no metal concentrations exceeded the soil cleanup criteria at SWSD003 which is the upstream (background) monitoring location along Westerly Brook in an area zoned for nonresidential use.

- No metal concentrations exceeded the soil cleanup criteria at SWSD002 and SWSD001 which are the downstream monitoring locations along Westerly Brook in an area zoned for residential use. At SWSD002, these results are consistent with the past several years. SWSD001 is a new monitoring location and thus, no past comparisons can be made.

- At SWSD007, in the eastern tributary of Lodi Brook, the measured concentration of lead (679 mg/kg) exceeded the corresponding soil cleanup criteria of 600 mg/kg. The reported concentration of arsenic (14 mg/kg) was significantly elevated compared to background, but below the soil cleanup criteria of 20mg/kg. The concentrations of all other metals were below their respective residential or nonresidential soil cleanup criteria. Although SWSD007 is an upstream location in an area zoned for nonresidential use, two downstream locations are located in an area zoned for residential use; therefore, it is prudent to evaluate upstream data against residential cleanup standards as well as nonresidential standards.

- At SWSD008, in the eastern tributary of Lodi Brook, the measured concentrations of the various metals were below their respective soil cleanup criteria. Arsenic was elevated compared to background at a concentration of 5.3 mg/kg, but well below the soil cleanup criteria of 20 mg/kg. SWSD008 is a new monitoring location and thus, no historical comparisons can be made.

- At SWSD005, at the confluence of the eastern and western tributaries of Lodi Brook, no metal concentrations exceeded the residential or nonresidential soil cleanup criteria. These results are consistent with the past several years.

- At SWSD010, a downstream location along Lodi Brook, no metal concentrations exceeded either the residential or nonresidential soil cleanup criteria. SWSD010 is a new monitoring location and thus, no historical comparisons can be made.

- At SWSD015, a downstream location at the confluence of Lodi Brook and Saddle River, no metal concentrations exceeded the residential or nonresidential cleanup criteria. SWSD015 is a new monitoring location and thus, no historical comparisons can be made.

Sediment Screening Values in the Baseline Ecological Evaluation.

To aid in the identification of contaminants of potential ecological concern, site-related metal concentrations in sediment are compared to the Lowest Effects Level (LEL) and Severe Effects Level (SEL) concentrations listed in the screening level criteria presented in the "Guidance for Sediment Quality Evaluations" (NJDEP 1998).

Various metal concentrations exceeded the LEL used in the Baseline Ecological Evaluation (BEE) at every sampling location. There were exceedances for copper, lead and chromium in Westerly Brook and lead, arsenic, copper, zinc, chromium, and nickel in Lodi Brook. However, metal concentrations exceeded SEL concentrations at only two locations, SWSD006 and SWSD007 (Figure 3-A, 3-B).

- At SWSD003, the nonresidential upstream location along Westerly Brook, copper and lead exceeded the LEL with concentrations of 30.6 mg/kg and 34.3 mg/kg, respectively.
- At SWSD002 and SWSD001, the residential downstream locations along Westerly Brook, copper, lead, chromium and zinc exceeded the LEL. None of the metals exceeded SEL.
- At SWSD008 in the eastern tributary of Lodi Brook upstream of Lodi Brook, only copper, chromium and lead exceeded the LEL. At SWSD006 and SWSD007, all metals exceeded the LEL. Only lead at SWSD006 exceeded the SEL with concentrations of 275 mg/kg while chromium, copper and lead exceeded the SEL at SWSD007 with concentrations of 132 mg/kg, 111 mg/kg and 679 mg/kg, respectively.
- At SWSD005, at the confluence of the eastern and western tributaries of Lodi Brook, copper, lead, and zinc exceeded the LEL with concentrations of 41.8 mg/kg, 47.6 mg/kg and 157 mg/kg, respectively.
- At SWSD010, downstream location along Lodi Brook, the metal concentrations of chromium, copper, lead and zinc exceeded the LEL. At SWSD015, the metal concentrations of cadmium, chromium, copper, lead and zinc exceeded the LEL. However, none of the metal concentrations at these locations exceeded the SEL.

5.5 GROUNDWATER

The locations of groundwater monitoring wells at the MISS are shown in Figure 2. Background information, descriptions of activities performed under the groundwater monitoring program and monitoring results are discussed below.

5.5.1 Groundwater Quality

Natural System

Groundwater in the Maywood area flows in both the bedrock and the overlying unconsolidated sediments. Bedrock is composed of fractured sandstone and shale belonging to the Passaic Formation. Unconsolidated sediments are composed of interbedded sand and clay of glacial origin. Although there is no continuous confining layer present across the Maywood Site, the Remedial Investigation report for the Maywood Site, indicated that the unconsolidated overburden deposits may be divided into three units that interfinger with the underlying and overlying unit (DOE 1992). The lower lithostratigraphic unit is characterized as consisting of stratified, moderately well sorted to well sorted fine grained sands and silts, with varying amounts of organic material. The middle lithostratigraphic unit consists of layers of clayey silt and silty clay with clayey to clean sand. The upper lithostratigraphic unit consists of undifferentiated deposits of sand, silt and gravel. These deposits are poorly to moderately sorted.

Bulk groundwater flow is predominantly horizontal; however, hydraulic head elevations obtained within the Maywood Site indicate that there is a downward component to groundwater flow within the MISS / Stepan property, and an apparent upward component of groundwater flow near groundwater discharge points such as the Saddle River and Lodi Brook. This information is further presented in the following sections.

Water Level Measurements

Water level measurements are obtained quarterly from 35 monitoring wells (Figure 2). Of these 35 monitoring wells, 15 are completed in unconsolidated overburden deposits, while 20 are completed in bedrock. During the synoptic gauging year 2001, four rounds of water levels were obtained as part of the Environmental Monitoring Program. The four synoptic gauging rounds were performed in February, April, July, and November. Water Level Record Sheets for the four synoptic water level gauging rounds are provided in Appendix B. Water levels fluctuate in response to short and long term seasonal changes in precipitation and evapo-transpiration. In the unconsolidated deposits, groundwater levels measured during the four gauging rounds varied as follows:

Table 5-1
Minimum and Maximum Water Level Elevations in Overburden Monitoring Wells
Synoptic Gauging Year 2001

	February 7	April 30	July 26	November 21
Minimum GW Elevation (ft NGVD)*	39.51	39.35	38.51	38.24
Maximum GW Elevation (ft NGVD)*	53.98	53.40	50.47	49.43
Well Depicting Minimum GW Elevation	B38W14S	B38W14S	B38W14S	B38W14S
Well Depicting Maximum GW Elevation	MISS-2A	MISS-2A	MISS-2A	MISS-2A

* NGVD – National Geodetic Vertical Datum – 1929

Table 7 presents the surveyed elevation of the top of inner casing (TOC), depth to water below TOR, and groundwater elevations for the 15 monitoring wells gauged and completed in the unconsolidated deposits. As depicted in Table 7, well B38W14S and MISS-3A showed the minimum and maximum water level fluctuations that occurred throughout the course of the year 2001 synoptic gauging program. Well

B38W14S varied by 1.27 ft, whereas well MISS-3A varied by 5.59 ft. Furthermore, the maximum and minimum groundwater elevations occurred during the months of February and November 2001, respectively.

In the bedrock aquifer, groundwater levels measured during the four gauging rounds ranged as follows:

Table 5-2
Minimum and Maximum Water Level Elevations in Bedrock Monitoring Wells
Synoptic Gauging Year 2001

	February 7	April 30	July 26	November 21
Minimum GW Elevation (ft NGVD)	39.39	41.20	39.76	39.51
Maximum GW Elevation (ft NGVD)	63.29	62.12	57.69	53.55
Well Depicting Minimum GW Elevation.	B38W14D	B38W14D	B38W14D	B38W14D
Well Depicting Maximum GW Elevation	B38W02D	B38W02D	B38W02D	B38W02D

Table 8 presents the surveyed elevation of the top of riser (TOR) / casing, depth to water below TOR / casing, and groundwater elevations for the 20 bedrock monitoring wells. As depicted in Table 8, well B38W14D and B38W02D showed the minimum and maximum water level fluctuations that occurred through out the course of the year 2001 synoptic gauging program. Well B38W14D varied by 1.81 ft, whereas, well B38W02D varied by 9.74 ft. For monitoring well B38W14D, the maximum and minimum groundwater elevations occurred during the months of April and February 2001, respectively. Furthermore, for B38W02D, the maximum and minimum groundwater elevations occurred during the months of February and November 2001, respectively.

Groundwater Flow System

Water table contour maps for the unconsolidated deposits and bedrock potentiometric surface maps are presented in Figure 4 through 7. Figures 4 and 5 present the groundwater flow for wells completed in the overburden soils; Figures 6 and 7 present the potentiometric surface maps for the wells completed in bedrock. Lateral groundwater flow at the MISS is strongly controlled by the morphology of the bedrock surface. The bedrock slopes westward across the site, flattens, and then rises to a subtle ridge along the Saddle River (DOE, 1992). Horizontal hydraulic gradients reflect this configuration and flatten off-site, to the west. A figure depicting the contours of the bedrock surface excerpted from the Remedial Investigation report, are presented in Figure 8 (DOE, 1992). Bedrock highs exist in the northeast portion of the site within the Stepan property and locally within the MISS. These bedrock highs form a local groundwater divide and control the direction of groundwater flow in the overburden and bedrock aquifers.

During the year 2001 synoptic gauging rounds, the horizontal hydraulic gradient varied spatially but typically ranged from approximately 0.005 ft/ft off-site to 0.015 ft/ft within the MISS / Stepan property. The direction of groundwater flow in the overburden aquifer is predominantly to the west-southwest towards the Saddle River, with a component of groundwater flow towards the northwest, refer to Figures 4 and 5.

The direction of groundwater flow in bedrock is shown on Figures 6 and 7. As depicted in these figures, groundwater flow is dictated by the presence of a groundwater high. This roughly coincides with a bedrock high located in the northeast corner of the site in the vicinity of the Stepan property, as shown on

Figure 8. Figures 6 and 7 depict the groundwater divide, with groundwater flowing predominantly to the west-southwest, with a component of groundwater flow to the northwest. Wells installed north of the site as part of the GWRI (MW-3D, MW-8D, MW-19D, and MW-20) will assist in further defining the direction of groundwater flow to the north of the site. Information obtained from the Groundwater Remedial Investigation (GWRI) will be included in the year 2002 Environmental Monitoring Program report after issuance of the GWRI report. In the bedrock aquifer, the horizontal hydraulic gradients ranged between 0.005 ft/ft off-site to 0.015 ft/ft within the MISS / Stepan property during the year 2001 synoptic gauging program.

Based on the synoptic gauging rounds, information regarding the vertical component of groundwater flow may be inferred. As depicted in Table 9, 13 well clusters were used to determine if a horizontal or vertical gradient (either upward or downward) exists between overburden and bedrock wells. Of the nine well clusters located within the MISS / Stepan property, the overburden well depicted a greater hydraulic head than the wells completed in bedrock at seven clusters. The data presented in Table 9 principally indicates that the MISS / Stepan property represents a recharge area for the unconsolidated / overburden aquifer. The exceptions to this statement are well clusters MISS-1AA/MISS-1B and B38W24S/24D. At these wells during certain times of the year bedrock may be recharging the overburden aquifer or the bedrock aquifer may be under confined conditions.

Water levels measured in off-site monitoring wells in 2001 principally indicates that for well clusters B38W12A/12B, B38W14S/14D, and B38W15S/15D, the hydraulic heads in the bedrock aquifer are typically higher than the heads in the overburden aquifer, indicating flow from the bedrock aquifer to the overburden aquifer. These wells are located in proximity to a drainage swale / Lodi Brook (B38W12A/12B) and the Saddle River (B38W14S/14D and B38W15S/15D), where an upward gradient may be expected. The other off-site well cluster, B38W17A/17B, predominantly displayed a horizontal component of groundwater flow. This well appears to be located transitionally between a recharge and discharge area.

Field Parameters

Table 10 presents a summary of field parameters measured during annual sampling activities at the MISS. Field parameters include temperature, pH, oxidation / reduction potential (Eh), turbidity, specific conductance, and dissolved oxygen. These parameters are monitored during the purging of the wells to determine when to commence sample collection. Field procedures require these parameters to reach a stable condition prior to sampling. Measurements are taken systematically during the purging procedure and are recorded in field logbooks.

Water Quality Parameters

Groundwater quality at the MISS has been evaluated historically for the standard parameters carbonate, bicarbonate, chloride, nitrate, sulfate, and total dissolved solids (TDS). Analyses for these parameters were discontinued after 1996.

5.5.2 Groundwater - Radioactive Constituents

Groundwater samples collected from monitoring wells both on-site and off-site (Figure 2) between June 2001 and July 2001 were analyzed for radioactive constituents. Eleven (11) shallow wells and 12 deep wells are included in the monitoring plan to be sampled for radionuclides, metals, and VOCs. The location of these wells with respect to the MISS are given below.

Table 5-3
Location of Wells with Respect to the MISS

Well Type	Location
Upgradient Wells	B38W-01S, 02D
On-site Wells	MISS-1AA, 1B, 2A, 2B, 5A, 5B, 6A, 7B B38W-19S, 19D, 18D, 24S, 24D, 25S, 25D
Downgradient Wells	B38W-14S, 14D, 15S, 15D, 17A, 17B

Although groundwater at the site is not used as a source of potable water, Federal and State drinking water standards are used as a conservative basis for evaluation of the results. Results are provided in Table 11 and discussed below.

- Gross alpha concentrations exceeded the Federal and State drinking water standards in five onsite wells (MISS05A, MISS02B, B38W18D, MISS05B, MISS07B). The concentrations of gross alpha in these five wells ranged from a minimum of 16.13 pCi/L at well MISS05A to a maximum of 42.00 pCi/L at B38W18D. As per NJDEP guidance, the uranium results were subtracted from gross alpha results. Last year, gross alpha concentrations were also exceeded in six wells with a maximum concentration of 230 pCi/L at B38W18D; five of these wells were onsite and one well was down-gradient.

- Gross beta results exceeded the Federal and State standards in three down-gradient wells (B38W15S, B38W15D, B38W17B) and three onsite wells (B38W25D, B38W19D, MISS05B). The concentrations in these six wells ranged from a minimum of 51.37 pCi/L at B38W15D to a maximum of 355.75 pCi/L at B38W19D. Last year, gross beta concentrations were exceeded in seven wells with a maximum concentration of 886 pCi/L at MISS05B; six of these wells were onsite and one well was down-gradient.

- Consistent with historical results, radium-226 was detected in most groundwater samples, but at concentrations that are less than the State and Federal drinking water standard for combined radium (radium-226 and radium-228) of 5 pCi/L. The measured concentrations ranged from non-detected to a maximum of 1.55 pCi/L at MISS02A. Last year, the maximum radium-226 concentration occurred at B38W18D with a value of 2.87 pCi/L.

- Consistent with historical results, radium-228 was detected in most groundwater samples, but at concentrations that are less than the State and Federal drinking water standards for combined radium. The reported concentrations of radium-228 ranged from non-detected to a maximum of 4.68 pCi/L at B38W24S. The concentration at B38W42S was elevated, but below the State and Federal drinking water standard for combined radium of 5 pCi/L. Last year, radium-228 was detected in five groundwater samples; an exceedance of the above standard occurred at one location (B38W18D) with a maximum concentration of 16.53 pCi/L.

- Consistent with general historical results, the combined concentrations of radium-226 and radium-228 were significantly less than the State and Federal drinking water standard of 5 pCi/L (for combined radium-226 and radium-228), with the exception of locations B38W24S and B38W18D. The combined radium concentrations at B38W24S and B38W18D were 4.97 pCi/L and 4.94 pCi/L; respectively. Although the SWDA does not apply because groundwater at the MISS is not used as a source of drinking water, the combined radium-226 and radium-228 concentrations were compared to the SWDA radium standard to evaluate groundwater quality.

Last year, one monitoring location (B38W18D) exceeded the combined radium standard of 5 pCi/L with a concentration of 19.4 pCi/L.

- Consistent with historical results, the detected concentrations of thorium-228 at the various sampling locations were significantly less than the State and Federal drinking water standard for total thorium (combined thorium-228, thorium-230 and thorium-232) of 15 pCi/L. The maximum concentration of thorium-228 (1.71 pCi/L) occurred at B38W18D. Last year, the maximum thorium-228 concentration also occurred at B38W18D with a measured value of 6.89 pCi/L.

- Consistent with historical results, thorium-230 was detected in almost all of the groundwater samples at concentrations that were below the State and Federal drinking water standard for total thorium (combined thorium-228, thorium-230 and thorium-232) of 15 pCi/L. The detected thorium-230 concentrations ranged from 0.17 pCi/L (B38W25D) to 2.59 pCi/L (B38W17A). Last year, thorium-230 was also detected in most of the groundwater samples with a maximum concentration of 2.45 pCi/L at MISS05A.

- Consistent with historical results, the detected concentrations of thorium-232 at the various sampling locations were significantly less than the State and Federal drinking water standard for total thorium (combined thorium-228, thorium-230 and thorium-232) of 15 pCi/L. The maximum concentration of thorium-232 (0.91pCi/L) was detected at B38W18D. Last year, the maximum thorium-232 concentration also occurred at B38W18D with a measured concentration of 7.53 pCi/L.

- The combined concentrations of thorium-228, thorium-230 and thorium-232 were less than the total thorium standard of 15 pCi/L at all of the monitoring locations. The maximum combined concentrations of thorium-228, thorium-230 and thorium-232 occurred at B38W17A with a value of 3.40 pCi/L. Last year, the maximum combined concentration of thorium-228, thorium-230 and thorium-232 occurred at B38W18D with a value of 16.13 pCi/L which exceeded the total thorium standard.

- Consistent with historical results, the total uranium concentrations in groundwater were much less than the SDWA standards with one exception. The maximum total uranium concentration occurred at MISS05A with a value of 52.87 pCi/L (74.53 µg/L). Although less than the concentrations measured during the period 1996-2000, the total uranium concentration at MISS05A is still well above the State and Federal drinking water standard of 20 pCi/L (30 µg/L). MISS05A is an overburden monitoring well located on-site near a former retention pond and areas of contaminated soil. Monitoring well B38W18D (bedrock well) located near Building 76 contained 2.65 pCi/L of total uranium compared to 1.64 pCi/L last year. The maximum concentration of total uranium detected off-site was 8.20 pCi/L at monitoring well B38W15D located southwest (down-gradient) of the site. Last year, the maximum concentration of total uranium detected offsite was also found at B38W15D with a concentration of 7.38 pCi/L.

5.5.3 Groundwater - Metals

Although groundwater at the MISS is not used as a source for public drinking water, the SDWA MCLs and the New Jersey Groundwater Quality Standards for Class IIA aquifers were used as a basis for comparison for metal analytical data at the MISS. Metals detected in groundwater are reported in Table 12.

Common metals that occur in abundance at the background locations (B38W01S and B38W02D) and in most of the monitoring wells include iron and manganese. These metals often exceed New Jersey Groundwater Quality Standards for Class IIA aquifers. Results for other metals are discussed below.

In 2001, arsenic concentrations in groundwater exceeded the SDWA MCL (50 µg/L) in three on-site wells MISS02A (2210 µg/L), B38W19D (69.8 µg/L), and MISS07B (82.8 µg/L). Three other wells; MISS05B (24.3 µg/L), B38W19S (28.7 µg/L), B38W25S (20.8 µg/L) exceeded the State water quality limit (0.02 µg/L) with a practical quantitation limit of (8 µ g/L). These wells have historically exhibited comparable concentrations for the metal. Although the measured concentrations from the other wells exceeded the more stringent State groundwater quality criteria, all but those discussed above were less than the practical quantitation limit (PQL), which is published by the State as that concentration that can reasonably be quantified by standard analytical methods. In such cases, where the PQL is higher than the groundwater quality criterion, the New Jersey regulations do not consider a discharge to be causing a contravention of that constituent standard as long as the concentration of the constituent in the affected groundwater is less than the relevant PQL (NJAC 7:9-6.9). Therefore, only at wells mentioned above, was the State limit exceeded.

- Antimony was not detected in any of the monitoring wells during the year 2001. Last year, antimony was detected in only one well (B38W17A) at a concentration of 37.6 µg/L which is above the Federal drinking water limit of 6 µg/L. All other detected concentrations last year were less than the Federal drinking water limit and the State PQL (20 µg/L) which is higher than the GWQC of 2 µg/L. Historically, there have been occasional exceedances of the Federal drinking water limit for antimony at various monitoring wells (B38W17A, MISS05A, MISS06A, MISS07B).

- Consistent with the past several years, the maximum beryllium concentration reported was at well B38W01S (2.2 µg/L) in 2001. All reported beryllium concentrations (wells B38W24D and B38W24S) were less than the Federal limit of 4 µg/L as was the case for the past several years. The reported beryllium concentrations ranged from a low of 0.2 to a maximum of 2.2 µg/L which exceeds the State GWQC (0.008 µg/L); however, all results were well below the PQL (20 µg/L) and therefore do not constitute a "contravention of that constituent standard" according to State regulations. Last year, the maximum beryllium concentration occurred at B38W01S with a value of 2.4 µg/L.

- Cadmium was detected in various wells with the highest concentrations measured at offsite well B38W14D (4.7 µg/L) and onsite well MISS06A (2.7 µg/L). The cadmium concentration at well B38W14D exceeded the State standard, but was below the Federal standard. Consistent with the past several years, the measured cadmium concentrations at all other wells were less than the State standard of 4 µg/L and Federal standard of 5 µg/L. Last year, the maximum cadmium concentration occurred at B38W14D with a value of 2.9 µg/L.

- Chromium was detected in most of the wells with all concentrations below the State and Federal limits of 100 µg/L. Last year, chromium was found in most of the wells; however, an exceedance of the SWDA standard occurred at B38W17A with a concentration of 1,590 µg/L. Historically, the highest chromium concentrations have occurred most frequently at B38W17A.

- Lead was detected in only one well, B38W15S, at a concentration of 5.0 µg/L. This concentration is below the State PQL of 10 µg/L and Federal drinking water limit of 15 µg/L; however, it equals the State GWQC of 5 µg/L. Last year, lead was detected in four wells at concentrations ranging from 5.8 μg/L (B38W01S) to 13 μg/L (MISS02A). Historically, there have been occasional exceedances of the Federal drinking water limit for lead at various wells (B38W14S, B38W15D, B38W17A, MISS06A).

- Lithium is a metal present at the site as a result of MCW site processing activities. However, no State or Federal limits have been set. Samples are analyzed for this parameter to establish a database of information on its'distribution. Lithium was detected in all 23 sampled wells at concentrations ranging from 30.5 μg/L (B38W14S) to 11,900 μg/L (MISS02B). Historically, lithium concentrations have consistently been highest at MISS02B.

- Consistent with historical results, the highest concentration of nickel was detected in well B38W17A at a value of 56.3 μg/L. This concentration is below the State water quality limit of 100 μg/L. Last year, the only exceedance of the State water quality limit for nickel occurred at monitoring well B38W17A with a concentration of 114 μg/L. During the last nine years, nickel concentrations at B38W17A have consistently been the highest ranging from a low of 56.3 μg/L in June 2001 to a high of 824 μg/L in July 1993.

5.5.4 Groundwater - Organic Compounds

Groundwater samples were also analyzed for VOCs. The pattern of groundwater contamination with VOCs in 2001 (Table 13) is consistent with historical results (Table A-4).

The prevalent organic constituents in groundwater at the MISS are tetrachloroethene and its degradation products: trichloroethene, dichloroethenes, and vinyl chloride. As seen historically at off-site wells B38W14D, B38W14S, and B38W15D, some or all of these compounds were detected in concentrations that exceeded the state groundwater quality standards for class IIA waters and Federal drinking water limits. The denser compounds were all detected in higher concentrations in the deep wells.

- Historically tetrachloroethene, trichloroethene, and dichloroethenes were also identified in on-site deep wells MISS01B and MISS07B, but not in their shallow counterparts.
- Benzene was not detected in shallow wells. In the deep wells, benzene was identified in many wells with estimated concentrations between 0.2 μg/L and 0.6 μg/l with an exceptionally high concentration of 330 μg/L found at well MISS05B. Last year, benzene was identified in three shallow wells at concentrations between 0.1 μg/L to 0.2 μg/L. Benzene was identified in many deep wells last year with estimated concentrations between 0.2 μg/L and 1.0 μg/L. An unusually high concentration of 3,500 μg/L also occurred at well MISS05B.

6.0 CONCLUSIONS

6.1 EXTERNAL GAMMA RADIATION

The 2001 monitors for gamma radiation (TETLDs) were collected at 14 site locations and 1 off-site background location (Figure 2). Site results, corrected for background, exposure duration, and attenuation, ranged from a minimum equal to background (location 32 and 33) to a maximum of 652.1 mrem/yr (above background) at location 21 (Table 2). At 5 of the 14 locations, measured external gamma radiation exceeded the 100 mrem annual dose limit specified by the U.S. Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC).

At Stepan property locations 30 and 31, south of the lawn, external gamma results were 70.6 and 90.5 mrem/yr, respectively. North of the lawn at locations 32 and 33, results were lower than background. These four locations are closest to potential receptors, and when time and distance are factored any doses would likely be less than regulatory limits. The doses measured at these locations represent the potential dose a person could receive if they spent the entire year at that location. This scenario is highly implausible; any received doses would be considerably lower than these measured results because the potential receptors would spend much less time at these locations.

The calculated dose from direct gamma exposure at the MISS to a hypothetical maximally-exposed individual assumed to be located 50 ft from the fenceline at location 21 was 6.72 mrem/yr (Calc. 08575-0207-003). This is a conservative approach since the nearest receptor is located approximately 200 ft from location 21. The results obtained from the gamma radiation monitors are consistent with historical data and all locations will continue to be monitored during 2002.

6.2 RADON-220 AND RADON-222

Cumulative radon measurements were collected at 14 site locations and 1 off-site background location (Figure 2, and Table 3). Measured radon-222 concentrations ranged from non-detect to 0.3 pCi/L and therefore were well below the 4 pCi/L action level identified by EPA (EPA 1992d).

Radon-220 concentrations ranged from non-detect to a maximum of 3.18 pCi/L (location 31). This value is the highest of 15 values. The next highest values are 2.89 and 2.77 pCi/L. Results of radon monitoring are consistent with last year results and all locations will continue to be monitored during 2002.

6.3 AIRBORNE PARTICULATE DOSE

The airborne particulate dose to the hypothetical maximally exposed individual in 2001 was a worker with 24% occupancy located approximately 25 m south of the water line installation in the parking area for the administrative / engineering trailer complex at MISS. The 2001 airborne particulate dose to that individual, considering all site contributions throughout the year, was 0.0014 mrem/yr. This is well below the 10 mrem/yr standard specified in 40CFR61, Subpart H. The hypothetical airborne particulate collective dose to the population within 80 km of the site was 0.003 person-rem/yr.

The maximum annual effective doses are almost entirely the result of the internal doses from the inhalation of dust particles and the ingestion of plant borne dust. The air immersion in the dust plume and ground surface irradiation from dust deposition pathways contribute a negligible amount to the total dose. As discussed in Appendix C, the dominant pathway is inhalation.

6.4 CUMULATIVE DOSE FROM EXTERNAL GAMMA RADIATION AND AIRBORNE PARTICULATE

The location of the maximally exposed individual from direct gamma radiation and the location of the maximally exposed individual from airborne particulates are different. The calculated maximally exposed individual from direct gamma radiation emitted at MISS occurred 50 ft from location 21, which is located on the southern perimeter of the site. The calculated cumulative dose from the external gamma radiation at the above location was 6.72 mrem/yr (see Section 5.1).

The location of the maximally exposed individual as determined by the dispersion modeling performed for the annual NESHAP's compliance report occurred at a facility located approximately 25 m south of the parking area for the administrative / engineering trailer complex at MISS (see Appendix C). The calculated annual effective dose to the maximally exposed individual was 0.0014 mrem/yr. The maximum annual effective dose is almost entirely the result of the internal doses received from the inhalation of dust particles with a small contribution from the ingestion of plant borne dust.

In light of the above, the calculated cumulative dose from external gamma radiation and airborne particulates to a hypothetical maximally exposed individual is essentially the external gamma radiation dose. The calculated cumulative dose from external gamma radiation and airborne particulates of 6.72 mrem/yr is well below the NRC standard of 100 mrem/yr (from all sources, excluding radon).

6.5 SURFACE WATER

Surface water samples in 2001 were collected and analyzed for radioactive constituents (Table 4) and metals (Table 5). Radionuclide concentrations in surface water samples collected in 2001 were below the Federal and State Standards. The maximum concentration for combined radium-226 and radium-228 was 2.4 pCi/L (SWSD010). All other radioactive constituents were below the Federal and State standards. Historically, surface water has not exhibited above-background concentrations of radionuclides during past environmental sampling rounds. The measured concentrations of iron and manganese exceeded the State criteria at almost every location. The State criteria for arsenic was exceeded on Westerly Brook at SWSD001 (8.9 μg/L), SWSD002 (14.1 μg/l) and SWSD004 (22.9 μg/L). The Federal and State criteria for aluminum were also exceeded in Westerly Brook at SWSD001 with a concentration of 298 μg/L. Surface water will continue to be monitored during 2002.

6.6 SEDIMENT

Because there are no standards for sediment, the State soil cleanup criteria are used as a basis for evaluating the analytical results. In 2001, radionuclide concentrations in sediment samples collected in Westerly Brook were within the background concentration and below the State soil cleanup criteria.. However, the measured concentrations collected upstream along Lodi Brook exceeded the DOE/EPA soil cleanup criteria at four locations. At SWSD008, the measured concentrations of radium-228 (5.10 pCi/g), thorium-228 (6.30 pCi/g) and thorium-232 (5.81 pCi/g) exceeded the cleanup criteria. At SWSD006, the radionuclides concentrations exceeded the sums-of-ratio criteria. At SWSD007, thorium-230 (6.64 pCi/g) and thorium-232 (6.56 pCi/g) exceeded the soil cleanup criteria. At SWSD005 (at the confluence of the eastern and western tributaries of Lodi Brook), the measured concentrations of thorium-228 (6.21pCi/g) and thorium-232 (6.91 pCi/g) also exceeded the soil cleanup criteria. Further downstream at SWSD010 and SWSD015, detected concentrations of all radionuclides were above background but below the soil cleanup criteria. Results for 2001 confirm the presence of localized radiological contamination in the streambed sediment of the eastern tributary of Lodi Brook. Various metal concentrations in sediment samples collected in Westerly Brook and Lodi Brook also exceeded the LEL. Some metal concentrations exceeded the SEL at two locations, SWSD006 and SWSD007 (Table 6-A). Sediment will continue to be monitored for radionuclides and metals during 2002.

6.7 GROUNDWATER

Concentrations of gross alpha and gross beta in groundwater exceeded the Federal and State drinking water in many wells. Concentrations of all other radionuclides sampled in groundwater in 2001 (radium-226, radium-228, thorium-230, thorium-232, and total uranium) were well below (except for well MISS05A, B38W18D and B38W24S) the Federal and State drinking water standards. The concentration of total uranium at location MISS05A was 52.87 pCi/L (74.53 µg/L) which exceeded the Federal and State drinking water standards. The concentration of radium-228 was elevated but below the State and Federal criteria in well B38W18D and B38W24S with concentrations of 4.46 pCi/L and 4.68 pCi/L, respectively. Consistent with historical results, the highest concentration of total uranium was detected in well MISS05A.

Although groundwater at the MISS is not a source of drinking water, State and Federal drinking water standards are used for evaluating groundwater data. Radium concentrations (except well B38W18D and B38W24S) in groundwater were well below the SDWA MCL of 5 pCi/L for combined radium-226 and radium-228.

The presence of arsenic at concentrations above Federal SDWA drinking water standards was identified in three onsite wells; MISS02A (2210 µg/L), B38W19D (69.8 µg/L) and MISS07B (82.8 µg/L). Three other locations (MISS05B, B38W19S and B38W25S) exceeded the State limit (PQL). All detected concentrations of beryllium were less than the State PQL and Federal limit. Cadmium was reported in various wells, but all detected concentrations (except for well B38W14D) were less than the State and Federal standard. Chromium was detected in most wells, but all detected concentrations were below the State and Federal limits. Lead was detected in one well with concentration below the State and Federal standards. Nickel was present below the State standards in many wells.

Tetrachloroethene and its degradation products were present in monitoring wells both onsite and offsite at concentrations exceeding New Jersey Groundwater Quality standards for Class IIA aquifers and SDWA MCLs. Results for VOCs are within the historical range; no significant increases or decreases in contaminant concentrations were observed.

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TABLES

TABLE 1
2001 Environmental Monitoring Program Summary
External Gamma Radiation and Radon Gas

Maywood Interim Storage Site - 2001

Air Monitoring

Measured Parameter	Station Identification	Number of Analyses or Measurements																								
		No. of Sample Locations				Sample Duplicate				Ship Blank				Contingency Sample				Matrix Spike				Matrix Spike Duplicate				Total Analyses per Year
		CY Quarter				CY Quarter				CY Quarter				CY Quarter				CY Quarter				CY Quarter				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
LABORATORY MEASUREMENTS																										
External gamma radiation (TETLDs)	4, 5, 10, 12, 19, 20, 4, 5, 10, 12, 19, 20, 21, 22, 23, 24, 25, 30, 31, 32, 33	15		15						1		1		16		16										64
Radon-222/Radon-220		15		15		1		1																		32
Radon-222		15		15		1		1																		32

TABLE 1 (continued)
2001 Environmental Monitoring Program Summary
Groundwater

Maywood Interim Storage Site - 2001

Measured Parameter	Station Identification	Number of Analyses or Measurements: No. of Sample Locations, CY Quarter				Rinsate Blank, CY Quarter				Trip Blank, CY Quarter				Sample Duplicate, CY Quarter				Matrix Spike, CY Quarter				Matrix Spike Duplicate, CY Quarter				Total Analyses per Year
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
FIELD MEASUREMENTS																										
Chemical/Physical	MISS01AA, MISS01B, MISS02A,																									
Dissolved oxygen	MISS02B, MISS05A, MISS05B,		23																							23
Eh[a]	MISS06A, MISS07B, MISS07A,		23																							23
Turbidity	B38W02D, B38W14S, B38W14D,		23																							23
Temperature	B38W15S, B38W15D, B38W17A,		23																							23
Specific conductivity	B38W17B, B38W18D, B38W19S,		23																							23
pH	B38W19D, B38W24S, B38W24D,		23																							23
	B38W25S, B38W25D, B38W01S																									
LABORATORY MEASURMENTS																										
Radiological																										
Total uranium			23				10								2											35
Thorium-230/232	MISS01AA, MISS01B, MISS02A,		23				10								2											35
Radium-226/228	MISS02B, MISS05A, MISS05B,		23				10								2											35
Gross Alpha	MISS06A, MISS07B, MISS07A,		23				10								2											35
Gross Beta	B38W02D, B38W14S, B38W14D,		23				10								2											35
Chemical	B38W15S, B38W15D, B38W17A,																									
TAL Metals[b]	B38W17B, B38W18D, B38W19S,		23				10								2				2				2			39
	B38W19D, B38W24S, B38W24D,		23				10								2				2				2			39
Volatile organic compounds[b]	B38W25S, B38W25D, B38W01S		23				10				10				2				2				2			49

TABLE 1 (continued)
2001 Environmental Monitoring Program Summary
Surface Water and Sediment

Maywood Interim Storage Site - 2001

Surface Water and Sediment Monitoring

Number of Analyses or Measurements

Measured Parameter	Station Identification	Samples CY Quarter				Rinsate Blank CY Quarter				Trip Blank CY Quarter				Sample Duplicate CY Quarter				Matrix Spike CY Quarter				Matrix Spike Duplicate CY Quarter				Total Analyses per Year
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
FIELD MEASUREMENTS																										
Chemical/Physical																										
Dissolved oxygen	SWSD-001, SWSD-002,		11				2								2											15
Eh[a]	SWSD-003, SWSD-004,		11				2								2											15
Turbidity	SWSD-005, SWSD-010,		11				2								2											15
Temperature	SWSD-011, SWSD-012,		11				2								2											15
Specific conductivity	SWSD-013, SWSD-014,		11				2								2											15
pH	SWSD-015.		11				2								2											15
LABORATORY MEASURMENTS																										
SEDIMENT																										
Radiological																										
Iso/Total uranium	SWSD-001, SWSD-002,		9				2								2											13
Thorium-230/232	SWSD-003, SWSD-005,		9				2								2											13
Radium-226/228	SWSD-006, SWSD-007,		9				2								2											13
Chemical	SWSD-008, SWSD-010,																									
MET-TAL	SWSD-015.		9				2								2											13
SURFACE WATER																										
Radiological																										
Iso/Total uranium	SWSD-001, SWSD-002,		11				2								2											15
Thorium-230/232	SWSD-003, SWSD-004,		11				2								2											15
Radium-226/228	SWSD-005, SWSD-010,		11				2								2											15
Gross Alpha	SWSD-011, SWSD-012,		11				2								2											15
Gross Beta	SWSD-013, SWSD-014,		11				2								2											15
Chemical	SWSD-015.		11				2								2											15
MET-TAL			11				2								2											15

[a] Oxidation/reduction potential (Eh).

[b] See Table 14 for a comprehensive list of metals.

TABLE 2
2001 External Gamma Radiation Dose Rates

Maywood Interim Storage Site - 2001

1/26/2001 to 7/25/2001 TETLD[a]		1/26/2001 to 1/26/2002 TETLD[a]		
Monitoring Location [b]	**Readings** (mrem)	**Monitoring Location** [b]	**Readings** (mrem)	**Corrected** [c] (mrem/yr)
MISS Perimeter				
4	77.4	4	148.8	86.4
	80.2		148.6	86.1
5	73.6	5	157.8	96.1
	75.8		158.2	96.5
10	122.6	10	239.2	184.1
	115.2		241.4	186.5
12	61.6	12	120.2	55.5
	*		122.0	57.4
20	48.0	20	99.0	32.5
	47.8		98.0	31.5
21	423.4	21	672.2	652.1
	338.6		596.0	569.8
22	95.8	22	174.2	113.8
	76.2		171.6	111.0
23	72.0	23	146.8	84.2
	73.2		137.8	74.5
24	184.0	24	343.6	296.9
	161.6		339.8	292.8
25	372.8	25	624.8	600.9
	*		613.4	588.6
30	53.2	30	118.8	53.9
	57.2		134.2	70.6
31	71.2	31	149.8	87.4
	76.2		152.6	90.5
32	37.4	32	62.4	-7.0
	*		*	*
33	41.4	33	72.6	4.0
	39.8		67.4	-1.6
Background				
19	39.6	19	67.4	72.9
	*		70.4	76.1

[a] TETLD = Tissue-equivalent thermoluminescent dosimeter. There are two TETLDs per station.

[b] Monitoring locations are shown on Figure 2.

[c] All TETLD readings are corrected for shelter/absorption factor (s/a = 1.075) and are normalized to exactly one year's exposure. Average corrected background is then subtracted from all other corrected readings.

* TETLD was damaged in Processing. Unable to report a reading.

TABLE 3
2001 Radon Gas Concentrations

Maywood Interim Storage Site - 2001

Monitoring Location[a]		Average Daily Concentration (pCi/L) 01/26/2001 to 07/25/2001		Average Daily Concentration (pCi/L) 07/25/2001 to 01/26/2002	
		Radon-220[b]	**Radon-222[c]**	**Radon-220[b]**	**Radon-222[c]**
MISS perimeter	4	2.10	0.2*	Missing	0.3
	5	1.20	0.2*	1.05	0.3
	10	1.47	0.2*	0.89	0.2
	12	1.78	0.2*	1.10	0.2*
	20	1.10	0.2*	0.76	0.2
	21	2.89	0.2*	1.30	0.2*
Duplicate[d]	21	2.68	0.2*	0.89	0.2*
	22	0.73	0.2*	0.26	0.2*
	23	1.22	0.2*	0.69	0.2*
	24	2.77	0.2*	1.99	0.2*
	25	0.77	0.2*	0.54	0.3
	30	1.21	0.2*	0.68	0.2*
	31	3.18	0.2*	1.86	0.3
	32	0.04	0.2*	0.33	0.2*
	33	0.20	0.2*	0.03	0.2
Background	19	0.02	0.2*	0.07	0.2*

(*) Indicates detection limit is reported. Actual result is less than this value.

[a] Monitoring locations are shown on Figure 2.

[b] Radon-220 gas concentrations are calculated according to the method outlined in FUSRAP committed calculation 191-CV-028, Rev. 1, using data from RadTrack® and RadTack®-modified detectors.

[c] The EPA Action Level for radon-222 is 4.0 pCi/L and assumes that radon 220 is present and in equilibrium, 40 CFR 192 (October 1999).

[d] A quality control duplicate is collected at the same time and location, and is analyzed by the same method in order to evaluate precision in sampling and analysis.

TABLE 4
2001 Surface Water Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Analyte	Result[a] (pCi/L)	Result[f] (ug/L)	Error	Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
Surface water samples collected in Westerly Brook:									
SWSD001	7/17/2001	Gross Alpha	0.00		2.36		2.17	15	
		Gross Beta	24.35		3.95		3.5	50	
		Radium-226	0.09		0.13	U	0.31	5	
		Radium-228	0.08		1.26	UJ	1.39	5	
		Thorium-228	0.22		0.31	U	0.55		
		Thorium-230	0.15		0.26	U	0.55		
		Thorium-232	0.57		0.16	UJ	0.57		
		Total Thorium	0.94					15	
		Uranium-234	1.96		0.79	J	0.46		
		Uranium-235	0.2		0.26	UJ	0.4		
		Uranium-238	3.08		1.05	J	0.57		
		Total Uranium	5.24	9.15				20	30
SWSD001 Duplicate	7/17/2001	Gross Alpha	1		3.44	UJ	3.55	15	
		Gross Beta	20.99		2.90		2.51	50	
		Radium-226	0.23		0.19	J	0.37	5	
		Radium-228	0.54		1.01	UJ	1.1	5	
		Thorium-228	0.17		0.23	UJ	0.35		
		Thorium-230	0.04		0.24	U	0.63		
		Thorium-232			0.05	R	0.47		
		Total Thorium	0.21					15	
		Uranium-234	2.51		0.97	J	0.59		
		Uranium-235	0.11		0.24	U	0.54		
		Uranium-238	3.64		1.24	J	0.78		
		Total Uranium	6.26	10.82				20	30
SWSD002	7/16/2001	Gross Alpha	0.00		3.68		3.99	15	
		Gross Beta	22.96		3.88		3.98	50	
		Radium-226	0.13		0.12	J	0.22	5	
		Radium-228	0.54		0.56	UJ	0.6	5	
		Thorium-228	0.23		0.27	UJ	0.4		
		Thorium-230	0.21		0.31	U	0.6		
		Thorium-232	0.63		0.20	UJ	0.63		
		Total Thorium	1.07					15	
		Uranium-234	2.72		0.98	J	0.35		
		Uranium-235	0.36		0.03	U	0.36		
		Uranium-238	4.41		1.35	J	0.38		
		Total Uranium	7.49	13.11				20	30

TABLE 4
2001 Surface Water Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Analyte	Result[a] (pCi/L)	Result[f] (ug/L)	Error	Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
SWSD003	7/16/2001	Gross Alpha	1.45		2.32	UJ	3.37	15	
		Gross Beta	3.21		2.54	UJ	3.44	50	
		Radium-226	0.21		0.17	J	0.29	5	
		Radium-228	0.36		0.69	UJ	0.76	5	
		Thorium-228	0.16		0.24	UJ	0.44		
		Thorium-230	0.19		0.28	UJ	0.52		
		Thorium-232	0.25		0.31	UJ	0.52		
		Total Thorium	0.6					15	
		Uranium-234	2.05		0.77	J	0.35		
		Uranium-235	0.18		0.25	U	0.43		
		Uranium-238	1.03		0.53	J	0.43		
		Total Uranium	3.26	3.06				20	30
SWSD004	7/17/2001	Gross Alpha	0.08		3.05		2.82	15	
		Gross Beta	31.75		4.35		3.74	50	
		Radium-226	0.65		0.29	J	0.35	5	
		Radium-228	0.27		1.01	UJ	1.11	5	
		Thorium-228	0.18		0.33	U	0.69		
		Thorium-230	0.66		0.55	UJ	0.79		
		Thorium-232	0.3		0.36	UJ	0.61		
		Total Thorium	1.14					15	
		Uranium-234	2.11		0.91	J	0.74		
		Uranium-235	0.14		0.31	U	0.7		
		Uranium-238	3.24		1.18	J	0.71		
		Total Uranium	5.49	9.63				20	30
Surface water samples collected in Lodi Brook:									
SWSD005	7/16/2001	Gross Alpha	2.97		2.39	UJ	3.11	15	
		Gross Beta	7.49		2.59		3.27	50	
		Radium-226	0.39		0.22	J	0.23	5	
		Radium-228	0.7		0.74	UJ	0.8	5	
		Thorium-228	0.4		0.37	UJ	0.55		
		Thorium-230	0.28		0.29	UJ	0.38		
		Thorium-232	0.24		0.26	UJ	0.29		
		Total Thorium	0.92					15	
		Uranium-234	2.72		0.89	J	0.36		
		Uranium-235	0.18		0.23	UJ	0.3		
		Uranium-238	3.25		1.00	J	0.28		
		Total Uranium	6.15	9.66				20	30

TABLE 4
2001 Surface Water Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Analyte	Result[a] (pCi/L)	Result[f] (ug/L)	Error	Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
SWSD010	7/16/2001	Gross Alpha	3.8		2.71		2.72	15	
		Gross Beta	10.29		2.25		2.65	50	
		Radium-226	1.05		0.36	J	0.27	5	
		Radium-228	1.35		0.62		0.63	5	
		Thorium-228	0.97		0.59	J	0.58		
		Thorium-230	0.62		0.47	J	0.55		
		Thorium-232	0.68		0.47	J	0.38		
		Total Thorium	2.27					15	
		Uranium-234	1.2		0.63	J	0.57		
		Uranium-235	0.01		0.17	U	0.57		
		Uranium-238	2.51		0.93	J	0.39		
		Total Uranium	3.72	7.46				20	30
SWSD011	7/17/2001	Gross Alpha	0.86		2.31	UJ	2.41	15	
		Gross Beta	6.75		2.04		1.9	50	
		Radium-226	0.15		0.16	U	0.33	5	
		Radium-228	0.21		1.05	UJ	1.16	5	
		Thorium-228	0.43		0.35	J	0.35		
		Thorium-230	0.41		0.40	UJ	0.65		
		Thorium-232	0.22		0.30	UJ	0.54		
		Total Thorium	1.06					15	
		Uranium-234	1.37		0.70	J	0.7		
		Uranium-235	0.24		0.29	UJ	0.39		
		Uranium-238	2.61		0.98	J	0.52		
		Total Uranium	4.22	7.76				20	30
SWSD012	7/17/2001	Gross Alpha	0.09		2.67	UJ	2.82	15	
		Gross Beta	3.64		2.66		2.58	50	
		Radium-226	0.46		0.24	J	0.27	5	
		Radium-228	0.22		0.93	UJ	1.02	5	
		Thorium-228	0.04		0.16	U	0.45		
		Thorium-230	0.42		0.37	J	0.4		
		Thorium-232	0.4		0.04	U	0.4		
		Total Thorium	0.86					15	
		Uranium-234	0.88		0.55	J	0.67		
		Uranium-235	0.13		0.28	U	0.63		
		Uranium-238	0.59		0.46	UJ	0.63		
		Total Uranium	1.6	1.75				20	30

TABLE 4
2001 Surface Water Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Analyte	Result[a] (pCi/L)	Result[f] (ug/L)	Error	Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
SWSD013	7/17/2001	Gross Alpha	1.05		1.77		1.71	15	
		Gross Beta	4.75		2.90		2.8	50	
		Radium-226	0.18		0.17	J	0.37	5	
		Radium-228	0.01		0.83	UJ	0.91	5	
		Thorium-228	0.3		0.30	UJ	0.44		
		Thorium-230	0.56		0.39	J	0.36		
		Thorium-232	0.13		0.21	U	0.41		
		Total Thorium	0.99					15	
		Uranium-234	0.52		0.48	UJ	0.75		
		Uranium-235	0.41		0.03	U	0.41		
		Uranium-238	0.49		0.42	UJ	0.56		
		Total Uranium	1.42	1.46				20	30
SWSD014	7/18/2001	Gross Alpha	7.01		2.88		2.5	15	
		Gross Beta	2.71		3.81	UJ	3.74	50	
		Radium-226	0.84		0.32	J	0.27	5	
		Radium-228	0.87		0.68	J	0.72	5	
		Thorium-228	0.31		0.30	UJ	0.35		
		Thorium-230	0.29		0.41	U	0.83		
		Thorium-232	0.04		0.19	U	0.53		
		Total Thorium	0.64					15	
		Uranium-234	0.74		0.54	J	0.69		
		Uranium-235	0.2		0.33	U	0.64		
		Uranium-238	0.13		0.31	U	0.71		
		Total Uranium	1.07	0.39				20	30
SWSD015	7/18/2001	Gross Alpha	1.73		2.10	UJ	2.14	15	
		Gross Beta	8.24		2.32		2.14	50	
		Radium-226	0.24		0.17	J	0.17	5	
		Radium-228	0.41		0.88	UJ	0.97	5	
		Thorium-228	0.12		0.29	U	0.65		
		Thorium-230	0.37		0.34	UJ	0.41		
		Thorium-232	0.19		0.28	U	0.53		
		Total Thorium	0.68					15	
		Uranium-234	0.47		0.39	UJ	0.53		
		Uranium-235	0.42		0.04	U	0.42		
		Uranium-238	0.46		0.39	UJ	0.55		
		Total Uranium	1.35	1.37				20	30

TABLE 4
2001 Surface Water Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Analyte	Result[a] (pCi/L)	Result[f] (ug/L)	Error	Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
SWSD015	7/18/2001	Gross Alpha	1.37		2.23	UJ	2.31	15	
Duplicate		Gross Beta	9.75		2.76		2.55	50	
		Radium-226	0.6		0.25	J	0.23	5	
		Radium-228	1.3		0.75	J	0.79	5	
		Thorium-228	0.45		0.40	UJ	0.54		
		Thorium-230	0.35		0.40	U	0.69		
		Thorium-232	0.17		0.28	U	0.57		
		Total Thorium	0.97					15	
		Uranium-234	1.23		0.65	J	0.62		
		Uranium-235	0.03		0.18	U	0.55		
		Uranium-238	0.4		0.40	UJ	0.63		
		Total Uranium	1.66	1.19				20	30

[a]Results reported with ± radiological error equal to 2 sigma (95% confidence level),

[b] USACE data qualifier flags based on the CDQMP-QAPP.
U = The analyte was not detected.
J = Reported as an estimated value.
R= Rejected by validation.

[c] Minimum Detectable Activity (MDA)

[d] SDWA standards (40CFR141), New Jersey Groundwater Standards (NJAC 7:9-6).

[e]Locations SWSD006, SWSD007, SWSD007 and SWSD009 were not sampled due to stagnant water.

[f]The NJDEP has established a MCL for total uranium in drinking water of 30 ug/L or 20 pCi/L; thus, regulatory compliance was determined by comparing the measured values for total uranium to the MCL expressed in both of the above units. The initial determination of regulatory compliance was made by comparing the reported total uranium to 20 pCi/L. In addition, the reported U-238 in pCi/L was divided by the specific activity of U-238 (0.3365 pCi/µg) to obtain the total uranium in µg/L and then compared to NJDEP MCL of 30 µg/L.

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
Samples collected in Westerly Brook:							
SWSD001	7/17/2001	Aluminum, Total	71.9	J	12.7	200	200
	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	8.9		2.3	50	0.02/8
	7/17/2001	Barium, Total	118		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.25	J	0.20	4	0.008/20
	7/17/2001	Boron, Total	153		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	0.9	U	0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	1.4	J	0.70	1300	1000
	7/17/2001	Iron, Total	317		15.7	300	300
	7/17/2001	Lead, Total	2.6	U	2.6	15	5
	7/17/2001	Lithium, Total	494	J	0.20		
	7/17/2001	Manganese, Total	182		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	1.2	U	1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	0.7	U	0.70		
	7/17/2001	Zinc, Total	19.7	J	0.30	500	5000
SWSD001	7/17/2001	Aluminum, Total	298	J	12.7	200	200
Duplicate	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	8.1		2.3	50	0.02/8
	7/17/2001	Barium, Total	126		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.2	U	0.20	4	0.008/20
	7/17/2001	Boron, Total	157		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	1		0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	4.1	J	0.70	1300	1000
	7/17/2001	Iron, Total	737		15.7	300	300
	7/17/2001	Lead, Total	4.9		2.6	15	5
	7/17/2001	Lithium, Total	490	J	0.20		
	7/17/2001	Manganese, Total	248		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	2		1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	1.4		0.70		
	7/17/2001	Zinc, Total	21.5	J	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
SWSD002	7/16/2001	Aluminum, Total	44.4	J	12.7	200	200
	7/16/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/16/2001	Arsenic, Total	14.1		2.3	50	0.02/8
	7/16/2001	Barium, Total	116		0.20	2000	2000
	7/16/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/16/2001	Boron, Total	152		2.1		
	7/16/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/16/2001	Chromium, Total	0.9	U	0.90	100	100
	7/16/2001	Cobalt, Total	0.8	U	0.80		
	7/16/2001	Copper, Total	0.7	J	0.70	1300	1000
	7/16/2001	Iron, Total	765		15.7	300	300
	7/16/2001	Lead, Total	2.6	U	2.6	15	5
	7/16/2001	Lithium, Total	487	J	0.20		
	7/16/2001	Manganese, Total	508		0.10	50	50
	7/16/2001	Mercury, Total	0.1	U	0.10	2	2
	7/16/2001	Nickel, Total	1.2	U	1.2		100
	7/16/2001	Selenium, Total	2.6	U	2.6	50	50
	7/16/2001	Silver, Total	1	U	1.0	1007	
	7/16/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/16/2001	Vanadium, Total	0.7	U	0.70		
	7/16/2001	Zinc, Total	7.7	UBJ	0.30	500	5000
SWSD003[f]	7/16/2001	Aluminum, Total	63.3	J	12.7	200	200
	7/16/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/16/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/16/2001	Barium, Total	140		0.20	2000	2000
	7/16/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/16/2001	Boron, Total	50.3		2.1		
	7/16/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/16/2001	Chromium, Total	1.5		0.90	100	100
	7/16/2001	Cobalt, Total	0.8	U	0.80		
	7/16/2001	Copper, Total	1.1	J	0.70	1300	1000
	7/16/2001	Iron, Total	445		15.7	300	300
	7/16/2001	Lead, Total	2.6	U	2.6	15	5
	7/16/2001	Lithium, Total	9.9	J	0.20		
	7/16/2001	Manganese, Total	97.3		0.10	50	50
	7/16/2001	Mercury, Total	0.1	U	0.10	2	2
	7/16/2001	Nickel, Total	2		1.2		100
	7/16/2001	Selenium, Total	2.6	U	2.6	50	50
	7/16/2001	Silver, Total	1	U	1.0	1007	
	7/16/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/16/2001	Vanadium, Total	0.7	U	0.70		
	7/16/2001	Zinc, Total	13.2	UBJ	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
SWSD004	7/17/2001	Aluminum, Total	171	J	12.7	200	200
	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	22.9		2.3	50	0.02/8
	7/17/2001	Barium, Total	135		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.22	J	0.20	4	0.008/20
	7/17/2001	Boron, Total	176		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	0.9	U	0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	0.72	J	0.70	1300	1000
	7/17/2001	Iron, Total	1590		15.7	300	300
	7/17/2001	Lead, Total	2.6	U	2.6	15	5
	7/17/2001	Lithium, Total	599	J	0.20		
	7/17/2001	Manganese, Total	1000		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	1.2	U	1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	1.1		0.70		
	7/17/2001	Zinc, Total	26.4	J	0.30	500	5000
Samples collected in Lodi Brook:							
SWSD005	7/16/2001	Aluminum, Total	151	J	12.7	200	200
	7/16/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/16/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/16/2001	Barium, Total	89		0.20	2000	2000
	7/16/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/16/2001	Boron, Total	109		2.1		
	7/16/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/16/2001	Chromium, Total	0.9	U	0.90	100	100
	7/16/2001	Cobalt, Total	0.8	U	0.80		
	7/16/2001	Copper, Total	11.6		0.70	1300	1000
	7/16/2001	Iron, Total	531		15.7	300	300
	7/16/2001	Lead, Total	2.6		2.6	15	5
	7/16/2001	Lithium, Total	50.4	J	0.20		
	7/16/2001	Manganese, Total	184		0.10	50	50
	7/16/2001	Mercury, Total	0.1	U	0.10	2	2
	7/16/2001	Nickel, Total	1.2	U	1.2		100
	7/16/2001	Selenium, Total	2.6	U	2.6	50	50
	7/16/2001	Silver, Total	1	U	1.0	1007	
	7/16/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/16/2001	Vanadium, Total	1.5		0.70		
	7/16/2001	Zinc, Total	20.3	J	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
SWSD010	7/16/2001	Aluminum, Total	128	J	12.7	200	200
	7/16/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/16/2001	Arsenic, Total	3.2		2.3	50	0.02/8
	7/16/2001	Barium, Total	82.3		0.20	2000	2000
	7/16/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/16/2001	Boron, Total	111		2.1		
	7/16/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/16/2001	Chromium, Total	0.9	U	0.90	100	100
	7/16/2001	Cobalt, Total	0.8	U	0.80		
	7/16/2001	Copper, Total	10.5		0.70	1300	1000
	7/16/2001	Iron, Total	567		15.7	300	300
	7/16/2001	Lead, Total	2.6	U	2.6	15	5
	7/16/2001	Lithium, Total	71.9	J	0.20		
	7/16/2001	Manganese, Total	241		0.10	50	50
	7/16/2001	Mercury, Total	0.1	U	0.10	2	2
	7/16/2001	Nickel, Total	1.8		1.2		100
	7/16/2001	Selenium, Total	2.6	U	2.6	50	50
	7/16/2001	Silver, Total	1	U	1.0	1007	
	7/16/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/16/2001	Vanadium, Total	1.1		0.70		
	7/16/2001	Zinc, Total	27.3	J	0.30	500	5000
SWSD011	7/17/2001	Aluminum, Total	173	J	12.7	200	200
	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/17/2001	Barium, Total	92.7		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.22	J	0.20	4	0.008/20
	7/17/2001	Boron, Total	127		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	1.1		0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	7.8	J	0.70	1300	1000
	7/17/2001	Iron, Total	298		15.7	300	300
	7/17/2001	Lead, Total	2.6	U	2.6	15	5
	7/17/2001	Lithium, Total	95.1	J	0.20		
	7/17/2001	Manganese, Total	115		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	1.5		1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	2		0.70		
	7/17/2001	Zinc, Total	22.8	J	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
SWSD012	7/17/2001	Aluminum, Total	101	J	12.7	200	200
	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/17/2001	Barium, Total	87.6		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/17/2001	Boron, Total	124		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	3.9		0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	9.1		0.70	1300	1000
	7/17/2001	Iron, Total	241		15.7	300	300
	7/17/2001	Lead, Total	2.6	U	2.6	15	5
	7/17/2001	Lithium, Total	70.4	J	0.20		
	7/17/2001	Manganese, Total	94.9		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	1.2	U	1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	2		0.70		
	7/17/2001	Zinc, Total	22.2	J	0.30	500	5000
SWSD013	7/17/2001	Aluminum, Total	104	J	12.7	200	200
	7/17/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/17/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/17/2001	Barium, Total	90.1		0.20	2000	2000
	7/17/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/17/2001	Boron, Total	123		2.1		
	7/17/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/17/2001	Chromium, Total	0.9	U	0.90	100	100
	7/17/2001	Cobalt, Total	0.8	U	0.80		
	7/17/2001	Copper, Total	9.1		0.70	1300	1000
	7/17/2001	Iron, Total	241		15.7	300	300
	7/17/2001	Lead, Total	2.6	U	2.6	15	5
	7/17/2001	Lithium, Total	75.8	J	0.20		
	7/17/2001	Manganese, Total	79.3		0.10	50	50
	7/17/2001	Mercury, Total	0.1	U	0.10	2	2
	7/17/2001	Nickel, Total	1.2	U	1.2		100
	7/17/2001	Selenium, Total	2.6	U	2.6	50	50
	7/17/2001	Silver, Total	1	U	1.0	1007	
	7/17/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/17/2001	Vanadium, Total	2.2		0.70		
	7/17/2001	Zinc, Total	23.7	J	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
SWSD014	7/18/2001	Aluminum, Total	133	J	12.7	200	200
	7/18/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/18/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/18/2001	Barium, Total	96.3		0.20	2000	2000
	7/18/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/18/2001	Boron, Total	127		2.1		
	7/18/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/18/2001	Chromium, Total	1.8		0.90	100	100
	7/18/2001	Cobalt, Total	0.8	U	0.80		
	7/18/2001	Copper, Total	7.4	J	0.70	1300	1000
	7/18/2001	Iron, Total	342		15.7	300	300
	7/18/2001	Lead, Total	2.6	U	2.6	15	5
	7/18/2001	Lithium, Total	61.7	J	0.20		
	7/18/2001	Manganese, Total	105		0.10	50	50
	7/18/2001	Mercury, Total	0.1	U	0.10	2	2
	7/18/2001	Nickel, Total	1.3		1.2		100
	7/18/2001	Selenium, Total	2.6	U	2.6	50	50
	7/18/2001	Silver, Total	1	U	1.0	1007	
	7/18/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/18/2001	Vanadium, Total	1.5		0.70		
	7/18/2001	Zinc, Total	22	J	0.30	500	5000
SWSD015	7/18/2001	Aluminum, Total	60.5	J	12.7	200	200
	7/18/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/18/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/18/2001	Barium, Total	90.5		0.20	2000	2000
	7/18/2001	Beryllium, Total	0.2	J	0.20	4	0.008/20
	7/18/2001	Boron, Total	134		2.1		
	7/18/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/18/2001	Chromium, Total	0.9	U	0.90	100	100
	7/18/2001	Cobalt, Total	0.8	U	0.80		
	7/18/2001	Copper, Total	7.2	J	0.70	1300	1000
	7/18/2001	Iron, Total	255		15.7	300	300
	7/18/2001	Lead, Total	2.6	U	2.6	15	5
	7/18/2001	Lithium, Total	59.4	J	0.20		
	7/18/2001	Manganese, Total	40		0.10	50	50
	7/18/2001	Mercury, Total	0.1	U	0.10	2	2
	7/18/2001	Nickel, Total	1.2	U	1.2		100
	7/18/2001	Selenium, Total	2.6	U	2.6	50	50
	7/18/2001	Silver, Total	1	U	1.0	1007	
	7/18/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/18/2001	Vanadium, Total	1.6		0.70		
	7/18/2001	Zinc, Total	20.5	J	0.30	500	5000

TABLE 5
2001 Surface Water Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location[e]	Date Collected	Detected Analyte[a]	Result: (ug/L)	Data Qualifier[b]	Reporting Limits (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
SWSD015	7/18/2001	Aluminum, Total	60.4	J	12.7	200	200
Duplicate	7/18/2001	Antimony, Total	1.9	U	1.9	6	2/20
	7/18/2001	Arsenic, Total	2.3	U	2.3	50	0.02/8
	7/18/2001	Barium, Total	90.7		0.20	2000	2000
	7/18/2001	Beryllium, Total	0.2	U	0.20	4	0.008/20
	7/18/2001	Boron, Total	142		2.1		
	7/18/2001	Cadmium, Total	0.3	U	0.30	5	4
	7/18/2001	Chromium, Total	0.9	U	0.90	100	100
	7/18/2001	Cobalt, Total	0.8	U	0.80		
	7/18/2001	Copper, Total	6.6	J	0.70	1300	1000
	7/18/2001	Iron, Total	253		15.7	300	300
	7/18/2001	Lead, Total	2.6	U	2.6	15	5
	7/18/2001	Lithium, Total	60.4	J	0.20		
	7/18/2001	Manganese, Total	41.3		0.10	50	50
	7/18/2001	Mercury, Total	0.1	U	0.10	2	2
	7/18/2001	Nickel, Total	1.5		1.2		100
	7/18/2001	Selenium, Total	2.6	U	2.6	50	50
	7/18/2001	Silver, Total	1	U	1.0	1007	
	7/18/2001	Thallium, Total	3.9	U	3.9	2	0.5
	7/18/2001	Vanadium, Total	1.5		0.70		
	7/18/2001	Zinc, Total	21.4	J	0.30	500	5000

[a]All analytes were repoprted, detected and undetected.
[b] USACE qualifier flags based on the CDQMP-QAPP: J = Reported as an estimated value, U= analyte was not detected.
[c] Federal SDWA MCLs, 40 CFR 141. Regulations pertain to drinking water quality and are listed for comparison purposes only. Not established (NE).
[d] New Jersey Class IIA Groundwater Quality Standards NJAC 7:9-6. Analytes for which the PQL is greater than the GWQC are noted as such: GWQC/PQL.
[e]Locations SWSD006, SWSD007, SWSD008 and SWSD009 were not sampled due to stagnant water.
[f]Monitoring well SWSD003 is the background location for surface water locations.

TABLE 6
2001 Sediment Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[f]	Date Collected	Analyte	Result[a] (pCi/g)	Error	Qualifier[b]	MDA[c] (pCi/g)	Cleanup Criteria[d] (pCi/g)
Sediment samples collected in Westerly Brook:							
SWSD001	17-Jul-01	Radium-226	0.61	0.22	J	0.2	5
		Radium-228	1.57	0.69	J	0.7	5
		Thorium-228	0.59	0.22	J	0.09	
		Thorium-230	0.57	0.22	J	0.16	5
		Thorium-232	0.37	0.17	J	0.12	5
		Uranium-234	1.01	0.33	J	0.17	
		Uranium-235	0.06	0.08	UJ	0.1	
		Uranium-238	0.78	0.28	J	0.14	
		Total Uranium	1.85				100
SWSD001 Duplicate[e]	17-Jul-01	Radium-226	0.91	0.29	J	0.19	5
		Radium-228	0.89	0.74	J	0.79	5
		Thorium-228	0.62	0.26	J	0.18	
		Thorium-230	0.91	0.33	J	0.2	5
		Thorium-232	0.46	0.22	J	0.16	5
		Uranium-234	0.83	0.26	J	0.1	
		Uranium-235	0.01	0.04	U	0.08	
		Uranium-238	0.58	0.21	J	0.09	
		Total Uranium	1.42				100
SWSD002	16-Jul-01	Radium-226	0.66	0.24	J	0.18	5
		Radium-228	0.85	0.66	J	0.7	5
		Thorium-228	0.36	0.17	J	0.15	
		Thorium-230	0.47	0.19		0.13	5
		Thorium-232	0.35	0.16	J	0.1	5
		Uranium-234	0.86	0.29	J	0.14	
		Uranium-235	0.03	0.06	U	0.13	
		Uranium-238	0.72	0.26	J	0.15	
		Total Uranium	1.61				100
SWSD003	16-Jul-01	Radium-226	0.24	0.09	J	0.05	5
		Radium-228	0.21	0.29	UJ	0.32	5
		Thorium-228	0.29	0.10	U	0.06	
		Thorium-230	0.4	0.13		0.04	5
		Thorium-232	0.34	0.11	J	0.04	5
		Uranium-234	0.38	0.14	J	0.08	
		Uranium-235	0.01	0.02	U	0.06	
		Uranium-238	0.38	0.14	J	0.08	
		Total Uranium	0.77				100

TABLE 6
2001 Sediment Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[f]	Date Collected	Analyte	Result[a] (pCi/g)	Error	Qualifier[b]	MDA[c] (pCi/g)	Cleanup Criteria[d] (pCi/g)
Sediment samples collected in Lodi Brook:							
SWSD005	16-Jul-01	Radium-226	0.87	0.24	J	0.15	5
		Radium-228	3.45	0.57		0.50	5
		Thorium-228	6.21	1.34		0.15	
		Thorium-230	2.00	0.54		0.18	5
		Thorium-232	6.91	1.47	J	0.13	5
		Uranium-234	1.34	0.42	J	0.26	
		Uranium-235	0.11	0.11	UJ	0.13	
		Uranium-238	1.06	0.35	J	0.18	
		Total Uranium	2.51				100
SWSD006	16-Jul-01	Radium-226	1.41	0.31		0.18	5
		Radium-228	4.09	0.78		0.74	5
		Thorium-228	4.13	0.93		0.14	
		Thorium-230	1.49	0.43		0.18	5
		Thorium-232	4.19	0.94	J	0.14	5
		Uranium-234	2.38	0.61	J	0.19	
		Uranium-235	0.04	0.07	U	0.11	
		Uranium-238	1.77	0.49	J	0.14	
		Total Uranium	4.18				100
SWSD007	16-Jul-01	Radium-226	0.89	0.26	J	0.24	5
		Radium-228	2.91	0.84	J	0.83	5
		Thorium-228	2.95	0.77	J	0.75	
		Thorium-230	4.56	1.03		0.10	5
		Thorium-232	3.06	0.72		0.16	5
		Uranium-234	1.85	0.49		0.10	
		Uranium-235	3.78	0.88	J	0.15	
		Uranium-238	1.87	0.54	J	0.20	
		Total Uranium	7.50				100
SWSD007 Duplicate[e]	16-Jul-01	Radium-226	1.40	0.32		0.14	5
		Radium-228	1.93	0.53		0.24	5
		Thorium-228	3.25	0.76	J	0.13	
		Thorium-230	6.64	1.46		0.18	5
		Thorium-232	6.56	1.49		0.21	5
		Uranium-234	0.18	0.15		0.16	
		Uranium-235	0.21	0.16		0.20	
		Uranium-238	3.01	0.76		0.23	
		Total Uranium	3.40				100

TABLE 6
2001 Sediment Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location[f]	Date Collected	Analyte	Result[a] (pCi/g)	Error	Qualifier[b]	MDA[c] (pCi/g)	Cleanup Criteria[d] (pCi/g)
SWSD008	18-Jul-01	Radium-226	1.96	0.44		0.22	5
		Radium-228	5.10	0.83		0.73	
		Thorium-228	6.30	1.31		0.14	
		Thorium-230	1.74	0.46		0.14	5
		Thorium-232	5.81	1.22	J	0.11	5
		Uranium-234	1.49	0.43	J	0.09	
		Uranium-235	0.10	0.10	UJ	0.10	
		Uranium-238	1.20	0.37		0.10	
		Total Uranium	2.80				100
SWSD010	16-Jul-01	Radium-226	0.62	0.21	J	0.16	5
		Radium-228	3.46	0.61		0.54	5
		Thorium-228	2.11	0.58		0.16	
		Thorium-230	0.84	0.31		0.15	5
		Thorium-232	2.69	0.69	J	0.14	5
		Uranium-234	3.84	0.97	J	0.20	
		Uranium-235	0.14	0.13	UJ	0.19	
		Uranium-238	0.96	0.35	J	0.21	
		Total Uranium	4.93				100
SWSD015	18-Jul-01	Radium-226	0.64	0.26	J	0.20	5
		Radium-228	1.61	0.69	J	0.70	5
		Thorium-228	0.66	0.24	J	0.08	
		Thorium-230	0.60	0.23	J	0.16	5
		Thorium-232	0.48	0.20	J	0.13	5
		Uranium-234	0.53	0.21	J	0.09	
		Uranium-235	0.03	0.05	U	0.09	
		Uranium-238	0.42	0.18		0.11	
		Total Uranium	0.98				100
SWSD015 Duplicate[e]	18-Jul-01	Radium-226	0.63	0.20	J	0.13	5
		Radium-228	0.63	0.50	J	0.53	5
		Thorium-228	0.51	0.17	J	0.09	
		Thorium-230	0.49	0.17	J	0.07	5
		Thorium-232	0.47	0.16	J	0.07	5
		Uranium-234	0.48	0.17	J	0.07	
		Uranium-235	0.08	0.01	U	0.08	
		Uranium-238	0.38	0.15		0.08	
		Total Uranium	0.94				100

TABLE 6
2001 Sediment Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

LEGEND:

[a]Results reported with ± radiological error equal at 2 sigma (95% confidence level),

[b] USACE data qualifier flags based on the CDQMP-QAPP;

U = The analyte was not detected.

J = Reported as an estimated value.

[c]Minimum Detectable Activity (MDA)

[d] New Jersey and EPA MCL (N.J.A.C. 7:9-6).

[e] A quality control duplicate is collected at the same time and location and is analyzed by the same method in order to evaluate precision in sampling and analysis.

[f] Sediment samples could not be collected at locations SWSD009, SWSD011, SWSD012, SWSD013 and SWSD014 in Lodi Brook and SWSD004 in Westerly Brook due to significant flow.

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
Samples collected in Westerly Brook:								
SWSD001	17-Jul-01	Aluminum, Total	2870		1.6	NE		
(residential)	17-Jul-01	Antimony, Total	0.92	J	0.24	14		
	17-Jul-01	Arsenic, Total	4		0.29	20	6	33
	17-Jul-01	Barium, Total	42.4	J	0.03	700		
	17-Jul-01	Beryllium, Total	0.05		0.03	1		
	17-Jul-01	Boron, Total	2.8	J	0.26	NE		
	17-Jul-01	Cadmium, Total	0.25		0.04	1	0.6	10
	17-Jul-01	Calcium, Total	2130	J	1	NE		
	17-Jul-01	Chromium, Total	38.8	J	0.11	NE	26	110
	17-Jul-01	Cobalt, Total	3.5	J	0.1	NE		
	17-Jul-01	Copper, Total	22.9	J	0.09	600	16	110
	17-Jul-01	Iron, Total	8510		2	NE		
	17-Jul-01	Lead, Total	117	J	0.33	400	31	250
	17-Jul-01	Lithium, Total	6		0.03	NE		
	17-Jul-01	Magnesium, Total	1480		1.1	NE		
	17-Jul-01	Manganese, Total	146	J	0.01	NE		
	17-Jul-01	Mercury, Total	0.02	J	0.02	14		
	17-Jul-01	Nickel, Total	6.9	J	0.15	250	16	75
	17-Jul-01	Potassium, Total	338	J	4.4	NE		
	17-Jul-01	Selenium, Total	0.7	UB	0.33	63		
	17-Jul-01	Silver, Total	0.17		0.13	110		
	17-Jul-01	Sodium, Total	195	UB	0.21	NE		
	17-Jul-01	Thallium, Total	0.49	U	0.49	2		
	17-Jul-01	Vanadium, Total	10.2		0.09	370		
	17-Jul-01	Zinc, Total	115	J	0.04	1500	120	820
SWSD001	17-Jul-01	Aluminum, Total	2960		1.6	NE		
Duplicate[d]	17-Jul-01	Antimony, Total	0.25	J	0.25	14		
	17-Jul-01	Arsenic, Total	3.8		0.3	20	6	33
	17-Jul-01	Barium, Total	34.1	J	0.03	700		
	17-Jul-01	Beryllium, Total	0.09		0.03	1		
	17-Jul-01	Boron, Total	2	J	0.27	NE		
	17-Jul-01	Cadmium, Total	0.2		0.04	1	0.6	10
	17-Jul-01	Calcium, Total	4140	J	1	NE		
	17-Jul-01	Chromium, Total	7.7	J	0.12	NE	26	110
	17-Jul-01	Cobalt, Total	2.9	J	0.1	NE		
	17-Jul-01	Copper, Total	12.8	J	0.09	600	16	110
	17-Jul-01	Iron, Total	8290		2	NE		
	17-Jul-01	Lead, Total	31.1	J	0.34	400	31	250
	17-Jul-01	Lithium, Total	6.6		0.03	NE		
	17-Jul-01	Magnesium, Total	1530		1.1	NE		
	17-Jul-01	Manganese, Total	186	J	0.01	NE		
	17-Jul-01	Mercury, Total	0.02	J	0.02	14		
	17-Jul-01	Nickel, Total	6.6	J	0.15	250	16	75
	17-Jul-01	Potassium, Total	398	J	4.6	NE		
	17-Jul-01	Selenium, Total	0.34	U	0.34	63		
	17-Jul-01	Silver, Total	0.13	U	0.13	110		
	17-Jul-01	Sodium, Total	233		0.22	NE		
	17-Jul-01	Thallium, Total	0.5	U	0.5	2		
	17-Jul-01	Vanadium, Total	9.6		0.09	370		
	17-Jul-01	Zinc, Total	84.4	J	0.04	1500	120	820

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
SWSD002	16-Jul-01	Aluminum, Total	3140		1.6	NE		
(residential)	16-Jul-01	Antimony, Total	0.28	J	0.24	14		
	16-Jul-01	Arsenic, Total	4.3		0.29	20	6	33
	16-Jul-01	Barium, Total	31.1	J	0.02	700		
	16-Jul-01	Beryllium, Total	0.14		0.02	1		
	16-Jul-01	Boron, Total	3.7	J	0.26	NE		
	16-Jul-01	Cadmium, Total	0.31		0.04	1	0.6	10
	16-Jul-01	Calcium, Total	6290	J	1	NE		
	16-Jul-01	Chromium, Total	11	J	0.11	NE	26	110
	16-Jul-01	Cobalt, Total	3.9	J	0.1	NE		
	16-Jul-01	Copper, Total	31.9	J	0.09	600	16	110
	16-Jul-01	Iron, Total	11100		2	NE		
	16-Jul-01	Lead, Total	63	J	0.32	400	31	250
	16-Jul-01	Lithium, Total	5.3		0.02	NE		
	16-Jul-01	Magnesium, Total	2970		1.1	NE		
	16-Jul-01	Manganese, Total	121	J	0.01	NE		
	16-Jul-01	Mercury, Total	0.02	J	0.02	14		
	16-Jul-01	Nickel, Total	13.8	J	0.15	250	16	75
	16-Jul-01	Potassium, Total	309	J	4.4	NE		
	16-Jul-01	Selenium, Total	0.56	UB	0.32	63		
	16-Jul-01	Silver, Total	0.12	U	0.12	110		
	16-Jul-01	Sodium, Total	220		0.21	NE		
	16-Jul-01	Thallium, Total	0.49	U	0.49	2		
	16-Jul-01	Vanadium, Total	11.8		0.09	370		
	16-Jul-01	Zinc, Total	136	J	0.04	1500	120	820
SWSD003	16-Jul-01	Aluminum, Total	2900		1.6	NE		
(nonresidential)	16-Jul-01	Antimony, Total	0.86	J	0.24	340		
	16-Jul-01	Arsenic, Total	2.7		0.29	20	6	33
	16-Jul-01	Barium, Total	30.4	J	0.03	47000		
	16-Jul-01	Beryllium, Total	0.06		0.03	1		
	16-Jul-01	Boron, Total	2.4	J	0.26	NE		
	16-Jul-01	Cadmium, Total	0.35		0.04	100	0.6	10
	16-Jul-01	Calcium, Total	3210	J	1	NE		
	16-Jul-01	Chromium, Total	10.8	J	0.11	NE	26	110
	16-Jul-01	Cobalt, Total	3.4	J	0.1	NE		
	16-Jul-01	Copper, Total	30.6	J	0.09	600	16	110
	16-Jul-01	Iron, Total	13500		2	NE		
	16-Jul-01	Lead, Total	34.3	J	0.33	600	31	250
	16-Jul-01	Lithium, Total	5		0.03	NE		
	16-Jul-01	Magnesium, Total	2180		1.1	NE		
	16-Jul-01	Manganese, Total	99	J	0.01	NE		
	16-Jul-01	Mercury, Total	0.02	U	0.02	270		
	16-Jul-01	Nickel, Total	11.4	J	0.15	2400	16	75
	16-Jul-01	Potassium, Total	317	J	4.4	NE		
	16-Jul-01	Selenium, Total	0.33	U	0.33	3100		
	16-Jul-01	Silver, Total	0.13	U	0.13	4100		
	16-Jul-01	Sodium, Total	185	UB	0.21	NE		
	16-Jul-01	Thallium, Total	0.49	U	0.49	2		
	16-Jul-01	Vanadium, Total	11.7		0.09	7100		
	16-Jul-01	Zinc, Total	109	J	0.04	1500	120	820

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
Samples collected in Lodi Brook:								
SWSD005	16-Jul-01	Aluminum, Total	3280		1.7	NE		
(nonresidential)	16-Jul-01	Antimony, Total	0.33	J	0.25	340		
	16-Jul-01	Arsenic, Total	5.7		0.31	20	6	33
	16-Jul-01	Barium, Total	47.2	J	0.03	47000		
	16-Jul-01	Beryllium, Total	0.25		0.03	1		
	16-Jul-01	Boron, Total	10.1	J	0.28	NE		
	16-Jul-01	Cadmium, Total	0.46		0.04	100	0.6	10
	16-Jul-01	Calcium, Total	6330	J	1.1	NE		
	16-Jul-01	Chromium, Total	23.5	J	0.12	NE	26	110
	16-Jul-01	Cobalt, Total	3.7	J	0.11	NE		
	16-Jul-01	Copper, Total	41.8	J	0.09	600	16	110
	16-Jul-01	Iron, Total	10800		2.1	NE		
	16-Jul-01	Lead, Total	47.6	J	0.35	600	31	250
	16-Jul-01	Lithium, Total	6.3		0.03	NE		
	16-Jul-01	Magnesium, Total	3630		1.2	NE		
	16-Jul-01	Manganese, Total	195	J	0.01	NE		
	16-Jul-01	Mercury, Total	0.07	J	0.02	270		
	16-Jul-01	Nickel, Total	10.5	J	0.16	2400	16	75
	16-Jul-01	Potassium, Total	339	J	4.7	NE		
	16-Jul-01	Selenium, Total	0.35	U	0.35	3100		
	16-Jul-01	Silver, Total	0.13	U	0.13	4100		
	16-Jul-01	Sodium, Total	293		0.23	NE		
	16-Jul-01	Thallium, Total	0.52	U	0.52	2		
	16-Jul-01	Vanadium, Total	14.2		0.09	7100		
	16-Jul-01	Zinc, Total	157	J	0.04	1500	120	820
SWSD006	16-Jul-01	Aluminum, Total	7020		3.5	NE		
(nonresidential)	16-Jul-01	Antimony, Total	2.6	J	0.52	340		
	16-Jul-01	Arsenic, Total	9.4		0.64	20	6	33
	16-Jul-01	Barium, Total	164	J	0.06	47000		
	16-Jul-01	Beryllium, Total	0.26		0.06	1		
	16-Jul-01	Boron, Total	12.1	J	0.58	NE		
	16-Jul-01	Cadmium, Total	1.3		0.08	100	0.6	10
	16-Jul-01	Calcium, Total	8210	J	2.2	NE		
	16-Jul-01	Chromium, Total	64.8	J	0.25	NE	26	110
	16-Jul-01	Cobalt, Total	5.9		0.22	NE		
	16-Jul-01	Copper, Total	80.8	J	0.19	600	16	110
	16-Jul-01	Iron, Total	16500		4.3	NE		
	16-Jul-01	Lead, Total	275	J	0.72	600	31	250
	16-Jul-01	Lithium, Total	18.3		0.06	NE		
	16-Jul-01	Magnesium, Total	2970		2.4	NE		
	16-Jul-01	Manganese, Total	414	J	0.03	NE		
	16-Jul-01	Mercury, Total	0.42	J	0.03	270		
	16-Jul-01	Nickel, Total	18.1	J	0.33	2400	16	75
	16-Jul-01	Potassium, Total	568	J	9.7	NE		
	16-Jul-01	Selenium, Total	2.3	UB	0.72	3100		
	16-Jul-01	Silver, Total	0.28	U	0.28	4100		
	16-Jul-01	Sodium, Total	805		0.47	NE		
	16-Jul-01	Thallium, Total	1.1	U	1.1	2		
	16-Jul-01	Vanadium, Total	33.8		0.19	7100		
	16-Jul-01	Zinc, Total	327	J	0.08	1500	120	820

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
SWSD007	16-Jul-01	Aluminum, Total	6730		4.4	NE		
(nonresidential)	16-Jul-01	Antimony, Total	3.2	J	0.66	340		
	16-Jul-01	Arsenic, Total	14		0.79	20	6	33
	16-Jul-01	Barium, Total	160	J	0.07	47000		
	16-Jul-01	Beryllium, Total	0.39		0.07	1		
	16-Jul-01	Boron, Total	15	J	0.72	NE		
	16-Jul-01	Cadmium, Total	2.4		0.1	100	0.6	10
	16-Jul-01	Calcium, Total	11200	J	2.8	NE		
	16-Jul-01	Chromium, Total	132	J	0.31	NE	26	110
	16-Jul-01	Cobalt, Total	8.3		0.28	NE		
	16-Jul-01	Copper, Total	111	J	0.24	600	16	110
	16-Jul-01	Iron, Total	20000		5.4	NE		
	16-Jul-01	Lead, Total	679	J	0.9	600	31	250
	16-Jul-01	Lithium, Total	18.8		0.07	NE		
	16-Jul-01	Magnesium, Total	3170		3	NE		
	16-Jul-01	Manganese, Total	454	J	0.03	NE		
	16-Jul-01	Mercury, Total	0.32	J	0.05	270		
	16-Jul-01	Nickel, Total	41	J	0.41	2400	16	75
	16-Jul-01	Potassium, Total	708	J	12.2	NE		
	16-Jul-01	Selenium, Total	0.91	UB	0.9	3100		
	16-Jul-01	Silver, Total	0.35	U	0.35	4100		
	16-Jul-01	Sodium, Total	608		0.59	NE		
	16-Jul-01	Thallium, Total	1.3	U	1.3	2		
	16-Jul-01	Vanadium, Total	37.8		0.24	7100		
	16-Jul-01	Zinc, Total	492	J	0.1	1500	120	820
SWSD008	18-Jul-01	Aluminum, Total	6240		1.8	NE		
(nonresidential)	18-Jul-01	Antimony, Total	0.61	J	0.27	340		
	18-Jul-01	Arsenic, Total	5.3		0.33	20	6	33
	18-Jul-01	Barium, Total	61.9		0.03	47000		
	18-Jul-01	Beryllium, Total	0.19		0.03	1		
	18-Jul-01	Boron, Total	4.5	J	0.3	NE		
	18-Jul-01	Cadmium, Total	0.31		0.04	100	0.6	10
	18-Jul-01	Calcium, Total	3840		1.2	NE		
	18-Jul-01	Chromium, Total	49	J	0.13	NE	26	110
	18-Jul-01	Cobalt, Total	3.1	J	0.11	NE		
	18-Jul-01	Copper, Total	36.5	J	0.1	600	16	110
	18-Jul-01	Iron, Total	9790		2.2	NE		
	18-Jul-01	Lead, Total	106	J	0.37	600	31	250
	18-Jul-01	Lithium, Total	21.5		0.03	NE		
	18-Jul-01	Magnesium, Total	1470		1.3	NE		
	18-Jul-01	Manganese, Total	107	J	0.01	NE		
	18-Jul-01	Mercury, Total	0.47	J	0.02	270		
	18-Jul-01	Nickel, Total	10.5	J	0.17	2400	16	75
	18-Jul-01	Potassium, Total	461	J	5	NE		
	18-Jul-01	Selenium, Total	0.83	UB	0.37	3100		
	18-Jul-01	Silver, Total	0.14	U	0.14	4100		
	18-Jul-01	Sodium, Total	339		0.24	NE		
	18-Jul-01	Thallium, Total	0.55	U	0.55	2		
	18-Jul-01	Vanadium, Total	19		0.1	7100		
	18-Jul-01	Zinc, Total	95.2	J	0.04	1500	120	820

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
SWSD010	16-Jul-01	Aluminum, Total	3710		1.6	NE		
(nonresidential)	16-Jul-01	Antimony, Total	0.61	J	0.25	340		
	16-Jul-01	Arsenic, Total	4.3		0.3	20	6	33
	16-Jul-01	Barium, Total	135	J	0.03	47000		
	16-Jul-01	Beryllium, Total	0.1		0.03	1		
	16-Jul-01	Boron, Total	41	J	0.27	NE		
	16-Jul-01	Cadmium, Total	0.57		0.04	100	0.6	10
	16-Jul-01	Calcium, Total	11500	J	1.1	NE		
	16-Jul-01	Chromium, Total	71	J	0.12	NE	26	110
	16-Jul-01	Cobalt, Total	3.9	J	0.1	NE		
	16-Jul-01	Copper, Total	50.7	J	0.09	600	16	110
	16-Jul-01	Iron, Total	14200		2	NE		
	16-Jul-01	Lead, Total	102	J	0.34	600	31	250
	16-Jul-01	Lithium, Total	7.1		0.03	NE		
	16-Jul-01	Magnesium, Total	3140		1.1	NE		
	16-Jul-01	Manganese, Total	567	J	0.01	NE		
	16-Jul-01	Mercury, Total	0.05	J	0.02	270		
	16-Jul-01	Nickel, Total	14.3	J	0.16	2400	16	75
	16-Jul-01	Potassium, Total	435	J	4.6	NE		
	16-Jul-01	Selenium, Total	0.41	UB	0.34	3100		
	16-Jul-01	Silver, Total	0.13	U	0.13	4100		
	16-Jul-01	Sodium, Total	245		0.22	NE		
	16-Jul-01	Thallium, Total	0.51	U	0.51	2		
	16-Jul-01	Vanadium, Total	17.1		0.09	7100		
	16-Jul-01	Zinc, Total	202	J	0.04	1500	120	820
SWSD015	18-Jul-01	Aluminum, Total	2890		1.8	NE		
(nonresidential)	18-Jul-01	Antimony, Total	0.68	J	0.27	340		
	18-Jul-01	Arsenic, Total	2.9		0.33	20	6	33
	18-Jul-01	Barium, Total	43.6		0.03	47000		
	18-Jul-01	Beryllium, Total	0.05		0.03	1		
	18-Jul-01	Boron, Total	3.2	J	0.3	NE		
	18-Jul-01	Cadmium, Total	0.75		0.04	100	0.6	10
	18-Jul-01	Calcium, Total	5890		1.2	NE		
	18-Jul-01	Chromium, Total	38.8	J	0.13	NE	26	110
	18-Jul-01	Cobalt, Total	3.3	J	0.12	NE		
	18-Jul-01	Copper, Total	31.8	J	0.1	600	16	110
	18-Jul-01	Iron, Total	16500		2.3	NE		
	18-Jul-01	Lead, Total	168	J	0.38	600	31	250
	18-Jul-01	Lithium, Total	5.1		0.03	NE		
	18-Jul-01	Magnesium, Total	3170		1.3	NE		
	18-Jul-01	Manganese, Total	178	J	0.01	NE		
	18-Jul-01	Mercury, Total	0.11	J	0.02	270		
	18-Jul-01	Nickel, Total	12.3	J	0.17	2400	16	75
	18-Jul-01	Potassium, Total	305	J	5.1	NE		
	18-Jul-01	Selenium, Total	0.46	UB	0.38	3100		
	18-Jul-01	Silver, Total	0.14	U	0.14	4100		
	18-Jul-01	Sodium, Total	226		0.25	NE		
	18-Jul-01	Thallium, Total	0.56	U	0.56	2		
	18-Jul-01	Vanadium, Total	14.8		0.1	7100		
	18-Jul-01	Zinc, Total	158	J	0.04	1500	120	820

TABLE 6-A
2001 Sediment Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Results[a] (mg/kg)	Data Qualifier[b]	Reporting Limits (mg/kg)	State Proposed Criteria[c] (mg/kg)	Lowest Effects Level (LEL) (mg/kg)	Severe Effects Level (SEL) (mg/kg)
SWSD015	18-Jul-01	Aluminum, Total	3950		1.7	NE		
Duplicate[d]	18-Jul-01	Antimony, Total	0.98	J	0.26	340		
	18-Jul-01	Arsenic, Total	3.8		0.32	20	6	33
	18-Jul-01	Barium, Total	65.2		0.03	47000		
	18-Jul-01	Beryllium, Total	0.11		0.03	1		
	18-Jul-01	Boron, Total	35.8	J	0.29	NE		
	18-Jul-01	Cadmium, Total	1.5	J	0.04	100	0.6	10
	18-Jul-01	Calcium, Total	7150		1.1	NE		
	18-Jul-01	Chromium, Total	50.5	J	0.12	NE	26	110
	18-Jul-01	Cobalt, Total	3.8	J	0.11	NE		
	18-Jul-01	Copper, Total	41.4	J	0.1	600	16	110
	18-Jul-01	Iron, Total	19300		2.2	NE		
	18-Jul-01	Lead, Total	108	J	0.36	600	31	250
	18-Jul-01	Lithium, Total	6.8		0.03	NE		
	18-Jul-01	Magnesium, Total	3280		1.2	NE		
	18-Jul-01	Manganese, Total	278	J	0.01	NE		
	18-Jul-01	Mercury, Total	0.05	J	0.02	270		
	18-Jul-01	Nickel, Total	14.5	J	0.16	2400	16	75
	18-Jul-01	Potassium, Total	409	J	4.8	NE		
	18-Jul-01	Selenium, Total	0.36	U	0.36	3100		
	18-Jul-01	Silver, Total	0.14	U	0.14	4100		
	18-Jul-01	Sodium, Total	223		0.23	NE		
	18-Jul-01	Thallium, Total	0.54	U	0.54	2		
	18-Jul-01	Vanadium, Total	15.7		0.1	7100		
	18-Jul-01	Zinc, Total	195	J	0.04	1500	120	820

[a] All analytes were reported, detected and undetected.

[b] USACE qualifier flags based on the CDQMP-QAPP: J = Reported as an estimated value, U= analyte was not detected.

[c] Federal SDWA MCLs, 40 CFR 141. Regulations pertain to drinking water

J= Reported as estimated value.

[c] New Jersey Proposed Cleanup Standards for Contaminated Sites: Residential and Non-residential Soil Cleanup Standards (N.J.A.C. 7:26). Residential or non-residential limits are presented, depending upon the zoning of the sampling location.

[d] A quality control duplicate is collected at the same time and location, and is analyzed by the same method in order to evaluate precision in sampling and analysis.

NE= Not established.

[e] Sediment samples could not be collected at locations SWSD009, SWSD011, SWSD012, SWSD013 and SWSD014 in Lodi Brook and SWSD004 in Westerly Brook due to significant flow.

TABLE 7
Depth To Groundwater and Groundwater Elevations for Overburden Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

Property ID	Well	Surveyed Easting - ft NAD	Surveyed Northing - ft NAD	Top of Inner Casing, ft NGVD	Water Level, ft BTOC - 2/7/01
08a	B38W12A	2165389.465	750774.637	49.96	5.15
10a	B38W24S	2164291.430	752193.571	55.04	7.99
10a	B38W25S	2164346.848	752512.996	57.50	5.94
10a	MISS03A	2164437.769	752302.004	58.52	6.32
10a	MISS04A	2164349.457	752109.733	57.17	6.65
12a	B38W01S	2164807.065	752837.366	56.57	5.55
12b	B38W19S	2164049.133	752513.617	59.91	14.67
12b	MISS01AA	2164101.977	752963.643	62.70	15.1
12b	MISS02A	2164706.125	752788.004	61.47	7.49
12b	MISS05A	2164044.198	752360.397	58.65	11.24
12b	MISS06A	2164224.782	752645.208	58.26	9.5
12b	MISS07A	2164053.102	752657.574	55.60	7.12
19a	B38W14S	2163384.820	752600.980	43.89	4.38
20a	B38W15S	2163472.299	752364.902	46.75	4.85
20a	B38W17A	2163922.900	752019.800	53.24	7.93
					Min. GW Elv. (ft NGVD)
					Max. GW Elv. (ft NGVD)

Legend

ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Datum - 1929
BTOC - Below Top of Casing

TABLE 7
Depth To Groundwater and Groundwater Elevations for Overburden Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

Property ID	Well	Groundwater Elv. ft NGVD - 2/7/01	Water Level, ft BTOC - 4/30/01	Groundwater Elv. ft NGVD - 4/30/01
08a	B38W12A	44.81	5.51	44.45
10a	B38W24S	47.05	8.43	46.61
10a	B38W25S	51.56	6.1	51.40
10a	MISS03A	52.20	7.23	51.29
10a	MISS04A	50.52	8.11	49.06
12a	B38W01S	51.02	5.86	50.71
12b	B38W19S	45.24	14.83	45.08
12b	MISS01AA	47.60	14.81	47.89
12b	MISS02A	53.98	8.07	53.40
12b	MISS05A	47.41	11.22	47.43
12b	MISS06A	48.76	10.36	47.90
12b	MISS07A	48.48	8.73	46.87
19a	B38W14S	39.51	4.54	39.35
20a	B38W15S	41.90	5.39	41.36
20a	B38W17A	45.31	8.18	45.06
		39.51	Min. GW Elv. (ft NGVD)	39.35
		53.98	Max. GW Elv. (ft NGVD)	53.40

Legend

ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Dat
BTOC - Below Top of Casing

TABLE 7
Depth To Groundwater and Groundwater Elevations for Overburden Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

Property ID	Well	Water Level, ft BTOC - 7/26/01	Groundwater Elv. ft NGVD - 7/26/01	Water Level, ft BTOC - 11/21/01	Groundwater Elv. ft NGVD - 11/21/01
08a	B38W12A	7.68	42.28	8.47	41.49
10a	B38W24S	10.37	44.67	11.42	43.62
10a	B38W25S	8.35	49.15	10.27	47.23
10a	MISS03A	10.06	48.46	11.91	46.61
10a	MISS04A	10.9	46.27	11.81	45.36
12a	B38W01S	7.6	48.97	8.43	48.14
12b	B38W19S	16.58	43.33	17.33	42.58
12b	MISS01AA	17.94	44.76	18.78	43.92
12b	MISS02A	11	50.47	12.04	49.43
12b	MISS05A	14.39	44.26	15.47	43.18
12b	MISS06A	13.02	45.24	14.57	43.69
12b	MISS07A	9.23	46.37	9.41	46.19
19a	B38W14S	5.38	38.51	5.65	38.24
20a	B38W15S	6.6	40.15	7.1	39.65
20a	B38W17A	10.25	42.99	11.04	42.20
		Min. GW Elv. (ft NGVD)	38.51	Min. GW Elv. (ft NGVD)	38.24
		Max. GW Elv. (ft NGVD)	50.47	Max. GW Elv. (ft NGVD)	49.43

Legend

ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Dat
BTOC - Below Top of Casing

TABLE 7
Depth To Groundwater and Groundwater Elevations for Overburden Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

Property ID	Well	Minimum Water Level Elv. ft NGVD	Maximum Water Level Elv. ft NGVD	Water Level Fluctuation (ft)
08a	B38W12A	41.49	44.81	3.32
10a	B38W24S	43.62	47.05	3.43
10a	B38W25S	47.23	51.56	4.33
10a	MISS03A	46.61	52.20	5.59
10a	MISS04A	45.36	50.52	5.16
12a	B38W01S	48.14	51.02	2.88
12b	B38W19S	42.58	45.24	2.66
12b	MISS01AA	43.92	47.89	3.97
12b	MISS02A	49.43	53.98	4.55
12b	MISS05A	43.18	47.43	4.25
12b	MISS06A	43.69	48.76	5.07
12b	MISS07A	46.19	48.48	2.29
19a	B38W14S	38.24	39.51	1.27
20a	B38W15S	39.65	41.90	2.25
20a	B38W17A	42.20	45.31	3.11
		Min. Water Level Fluctuation. (ft NGVD)		1.27
		Max. Water Level Fluctuation. (ft NGVD)		5.59

Legend

ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Dat
BTOC - Below Top of Casing

TABLE 8
Depth to Groundwater and Groundwater Elevations for Bedrock Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

(table length is &[Pages] pages)	Well	Surveyed Easting - ft NAD	Surveyed Northing - ft NAD	Top of Inner Casing, ft NGVD	Water Level, ft BTOC - 2/7/01
12a	B38W02D	2165243.12	752558.09	78.04	14.75
10a	B38W03B	2164513.81	752253.19	58.27	8.72
10a	B38W04B	2164950.28	752093.58	65.64	9.25
10a	B38W05B	2165366.54	752175.88	70.98	NG
10a	B38W06B	2164670.62	752016.56	58.62	9.52
10a	B38W07B	2164168.21	751974.70	54.98	7.65
08a	B38W12B	2165393.54	750766.32	49.64	4.75
19a	B38W14D	2163391.63	752597.24	43.79	4.4
20a	B38W15D	2163475.63	752368.54	47.04	3.89
20a	B38W17B	2163927.32	752021.78	53.28	7.87
12b	B38W18D	2164783.97	752505.39	57.85	3.14
12b	B38W19D	2164045.10	752522.83	59.98	14.9
10a	B38W24D	2164291.33	752193.57	54.91	7.62
10a	B38W25D	2164346.85	752513.00	57.66	6.24
12b	MISS01B	2164092.32	752964.86	61.98	15.25
12b	MISS02B	2164709.45	752771.91	61.38	10.33
10a	MISS03B	2164451.46	752296.78	57.66	8.62
10a	MISS04B	2164353.55	752096.08	56.42	9.67
12b	MISS05B	2164044.40	752371.68	59.76	14.46
12b	MISS07B	2164048.77	752652.98	55.77	9.9
					Min. GW Elv. (ft NGVD)
					Max. GW Elv. (ft NGVD)

Legend
ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Datum - 1929
BTOC - Below Top of Casing

TABLE 8
Depth to Groundwater and Groundwater Elevations for Bedrock Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

(table length is &[Pages] pages)	Well	Groundwater Elv. ft NGVD - 2/7/01	Water Level, ft BTOC - 4/30/01	Groundwater Elv. ft NGVD - 4/30/01
12a	B38W02D	63.29	15.92	62.12
10a	B38W03B	49.55	9.26	49.01
10a	B38W04B	56.39	9.28	56.36
10a	B38W05B	NA	9.66	61.32
10a	B38W06B	49.10	9.94	48.68
10a	B38W07B	47.33	8.49	46.49
08a	B38W12B	44.89	4.9	44.74
19a	B38W14D	39.39	2.59	41.20
20a	B38W15D	43.15	4.36	42.68
20a	B38W17B	45.41	8.31	44.97
12b	B38W18D	54.71	3.62	54.23
12b	B38W19D	45.08	15.09	44.89
10a	B38W24D	47.29	8.22	46.69
10a	B38W25D	51.42	6.6	51.06
12b	MISS01B	46.73	15.58	46.40
12b	MISS02B	51.05	10.87	50.51
10a	MISS03B	49.04	6.21	51.45
10a	MISS04B	46.75	10.31	46.11
12b	MISS05B	45.30	14.74	45.02
12b	MISS07B	45.87	10.3	45.47
		39.39	Min. GW Elv. (ft NGVD)	41.20
		54.71	Max. GW Elv. (ft NGVD)	54.23

Legend
ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Datum - 192
BTOC - Below Top of Casing

TABLE 8
Depth to Groundwater and Groundwater Elevations for Bedrock Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

(table length is &[Pages] pages)	Well	Water Level, ft BTOC - 7/26/01	Groundwater Elv. ft NGVD - 7/26/01	Water Level, ft BTOC - 11/21/01	Groundwater Elv. ft NGVD - 11/21/01
12a	B38W02D	20.35	57.69	24.49	53.55
10a	B38W03B	11.21	47.06	12.57	45.70
10a	B38W04B	11.21	54.43	13.52	52.12
10a	B38W05B	14.33	56.65	17.89	53.09
10a	B38W06B	11.47	47.15	12.36	46.26
10a	B38W07B	10.91	44.07	12.75	42.23
08a	B38W12B	7.07	42.57	8.2	41.44
19a	B38W14D	4.03	39.76	4.28	39.51
20a	B38W15D	5.7	41.34	6.32	40.72
20a	B38W17B	10.22	43.06	11.05	42.23
12b	B38W18D	4.94	52.91	6.33	51.52
12b	B38W19D	16.74	43.24	17.61	42.37
10a	B38W24D	10.35	44.56	12.13	42.78
10a	B38W25D	8.6	49.06	10.48	47.18
12b	MISS01B	16.8	45.18	17.57	44.41
12b	MISS02B	12.52	48.86	13.36	48.02
10a	MISS03B	11.05	46.61	13.24	44.42
10a	MISS04B	12.1	44.32	12.96	43.46
12b	MISS05B	16.6	43.16	17.45	42.31
12b	MISS07B	11.72	44.05	12.52	43.25
		Min. GW Elv. (ft NGVD)	39.76	Min. GW Elv. (ft NGVD)	39.51
		Max. GW Elv. (ft NGVD)	52.91	Max. GW Elv. (ft NGVD)	51.52

Legend
ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Datum - 192
BTOC - Below Top of Casing

TABLE 8
Depth to Groundwater and Groundwater Elevations for Bedrock Monitoring Wells
February Through November 2001

MAYWOOD INTERIM STORAGE SITE - 2001

(table length is &[Pages] pages)	Well	Minimum Water Level Elv. ft NGVD	Maximum Water Level Elv. ft NGVD	Water Level Fluctuation (ft)
12a	B38W02D	53.55	63.29	9.74
10a	B38W03B	45.70	49.55	3.85
10a	B38W04B	52.12	56.39	4.27
10a	B38W05B	53.09	61.32	8.23
10a	B38W06B	46.26	49.10	2.84
10a	B38W07B	42.23	47.33	5.10
08a	B38W12B	41.44	44.89	3.45
19a	B38W14D	39.39	41.20	1.81
20a	B38W15D	40.72	43.15	2.43
20a	B38W17B	42.23	45.41	3.18
12b	B38W18D	51.52	54.71	3.19
12b	B38W19D	42.37	45.08	2.71
10a	B38W24D	42.78	47.29	4.51
10a	B38W25D	47.18	51.42	4.24
12b	MISS01B	44.41	46.73	2.32
12b	MISS02B	48.02	51.05	3.03
10a	MISS03B	44.42	51.45	7.03
10a	MISS04B	43.46	46.75	3.29
12b	MISS05B	42.31	45.30	2.99
12b	MISS07B	43.25	45.87	2.62
		Min. Water Level Fluctuation. (ft NGVD)		1.81
		Max. Water Level Fluctuation. (ft NGVD)		9.74

Legend
ft - Feet
NAD - North American Datum - 1927
NGVD - National Geodetic Vertical Datum - 192
BTOC - Below Top of Casing

TABLE 9
Vertical Gradient Calculations for Monitoring Well Clusters

MAYWOOD INTERIM STORAGE SITE - 2001

Well	Groundwater Elv. ft NGVD - 2/7/01	Groundwater Elv. ft NGVD - 4/30/01	Groundwater Elv. ft NGVD - 7/26/01	Groundwater Elv. ft NGVD - 11/21/01
MISS/Stepan Property Wells				
MISS01AA	47.60	47.89	44.76	43.92
MISS01B	46.73	46.40	45.18	44.41
Hydraulic Head Difference (ft)	0.87	1.49	-0.42	-0.49
MISS02A	53.98	53.40	50.47	49.43
MISS02B	51.05	50.51	48.86	48.02
Hydraulic Head Difference (ft)	2.93	2.89	1.61	1.41
MISS03A	52.20	51.29	48.46	46.61
MISS03B	49.04	51.45	46.61	44.42
Hydraulic Head Difference (ft)	3.16	-0.16	1.85	2.19
MISS04A	50.52	49.06	46.27	45.36
MISS04B	46.75	46.11	44.32	43.46
Hydraulic Head Difference (ft)	3.77	2.95	1.95	1.90
MISS05A	47.41	47.43	44.26	43.18
MISS05B	45.30	45.02	43.16	42.31
Hydraulic Head Difference (ft)	2.11	2.41	1.10	0.87
MISS07A	48.48	46.87	46.37	46.19
MISS07B	45.87	45.47	44.05	43.25
Hydraulic Head Difference (ft)	2.61	1.40	2.32	2.94
B38W19S	45.24	45.08	43.33	42.58
B38W19D	45.08	44.89	43.24	42.37
Hydraulic Head Difference (ft)	0.16	0.19	0.09	0.21
B38W24S	47.05	46.61	44.67	43.62
B38W24D	47.29	46.69	44.56	42.78
Hydraulic Head Difference (ft)	-0.24	-0.08	0.11	0.84
B38W25S	51.56	51.40	49.15	47.23
B38W25D	51.42	51.06	49.06	47.18
Hydraulic Head Difference (ft)	0.14	0.34	0.09	0.05
Off-Site Monitoring Wells				
B38W12A	44.81	44.45	42.28	41.49
B38W12B	44.89	44.74	42.57	41.44
Hydraulic Head Difference (ft)	-0.08	-0.29	-0.29	0.05
B38W14S	39.51	39.35	38.51	38.24
B38W14D	39.39	41.20	39.76	39.51
Hydraulic Head Difference (ft)	0.12	-1.85	-1.25	-1.27
B38W15S	41.90	41.36	40.15	39.65
B38W15D	43.15	42.68	41.34	40.72
Hydraulic Head Difference (ft)	-1.25	-1.32	-1.19	-1.07
B38W17A	45.31	45.06	42.99	42.20
B38W17B	45.41	44.97	43.06	42.23
Hydraulic Head Difference (ft)	-0.10	0.09	-0.07	-0.03

Notes

Positive Hydraulic Head Difference may depict an area of groundwater recharge

Negative Hydraulic Head Difference may depict an area of groundwater discharge

ft - Feet

NGVD - National Geodetic Vertical Datum - 1929

TABLE 10
2001 Field Parameter Summary

Maywood Interim Storage Site - 2001

Sampling Location	Date	Temp (C)	Spec. Cond.[a] (mS/cm)	pH	Eh (mV)[b]	DO mg/l	Turbidity (NTU)[c]	Discharge (mL/min)[e]
GROUNDWATER								
MISS01AA	06/20/01	--[d]	--[d]	--[d]	--[d]	--[d]	--[d]	--[d]
MISS01B	06/19/01	21.6	0.666	7.21	-137	0.89	33.0	300
MISS02A	07/05/01	18.5	3.17	6.96	-160	1.31	19.1	250
MISS02B	07/05/01	19.3	4.79	7.89	-258	0.00	48.3	250
MISS05A	06/19/01	15.3	2.13	6.49	39	2.56	4.0	200
MISS05B	06/18/01	--[d]	--[d]	--[d]	--[d]	--[d]	--[d]	--[d]
MISS06A	06/20/01	21.3	1.26	6.89	136	2.64	1	300
MISS07B	06/11/01	16.3	7.17	7.36	-125	0.06	43.0	500
B38W01S	07/11/01	18.1	1.74	6.80	-92	2.45	32.1	300
B38W02D	06/28/01	17.3	0.358	6.25	145	2.24	39.1	300
B38W14S	07/02/01	14.7	0.648	7.31	102	2.12	6.6	300
B38W14D	07/02/01	16.7	0.666	7.46	125	3.53	12.1	300
B38W15S	06/27/01	18.6	2.12	7.31	-91	2.23	29.8	300
B38W15D	06/27/01	19.5	0.757	8.95	88	6.71	1.0	300
B38W17A	06/14/01	14.9	0.491	7.04	56	1.38	7	200
B38W17B	06/14/01	16.0	2.39	7.22	-111	1.20	19.8	300
B38W18D	06/20/01	20.9	0.508	6.35	90	1.25	1	300
B38W19S	06/13/01	14.9	2.76	7.38	-80	0.80	2.2	300
B38W19D	06/13/01	18.2	3.45	7.02	-79	0.21	20.9	300
B38W24S	07/05/01	25.0	0.417	6.06	-12	1.61	43.1	300
B38W24D	07/05/01	22.5	0.746	6.10	-93	2.83	41.4	300
B38W25S	07/10/01	19.1	1.03	6.80	-134	1.03	30.8	300
B38W25D	07/10/01	20.3	0.91	6.60	-98	0.70	12.0	300

TABLE 10
2001 Field Parameter Summary

Maywood Interim Storage Site - 2001

Sampling Location	Date	Temp (C)	Spec. Cond.[a] (mS/cm)	pH	Eh (mV)[b]	DO mg/l	Turbidity (NTU)[c]	Discharge (mL/min)[e]
SURFACE WATER								
SWSD001	07/17/01	19.5	1.20	7.9	135	6.82	1	--[g]
SWSD002	07/16/01	18.7	1.10	7.5	98	8.93	1	--[g]
SWSD003	07/16/01	21.0	0.674	7.60	127	8.78	2	--[g]
SWSD004	07/17/01	20.2	1.27	7.6	34	7.19	5	
SWSD005	07/16/01	36.2	0.668	7.30	151	5.24	15	--[g]
SWSD010	07/16/01	27.7	0.666	7.5	148	6.32	2	--[g]
SWSD011	07/17/01	28.3	0.844	8.0	161	7.07	20	--[g]
SWSD012	07/17/01	27.8	0.774	8.1	158	6.96	1	--[g]
SWSD013	07/17/01	27.5	0.772	8.0	151	6.49	2	--[g]
SWSD014	07/18/01	24.6	0.794	8.2	140	7.09	1	--[g]
SWSD015	07/18/01	21.4	0.826	8.2	139	7.07	1	--[g]

[a] Specific conductance, measured in milliSiemens/centimeter (mS/cm).

[b] Oxidation/reduction potential (Eh), measured in milliVolts (mV).

[c] Nephelometric turbidity units.

[d] Well is dry.

[e] Milliliters per Minute (mL/min).

[f] Well was not sampled because of obstruction in the well. The sump pump could not be lowered more than 7 feet.

[g] Parameter not applicable.

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
Monitoring wells completed in unconsolidated sediment:										
B38W01S[e]	11-Jul-01	Gross Alpha	0.00		±	6.45	UJ	6.92	15	
	11-Jul-01	Gross Beta	38.70		±	6.86		6.09	50	
	11-Jul-01	Radium-226	0.28		±	0.17	J	0.25	5 (h)	
	11-Jul-01	Radium-228	0.13		±	0.78	UJ	0.86	5 (h)	
	11-Jul-01	Thorium-228	0.65		±	0.47	J	0.58		
	11-Jul-01	Thorium-230	1.39		±	0.66	J	0.49		
	11-Jul-01	Thorium-232	0.28		±	0.29	UJ	0.38		
	11-Jul-01	Total Thorium	2.32						15	
	11-Jul-01	Uranium-234	3.71		±	1.18	J	0.47		
	11-Jul-01	Uranium-235	0.38		±	0.34		0.20		
	11-Jul-01	Uranium-238	5.31		±	1.51	J	0.51		
	11-Jul-01	Total Uranium	9.39	15.77					20	30
B38W01S	11-Jul-01	Gross Alpha	1.14		±	6.06	U	6.41	15	
Duplicate[f]	11-Jul-01	Gross Beta	42.19		±	6.10	U	5.22	50	
	11-Jul-01	Radium-226	0.14		±	0.12	J	0.20	5 (h)	
	11-Jul-01	Radium-228	1.19		±	0.60		0.62	5 (h)	
	11-Jul-01	Thorium-228	0.54		±	0.14	U	0.54		
	11-Jul-01	Thorium-230	0.50		±	0.42	UJ	0.61		
	11-Jul-01	Thorium-232	0.32		±	0.32	UJ	0.47		
	11-Jul-01	Total Thorium	1.35						15	
	11-Jul-01	Uranium-234	3.08		±	1.08	J	0.48		
	11-Jul-01	Uranium-235	0.00		±	0.00	U	0.21		
	11-Jul-01	Uranium-238	5.15		±	1.54	J	0.54		
	11-Jul-01	Total Uranium	8.23	15.30					20	30
B38W14S	2-Jul-01	Gross Alpha	1.83		±	1.88	UJ	1.87	15	
	2-Jul-01	Gross Beta	2.36		±	2.98	UJ	2.92	50	
	2-Jul-01	Radium-226	0.11		±	0.13	U	0.28	5 (h)	
	2-Jul-01	Radium-228	0.95		±	0.85	UJ	0.95	5 (h)	
	2-Jul-01	Thorium-228	0.07		±	0.18	U	0.42		
	2-Jul-01	Thorium-230	0.67		±	0.44	J	0.42		
	2-Jul-01	Thorium-232	0.16		±	0.21	UJ	0.33		
	2-Jul-01	Total Thorium	0.90						15	
	2-Jul-01	Uranium-234	1.82		±	0.86	J	0.66		
	2-Jul-01	Uranium-235	0.24		±	0.34		0.58		
	2-Jul-01	Uranium-238	1.02		±	0.64		0.70		
	2-Jul-01	Total Uranium	3.08	3.02					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
B38W15S	27-Jun-01	Gross Alpha	8.92		±	6.23		5.85	15	
	27-Jun-01	Gross Beta	167.87		±	9.19		5.85	50	
	27-Jun-01	Radium-226	0.15		±	0.12	J	0.21	5 (h)	
	27-Jun-01	Radium-228	0.44		±	0.90	UJ	0.98	5 (h)	
	27-Jun-01	Thorium-228	0.60		±	0.44	J	0.53		
	27-Jun-01	Thorium-230	0.45		±	0.36	J	0.44		
	27-Jun-01	Thorium-232	0.15		±	0.26	U	0.53		
	27-Jun-01	Total Thorium	1.20						15	
	27-Jun-01	Uranium-234	0.77		±	0.49	J	0.50		
	27-Jun-01	Uranium-235	0.21		±	0.28	UJ	0.43		
	27-Jun-01	Uranium-238	0.54		±	0.40	J	0.42		
	27-Jun-01	Total Uranium	1.51	1.59					20	30
B38W17A	14-Jun-01	Gross Alpha	1.48		±	2.14	U	3.67	15	
	14-Jun-01	Gross Beta	14.85		±	2.96	J	3.44	50	
	14-Jun-01	Radium-226	0.24		±	0.17	J	0.29	5 (h)	
	14-Jun-01	Radium-228	0.70		±	0.62	UJ	0.70	5 (h)	
	14-Jun-01	Thorium-228	0.38		±	0.39	UJ	0.50		
	14-Jun-01	Thorium-230	2.59		±	1.08	J	0.76		
	14-Jun-01	Thorium-232	0.43		±	0.42	UJ	0.58		
	14-Jun-01	Total Thorium	3.40						15	
	14-Jun-01	Uranium-234	0.54		±	0.44	UJ	0.57		
	14-Jun-01	Uranium-235	0.40		±	0.03	U	0.40		
	14-Jun-01	Uranium-238	0.66		±	0.46	J	0.42		
	14-Jun-01	Total Uranium	1.60	1.97					20	30
B38W19S	13-Jun-01	Gross Alpha	4.83		±	7.55	UJ	7.69	15	
	13-Jun-01	Gross Beta	14.71		±	9.06	J	8.75	50	
	13-Jun-01	Radium-226	0.51		±	0.23	J	0.24	5 (h)	
	13-Jun-01	Radium-228	2.49		±	0.72	J	0.70	5 (h)	
	13-Jun-01	Thorium-228	0.36		±	0.35	UJ	0.52		
	13-Jun-01	Thorium-230	1.51		±	0.70	J	0.52		
	13-Jun-01	Thorium-232	0.30		±	0.32	UJ	0.52		
	13-Jun-01	Total Thorium	2.17						15	
	13-Jun-01	Uranium-234	0.34		±	0.39	U	0.64		
	13-Jun-01	Uranium-235	0.25		±	0.33	UJ	0.51		
	13-Jun-01	Uranium-238	0.30		±	0.35	UJ	0.56		
	13-Jun-01	Total Uranium	0.89	0.90					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
B38W24S	5-Jul-01	Gross Alpha	2.98		±	1.72	U	2.98	15	
	5-Jul-01	Gross Beta	8.37		±	1.70		2.06	50	
	5-Jul-01	Radium-226	0.29		±	0.21	J	0.36	5 (h)	
	5-Jul-01	Radium-228	4.68		±	1.37	J	1.34	5 (h)	
	5-Jul-01	Thorium-228	0.40		±	0.44	U	0.75		
	5-Jul-01	Thorium-230	0.37		±	0.40	UJ	0.65		
	5-Jul-01	Thorium-232	0.42		±	0.44	UJ	0.70		
	5-Jul-01	Total Thorium	1.19						15	
	5-Jul-01	Uranium-234	0.62		±	0.50	UJ	0.71		
	5-Jul-01	Uranium-235	0.03		±	0.19	U	0.58		
	5-Jul-01	Uranium-238	0.46		±	0.45	UJ	0.73		
	5-Jul-01	Total Uranium	1.11	1.38					20	30
B38W25S	10-Jul-01	Gross Alpha	0.90		±	3.17	J	3.05	15	
	10-Jul-01	Gross Beta	38.90		±	3.38		2.66	50	
	10-Jul-01	Radium-226	0.32		±	0.18	J	0.21	5 (h)	
	10-Jul-01	Radium-228	0.76		±	0.72	UJ	0.77	5 (h)	
	10-Jul-01	Thorium-228	0.53		±	0.14	U	0.53		
	10-Jul-01	Thorium-230	0.65		±	0.42	J	0.33		
	10-Jul-01	Thorium-232	0.03		±	0.13	UJ	0.36		
	10-Jul-01	Total Thorium	1.21						15	
	10-Jul-01	Uranium-234	1.04		±	0.62	J	0.64		
	10-Jul-01	Uranium-235	0.09		±	0.26	U	0.66		
	10-Jul-01	Uranium-238	2.62		±	1.03	J	0.63		
	10-Jul-01	Total Uranium	3.74	7.78					20	30
MISS01AA	20-Jun-01	Gross Alpha	4.07		±	10.04	UJ	10.39	15	
	20-Jun-01	Gross Beta	8.47		±	9.70	UJ	9.51	50	
	20-Jun-01	Radium-226	0.35		±	0.19		0.20	5 (h)	
	20-Jun-01	Radium-228	1.06		±	0.74	J	0.78	5 (h)	
	20-Jun-01	Thorium-228	0.31		±	0.35	UJ	0.57		
	20-Jun-01	Thorium-230	0.56		±	0.45	UJ	0.60		
	20-Jun-01	Thorium-232	0.54		±	0.42		0.50		
	20-Jun-01	Total Thorium	1.41						15	
	20-Jun-01	Uranium-234	0.94		±	0.58	J	0.50		
	20-Jun-01	Uranium-235	0.05		±	0.20	U	0.57		
	20-Jun-01	Uranium-238	0.64		±	0.47		0.46		
	20-Jun-01	Total Uranium	1.63	1.91					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
MISS02A	5-Jul-01	Gross Alpha	14.88		±	15.74	UJ	16.83	15	
	5-Jul-01	Gross Beta	14.62		±	14.64	UJ	14.62	50	
	5-Jul-01	Radium-226	1.55		±	0.61	J	0.79	5 (h)	
	5-Jul-01	Radium-228	0.03		±	1.71	UJ	1.90	5 (h)	
	5-Jul-01	Thorium-228	0.55		±	0.44	UJ	0.58		
	5-Jul-01	Thorium-230	0.32		±	0.33	UJ	0.51		
	5-Jul-01	Thorium-232	0.19		±	0.23	UJ	0.30		
	5-Jul-01	Total Thorium	1.06						15	
	5-Jul-01	Uranium-234	0.90		±	0.73	UJ	1.17		
	5-Jul-01	Uranium-235	0.09		±	0.22	U	0.51		
	5-Jul-01	Uranium-238	0.96		±	0.65	J	0.69		
	5-Jul-01	Total Uranium	1.95	2.86					20	30
MISS05A	19-Jun-01	Gross Alpha	16.13		±	17.14		13.27	15	
	19-Jun-01	Gross Beta	46.96		±	14.57		13.58	50	
	19-Jun-01	Radium-226	0.60		±	0.28	J	0.34	5 (h)	
	19-Jun-01	Radium-228	2.05		±	0.85	J	0.87	5 (h)	
	19-Jun-01	Thorium-228	0.07		±	0.20	U	0.49		
	19-Jun-01	Thorium-230	1.25		±	0.67	J	0.72		
	19-Jun-01	Thorium-232	0.29		±	0.30	UJ	0.43		
	19-Jun-01	Total Thorium	1.60						15	
	19-Jun-01	Uranium-234	26.94		±	6.47		0.87		
	19-Jun-01	Uranium-235	0.85		±	0.67		0.33		
	19-Jun-01	Uranium-238	25.08		±	6.08		0.80		
	19-Jun-01	Total Uranium	52.87	74.53					20	30
MISS06A	20-Jun-01	Gross Alpha	7.18		±	5.40		4.89	15	
	20-Jun-01	Gross Beta	21.95		±	4.70		4.25	50	
	20-Jun-01	Radium-226	0.44		±	0.21		0.22	5 (h)	
	20-Jun-01	Radium-228	2.64		±	0.81	J	0.80	5 (h)	
	20-Jun-01	Thorium-228	0.44		±	0.39	UJ	0.52		
	20-Jun-01	Thorium-230	0.23		±	0.33	U	0.63		
	20-Jun-01	Thorium-232	0.29		±	0.35	U	0.63		
	20-Jun-01	Total Thorium	0.96						15	
	20-Jun-01	Uranium-234	3.02		±	1.09		0.56		
	20-Jun-01	Uranium-235	0.14		±	0.24	U	0.44		
	20-Jun-01	Uranium-238	2.75		±	1.01		0.36		
	20-Jun-01	Total Uranium	5.90	8.18					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
Monitoring wells completed in bedrock:										
B38W02D[e]	28-Jun-01	Gross Alpha	2.16		±	1.59	UJ	2.20	15	
	28-Jun-01	Gross Beta	2.60		±	1.22	J	1.69	50	
	28-Jun-01	Radium-226	0.33		±	0.18		0.20	5 (h)	
	28-Jun-01	Radium-228	0.06		±	0.85	UJ	0.94	5 (h)	
	28-Jun-01	Thorium-228	0.67		±	0.16	U	0.67		
	28-Jun-01	Thorium-230	0.74		±	0.47	J	0.39		
	28-Jun-01	Thorium-232	0.16		±	0.23	U	0.39		
	28-Jun-01	Total Thorium	1.57						15	
	28-Jun-01	Uranium-234	0.22		±	0.27	U	0.44		
	28-Jun-01	Uranium-235	0.04		±	0.17	U	0.50		
	28-Jun-01	Uranium-238	0.15		±	0.24	U	0.44		
	28-Jun-01	Total Uranium	0.42	0.46					20	30
B38W14D	2-Jul-01	Gross Alpha	2.14		±	2.34	UJ	2.34	15	
	2-Jul-01	Gross Beta	7.20		±	2.87		2.73	50	
	2-Jul-01	Radium-226	0.42		±	0.19	J	0.17	5 (h)	
	2-Jul-01	Radium-228	0.80		±	0.82	UJ	0.88	5 (h)	
	2-Jul-01	Thorium-228	0.45		±	0.37		0.43		
	2-Jul-01	Thorium-230	0.32		±	0.31	UJ	0.44		
	2-Jul-01	Thorium-232	0.10		±	0.22	U	0.50		
	2-Jul-01	Total Thorium	0.87						15	
	2-Jul-01	Uranium-234	1.89		±	0.85	J	0.45		
	2-Jul-01	Uranium-235	0.03		±	0.19	U	0.60		
	2-Jul-01	Uranium-238	0.92		±	0.57		0.45		
	2-Jul-01	Total Uranium	2.84	2.74					20	30
B38W15D	27-Jun-01	Gross Alpha	3.56		±	8.92		8.83	15	
	27-Jun-01	Gross Beta	51.37		±	8.68		7.72	50	
	27-Jun-01	Radium-226	0.06		±	0.09	U	0.21	5 (h)	
	27-Jun-01	Radium-228	0.51		±	0.91	UJ	0.99	5 (h)	
	27-Jun-01	Thorium-228	0.18		±	0.28	U	0.53		
	27-Jun-01	Thorium-230	0.24		±	0.27	UJ	0.35		
	27-Jun-01	Thorium-232	0.03		±	0.14	U	0.39		
	27-Jun-01	Total Thorium	0.45						15	
	27-Jun-01	Uranium-234	3.32		±	1.08	J	0.47		
	27-Jun-01	Uranium-235	0.26		±	0.31	UJ	0.45		
	27-Jun-01	Uranium-238	2.50		±	0.90	J	0.36		
	27-Jun-01	Total Uranium	6.08	7.44	±				20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
B38W15D	27-Jun-01	Gross Alpha	1.89		±	5.25		4.84	15	
Duplicate[f]	27-Jun-01	Gross Beta	44.09		±	5.73		4.84	50	
	27-Jun-01	Radium-226	0.17		±	0.13	UJ	0.18	5 (h)	
	27-Jun-01	Radium-228	1.16		±	1.04	UJ	1.16	5 (h)	
	27-Jun-01	Thorium-228	0.96		±	0.52	J	0.44		
	27-Jun-01	Thorium-230	0.48		±	0.39	UJ	0.55		
	27-Jun-01	Thorium-232	0.15		±	0.20	UJ	0.30		
	27-Jun-01	Total Thorium	1.59						15	
	27-Jun-01	Uranium-234	4.61		±	1.44		0.48		
	27-Jun-01	Uranium-235	0.43		±	0.41		0.42		
	27-Jun-01	Uranium-238	3.15		±	1.13	J	0.44		
	27-Jun-01	Total Uranium	8.20	9.37	±				20	30
B38W17B	14-Jun-01	Gross Alpha	9.44		±	8.49		8.33	15	
	14-Jun-01	Gross Beta	96.42		±	9.48		7.50	50	
	14-Jun-01	Radium-226	0.37		±	0.19	J	0.25	5 (h)	
	14-Jun-01	Radium-228	0.63		±	0.71	UJ	0.76	5 (h)	
	14-Jun-01	Thorium-228	0.49		±	0.06	U	0.49		
	14-Jun-01	Thorium-230	0.52		±	0.41	UJ	0.52		
	14-Jun-01	Thorium-232	0.31		±	0.30	UJ	0.36		
	14-Jun-01	Total Thorium	1.32						15	
	14-Jun-01	Uranium-234	0.38		±	0.35	UJ	0.42		
	14-Jun-01	Uranium-235	0.23		±	0.30	UJ	0.47		
	14-Jun-01	Uranium-238	0.38		±	0.35	UJ	0.42		
	14-Jun-01	Total Uranium	1.00	1.14					20	30
B38W17B	14-Jun-01	Gross Alpha	10.09		±	8.09		7.78	15	
Duplicate[f]	14-Jun-01	Gross Beta	91.96		±	9.35		7.46	50	
	14-Jun-01	Radium-226	0.62		±	0.26	J	0.25	5 (h)	
	14-Jun-01	Radium-228	0.89		±	0.94	UJ	1.01	5 (h)	
	14-Jun-01	Thorium-228	0.36		±	0.38	UJ	0.57		
	14-Jun-01	Thorium-230	0.76		±	0.51	J	0.48		
	14-Jun-01	Thorium-232	0.04		±	0.15	UJ	0.44		
	14-Jun-01	Total Thorium	1.16						15	
	14-Jun-01	Uranium-234	0.92		±	0.57		0.49		
	14-Jun-01	Uranium-235	0.34		±	0.38	UJ	0.50		
	14-Jun-01	Uranium-238	0.56		±	0.43	J	0.45		
	14-Jun-01	Total Uranium	1.81	1.66	±				20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
B38W24D	5-Jul-01	Gross Alpha	3.65		±	2.76	UJ	3.87	15	
	5-Jul-01	Gross Beta	9.08		±	1.40		1.58	50	
	5-Jul-01	Radium-226	0.14		±	0.12	J	0.20	5 (h)	
	5-Jul-01	Radium-228	1.22		±	1.10	UJ	1.22	5 (h)	
	5-Jul-01	Thorium-228	0.05		±	0.23	U	0.59		
	5-Jul-01	Thorium-230	0.59		±	0.41	J	0.37		
	5-Jul-01	Thorium-232	0.05		±	0.18	UJ	0.48		
	5-Jul-01	Total Thorium	0.69						15	
	5-Jul-01	Uranium-234	1.80		±	0.76	J	0.29		
	5-Jul-01	Uranium-235	0.31		±	0.31	U	0.21		
	5-Jul-01	Uranium-238	4.35		±	1.35	J	0.46		
	5-Jul-01	Total Uranium	6.46	12.92					20	30
B38W25D	10-Jul-01	Gross Alpha	0.00		±	2.01		1.61	15	
	10-Jul-01	Gross Beta	53.79		±	3.15		2.26	50	
	10-Jul-01	Radium-226	0.45		±	0.23	J	0.25	5 (h)	
	10-Jul-01	Radium-228	0.72		±	0.71	UJ	0.76	5 (h)	
	10-Jul-01	Thorium-228	0.47		±	0.38	UJ	0.46		
	10-Jul-01	Thorium-230	0.52		±	0.41	UJ	0.57		
	10-Jul-01	Thorium-232	0.42		±	0.05	UJ	0.42		
	10-Jul-01	Total Thorium	1.41						15	
	10-Jul-01	Uranium-234	3.17		±	1.08	J	0.75		
	10-Jul-01	Uranium-235	0.34		±	0.37	UJ	0.60		
	10-Jul-01	Uranium-238	6.79		±	1.79	J	0.46		
	10-Jul-01	Total Uranium	10.30	20.18					20	30
B38W25D	10-Jul-01	Gross Alpha	0.00		±	2.62		2.25	15	
Duplicate[f]	10-Jul-01	Gross Beta	50.78		±	2.36		1.56	50	
	10-Jul-01	Radium-226	0.27		±	0.16	J	0.14	5 (h)	
	10-Jul-01	Radium-228	0.65		±	0.77	UJ	0.83	5 (h)	
	10-Jul-01	Thorium-228	0.28		±	0.31	UJ	0.49		
	10-Jul-01	Thorium-230	0.17		±	0.25	U	0.47		
	10-Jul-01	Thorium-232	0.00		±	0.13	UJ	0.45		
	10-Jul-01	Total Thorium	0.45						15	
	10-Jul-01	Uranium-234	2.91		±	1.05	J	0.47		
	10-Jul-01	Uranium-235	0.03		±	0.18	U	0.54		
	10-Jul-01	Uranium-238	5.31		±	1.57	J	0.47		
	10-Jul-01	Total Uranium	8.24	15.77					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
MISS01B	19-Jun-01	Gross Alpha	1.34		±	3.40	UJ	3.59	15	
	19-Jun-01	Gross Beta	6.64		±	2.56		2.41	50	
	19-Jun-01	Radium-226	0.10		±	0.12	U	0.23	5 (h)	
	19-Jun-01	Radium-228	1.02		±	0.91	UJ	1.02	5 (h)	
	19-Jun-01	Thorium-228	0.09		±	0.24	U	0.57		
	19-Jun-01	Thorium-230	0.49		±	0.41	UJ	0.55		
	19-Jun-01	Thorium-232	0.00		±	0.14	UJ	0.48		
	19-Jun-01	Total Thorium	0.57						15	
	19-Jun-01	Uranium-234	1.45		±	0.81	J	1.05		
	19-Jun-01	Uranium-235	0.14		±	0.27	U	0.56		
	19-Jun-01	Uranium-238	1.81		±	0.82	J	0.52		
	19-Jun-01	Total Uranium	3.40	5.38					20	30
MISS02B	5-Jul-01	Gross Alpha	20.10		±	20.83	UJ	22.99	15	
	5-Jul-01	Gross Beta	11.83		±	21.99	UJ	21.67	50	
	5-Jul-01	Radium-226	0.23		±	0.17	J	0.28	5 (h)	
	5-Jul-01	Radium-228	1.36		±	1.05	J	1.11	5 (h)	
	5-Jul-01	Thorium-228	0.23		±	0.26	UJ	0.41		
	5-Jul-01	Thorium-230	0.66		±	0.42	J	0.44		
	5-Jul-01	Thorium-232	0.54		±	0.39		0.45		
	5-Jul-01	Total Thorium	1.43						15	
	5-Jul-01	Uranium-234	1.59		±	0.93	J	1.08		
	5-Jul-01	Uranium-235	0.34		±	0.42	UJ	0.55		
	5-Jul-01	Uranium-238	1.05		±	0.70	J	0.71		
	5-Jul-01	Total Uranium	2.98	3.12					20	30
B38W18D	20-Jun-01	Gross Alpha	42.00		±	5.54		2.93	15	
	20-Jun-01	Gross Beta	22.35		±	2.02		1.71	50	
	20-Jun-01	Radium-226	0.48		±	0.22		0.29	5 (h)	
	20-Jun-01	Radium-228	4.46		±	0.82	J	0.75	5 (h)	
	20-Jun-01	Thorium-228	1.71		±	0.74		0.48		
	20-Jun-01	Thorium-230	0.41		±	0.34	J	0.34		
	20-Jun-01	Thorium-232	0.91		±	0.51		0.34		
	20-Jun-01	Total Thorium	3.03						15	
	20-Jun-01	Uranium-234	1.09		±	0.59	J	0.59		
	20-Jun-01	Uranium-235	0.59		±	0.17	U	0.59		
	20-Jun-01	Uranium-238	0.97		±	0.54		0.45		
	20-Jun-01	Total Uranium	2.65	2.89					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte	Result[a] (pCi/L)	Result[i] (ug/L)			Data Qualifier[b]	MDA[c] (pCi/L)	State/Federal[d] Standards (pCi/L)	State/Federal[d] Standards (ug/L)
B38W19D	13-Jun-01	Gross Alpha	3.39		±	7.76	UJ	8.44	15	
	13-Jun-01	Gross Beta	355.75		±	18.41		12.47	50	
	13-Jun-01	Radium-226	0.28		±	0.17	J	0.21	5 (h)	
	13-Jun-01	Radium-228	0.70		±	0.69	UJ	0.74	5 (h)	
	13-Jun-01	Thorium-228	0.42		±	0.44	UJ	0.66		
	13-Jun-01	Thorium-230	0.72		±	0.60	UJ	0.87		
	13-Jun-01	Thorium-232	0.52		±	0.50	UJ	0.78		
	13-Jun-01	Total Thorium	1.66						15	
	13-Jun-01	Uranium-234	0.71		±	0.54	UJ	0.76		
	13-Jun-01	Uranium-235	0.18		±	0.26	UJ	0.25		
	13-Jun-01	Uranium-238	0.11		±	0.21	U	0.44		
	13-Jun-01	Total Uranium	1.00	0.32					20	30
MISS05B	18-Jun-01	Gross Alpha	18.85		±	13.28		12.74	15	
	18-Jun-01	Gross Beta	301.10		±	18.37		12.77	50	
	18-Jun-01	Radium-226	0.33		±	0.21	UJ	0.34	5 (h)	
	18-Jun-01	Radium-228	0.44		±	0.83	UJ	0.90	5 (h)	
	18-Jun-01	Thorium-228	0.01		±	0.20	U	0.57		
	18-Jun-01	Thorium-230	0.54		±	0.42	UJ	0.54		
	18-Jun-01	Thorium-232	0.11		±	0.18	UJ	0.34		
	18-Jun-01	Total Thorium	0.65						15	
	18-Jun-01	Uranium-234	0.16		±	0.32	U	0.70		
	18-Jun-01	Uranium-235	0.57		±	0.06	U	0.57		
	18-Jun-01	Uranium-238	0.40		±	0.39	UJ	0.54		
	18-Jun-01	Total Uranium	1.13	1.18					20	30
MISS07B	11-Jun-01	Gross Alpha	32.73		±	27.83		26.85	15	
	11-Jun-01	Gross Beta	28.87		±	27.37		26.73	50	
	11-Jun-01	Radium-226	0.18		±	0.16	J	0.34	5 (h)	
	11-Jun-01	Radium-228	0.77		±	0.60	J	0.64	5 (h)	
	11-Jun-01	Thorium-228	0.24		±	0.31	U	0.52		
	11-Jun-01	Thorium-230	0.19		±	0.38	U	0.84		
	11-Jun-01	Thorium-232	0.05		±	0.15	U	0.40		
	11-Jun-01	Total Thorium	0.48						15	
	11-Jun-01	Uranium-234	4.72		±	1.54		0.50		
	11-Jun-01	Uranium-235	0.33		±	0.39	UJ	0.57		
	11-Jun-01	Uranium-238	2.22		±	0.97	J	0.72		
	11-Jun-01	Total Uranium	7.27	6.59					20	30

TABLE 11
2001 Groundwater Analytical Results - Radioactive Constituents

Maywood Interim Storage Site - 2001

FOOTNOTES:

[a] Results reported with (±) radiological error quoted at 2 sigma (95 percent confidence level).

[b]USACE data qualifier flags based on the CDQMP-QAPP;
U = The analyte was not detected.
UJ = Analyte was not detected; estimated value reported. The result is below the MDA or less than the associated error term.
J= Reported as an estimated value. R= Rejected by validation.

[c] Minimum Detectable Activity (MDA).

[d] Federal and State SDWA standards.

[e] Monitoring wells B38W01S and B38W02D are the background locations for wells that are completed in overburden and bedrock wells respectively.

[f] A quality control duplicate is collected at the same time and location, and is analyzed by the same method in order to evaluate precision in sampling and analysis.

[g]The federal MCL of 50 pCi/L was used as standard to evaluate measured gross beta.

(h) 5 pCi/L is the New Jersey and Federal standard for the combined concentration of Radium-226 and Radium-228 in in drinking water.

[i]The NJDEP has established a MCL for total uranium in drinking water of 30 µg/L or 20 pCi/L; thus, regulatory compliance was determined by comparing the measured values for total uranium to the MCL expressed in both of the above units. The initial determination of regulatory compliance was made by comparing the reported total uranium to 20 pCi/L. In addition, the reported U-238 in pCi/L was divided by the specific activity of U-238 (0.3365 pCi/µg) to obtain the total uranium in µg/L and then compared to NJDEP MCL of 30 µg/L.

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
Monitoring wells completed in unconsolidated sediment:							
B38W01S[e]	11-Jul-01	Aluminum, Total	99.2		16.8	200	200
Background	11-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	11-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	11-Jul-01	Barium, Total	14.9		0.20	2000	2000
	11-Jul-01	Beryllium, Total	1.7	UB	0.30	4	0.008/20
	11-Jul-01	Boron, Total	268		2.1		
	11-Jul-01	Cadmium, Total	0.37	UB	0.30	5	4
	11-Jul-01	Chromium, Total	1	UB	0.90	100	100
	11-Jul-01	Cobalt, Total	0.8	U	0.80		
	11-Jul-01	Copper, Total	2.6	UB	0.70	1300	1000
	11-Jul-01	Iron, Total	22900		15.7	300	300
	11-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	11-Jul-01	Lithium, Total	1570		0.20		
	11-Jul-01	Manganese, Total	2520		0.10	50	50
	11-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	11-Jul-01	Nickel, Total	4.9		1.2		100
	11-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	11-Jul-01	Silver, Total	1	U	1.0	1007	
	11-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	11-Jul-01	Vanadium, Total	0.7	U	0.70		
	11-Jul-01	Zinc, Total	0.93	UB	0.30	500	5000
B38W01S[e]	11-Jul-01	Aluminum, Total	80.6		16.8	200	200
Duplicate	11-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	11-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	11-Jul-01	Barium, Total	15.1		0.20	2000	2000
	11-Jul-01	Beryllium, Total	2.2	UB	0.30	4	0.008/20
	11-Jul-01	Boron, Total	276		2.1		
	11-Jul-01	Cadmium, Total	0.3	UB	0.30	5	4
	11-Jul-01	Chromium, Total	0.9	U	0.90	100	100
	11-Jul-01	Cobalt, Total	0.8	U	0.80		
	11-Jul-01	Copper, Total	2.4	UB	0.70	1300	1000
	11-Jul-01	Iron, Total	23200		15.7	300	300
	11-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	11-Jul-01	Lithium, Total	1580		0.20		
	11-Jul-01	Manganese, Total	2570		0.10	50	50
	11-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	11-Jul-01	Nickel, Total	4.2		1.2		100
	11-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	11-Jul-01	Silver, Total	1	U	1.0	1007	
	11-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	11-Jul-01	Vanadium, Total	0.7	U	0.70		
	11-Jul-01	Zinc, Total	1.6	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W14S	2-Jul-01	Aluminum, Total	12.7	U	12.7	200	200
	2-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	2-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	2-Jul-01	Barium, Total	85.6		0.20	2000	2000
	2-Jul-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	2-Jul-01	Boron, Total	34.5		2.1		
	2-Jul-01	Cadmium, Total	0.48		0.30	5	4
	2-Jul-01	Chromium, Total	0.9	U	0.90	100	100
	2-Jul-01	Cobalt, Total	0.8	U	0.80		
	2-Jul-01	Copper, Total	1.4		0.70	1300	1000
	2-Jul-01	Iron, Total	82.4	UB	15.7	300	300
	2-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	2-Jul-01	Lithium, Total	30.5	J	0.20		
	2-Jul-01	Manganese, Total	50.8		0.10	50	50
	2-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	2-Jul-01	Nickel, Total	4.8	UB	1.2		100
	2-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	2-Jul-01	Silver, Total	1	U	1.0	1007	
	2-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	2-Jul-01	Vanadium, Total	2.4	UB	0.70		
	2-Jul-01	Zinc, Total	2.8	UB	0.30	500	5000
B38W15S	27-Jun-01	Aluminum, Total	230		12.7	200	200
	27-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	27-Jun-01	Arsenic, Total	4.4		2.3	50	0.02/8
	27-Jun-01	Barium, Total	46		0.20	2000	2000
	27-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	27-Jun-01	Boron, Total	642		2.1		
	27-Jun-01	Cadmium, Total	0.51		0.30	5	4
	27-Jun-01	Chromium, Total	2.9	UB	0.90	100	100
	27-Jun-01	Cobalt, Total	1.2		0.80		
	27-Jun-01	Copper, Total	18.9		0.70	1300	1000
	27-Jun-01	Iron, Total	1210		15.7	300	300
	27-Jun-01	Lead, Total	5		2.6	15	5/10
	27-Jun-01	Lithium, Total	3150	J	0.20		
	27-Jun-01	Manganese, Total	2300		0.10	50	50
	27-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	27-Jun-01	Nickel, Total	6.2		1.2		100
	27-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	27-Jun-01	Silver, Total	1	U	1.0	1007	
	27-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	27-Jun-01	Vanadium, Total	2.4	UB	0.70		
	27-Jun-01	Zinc, Total	9.3	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W17A	14-Jun-01	Aluminum, Total	128	U	12.7	200	200
	14-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	14-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	14-Jun-01	Barium, Total	44.7		0.20	2000	2000
	14-Jun-01	Beryllium, Total	0.24	U	0.20	4	0.008/20
	14-Jun-01	Boron, Total	62.4	J	2.1		
	14-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	14-Jun-01	Chromium, Total	3.9	U	0.90	100	100
	14-Jun-01	Cobalt, Total	1.6	UJ	0.80		
	14-Jun-01	Copper, Total	2		0.70	1300	1000
	14-Jun-01	Iron, Total	189	J	15.7	300	300
	14-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	14-Jun-01	Lithium, Total	298	J	0.20		
	14-Jun-01	Manganese, Total	253	J	0.10	50	50
	14-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	14-Jun-01	Nickel, Total	56.3	UJ	1.2		100
	14-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	14-Jun-01	Silver, Total	1	U	1.0	1007	
	14-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	14-Jun-01	Vanadium, Total	0.7	U	0.70		
	14-Jun-01	Zinc, Total	12.1	U	0.30	500	5000
B38W19S	13-Jun-01	Aluminum, Total	44	U	12.7	200	200
	13-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	13-Jun-01	Arsenic, Total	28.7		2.3	50	0.02/8
	13-Jun-01	Barium, Total	36.5		0.20	2000	2000
	13-Jun-01	Beryllium, Total	0.26	U	0.20	4	0.008/20
	13-Jun-01	Boron, Total	746		2.1		
	13-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	13-Jun-01	Chromium, Total	0.9	U	0.90	100	100
	13-Jun-01	Cobalt, Total	0.8	U	0.80		
	13-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	13-Jun-01	Iron, Total	2500		15.7	300	300
	13-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	13-Jun-01	Lithium, Total	1480	J	0.20		
	13-Jun-01	Manganese, Total	933		0.10	50	50
	13-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	13-Jun-01	Nickel, Total	3.5	U	1.2		100
	13-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	13-Jun-01	Silver, Total	1	U	1.0	1007	
	13-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	13-Jun-01	Vanadium, Total	0.7	U	0.70		
	13-Jun-01	Zinc, Total	2.5	U	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W24S	27-Jun-01	Aluminum, Total	16.8	U	16.8	200	200
	27-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	27-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	27-Jun-01	Barium, Total	34.1		0.20	2000	2000
	27-Jun-01	Beryllium, Total	1.4	UB	0.30	4	0.008/20
	27-Jun-01	Boron, Total	92.8		2.1		
	27-Jun-01	Cadmium, Total	0.44	UB	0.30	5	4
	27-Jun-01	Chromium, Total	0.9	U	0.90	100	100
	27-Jun-01	Cobalt, Total	0.8	U	0.80		
	27-Jun-01	Copper, Total	1.3	UB	0.70	1300	1000
	27-Jun-01	Iron, Total	24700		15.7	300	300
	27-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	27-Jun-01	Lithium, Total	27.2		0.20		
	27-Jun-01	Manganese, Total	3010		0.10	50	50
	27-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	27-Jun-01	Nickel, Total	1.2	U	1.2		100
	27-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	27-Jun-01	Silver, Total	1	U	1.0	1007	
	27-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	27-Jun-01	Vanadium, Total	0.7	U	0.70		
	27-Jun-01	Zinc, Total	6.1	UB	0.30	500	5000
B38W25S	10-Jul-01	Aluminum, Total	16.8	U	16.8	200	200
	10-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	10-Jul-01	Arsenic, Total	20.8		2.3	50	0.02/8
	10-Jul-01	Barium, Total	198		0.20	2000	2000
	10-Jul-01	Beryllium, Total	0.3	U	0.30	4	0.008/20
	10-Jul-01	Boron, Total	79.3		2.1		
	10-Jul-01	Cadmium, Total	0.46	UB	0.30	5	4
	10-Jul-01	Chromium, Total	3.5	UB	0.90	100	100
	10-Jul-01	Cobalt, Total	24		0.80		
	10-Jul-01	Copper, Total	1.7	UB	0.70	1300	1000
	10-Jul-01	Iron, Total	30900		15.7	300	300
	10-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	10-Jul-01	Lithium, Total	610		0.20		
	10-Jul-01	Manganese, Total	7380		0.10	50	50
	10-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	10-Jul-01	Nickel, Total	14.2		1.2		100
	10-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	10-Jul-01	Silver, Total	1	U	1.0	1007	
	10-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	10-Jul-01	Vanadium, Total	0.7	U	0.70		
	10-Jul-01	Zinc, Total	35.9	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS01AA	20-Jun-01	Aluminum, Total	34		12.7	200	200
	20-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	20-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	20-Jun-01	Barium, Total	9		0.20	2000	2000
	20-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	20-Jun-01	Boron, Total	376		2.1		
	20-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	20-Jun-01	Chromium, Total	0.9	U	0.90	100	100
	20-Jun-01	Cobalt, Total	0.8	U	0.80		
	20-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	20-Jun-01	Iron, Total	731		15.7	300	300
	20-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	20-Jun-01	Lithium, Total	260	J	0.20		
	20-Jun-01	Manganese, Total	117		0.10	50	50
	20-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	20-Jun-01	Nickel, Total	1.9	UB	1.2		100
	20-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	20-Jun-01	Silver, Total	1	U	1.0	1007	
	20-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	20-Jun-01	Vanadium, Total	0.81	UB	0.70		
	20-Jun-01	Zinc, Total	16.6		0.30	500	5000
MISS05A	19-Jun-01	Aluminum, Total	28.4	UB	12.7	200	200
	19-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	19-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	19-Jun-01	Barium, Total	17.2		0.20	2000	2000
	19-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	19-Jun-01	Boron, Total	326		2.1		
	19-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	19-Jun-01	Chromium, Total	0.9	U	0.90	100	100
	19-Jun-01	Cobalt, Total	2.8	UB	0.80		
	19-Jun-01	Copper, Total	1.4		0.70	1300	1000
	19-Jun-01	Iron, Total	1530		15.7	300	300
	19-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	19-Jun-01	Lithium, Total	767	J	0.20		
	19-Jun-01	Manganese, Total	722		0.10	50	50
	19-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	19-Jun-01	Nickel, Total	5.1		1.2		100
	19-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	19-Jun-01	Silver, Total	1	U	1.0	1007	
	19-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	19-Jun-01	Vanadium, Total	0.7	U	0.70		
	19-Jun-01	Zinc, Total	24.1	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS02A	5-Jul-01	Aluminum, Total	29.5		16.8	200	200
	5-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	5-Jul-01	Arsenic, Total	2210		2.3	50	0.02/8
	5-Jul-01	Barium, Total	1.5	UB	0.20	2000	2000
	5-Jul-01	Beryllium, Total	0.3	U	0.30	4	0.008/20
	5-Jul-01	Boron, Total	977		2.1		
	5-Jul-01	Cadmium, Total	0.3	U	0.30	5	4
	5-Jul-01	Chromium, Total	19.7		0.90	100	100
	5-Jul-01	Cobalt, Total	1	UB	0.80		
	5-Jul-01	Copper, Total	20.8		0.70	1300	1000
	5-Jul-01	Iron, Total	863		15.7	300	300
	5-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	5-Jul-01	Lithium, Total	8150		0.20		
	5-Jul-01	Manganese, Total	109		0.10	50	50
	5-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	5-Jul-01	Nickel, Total	4.3		1.2		100
	5-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	5-Jul-01	Silver, Total	1	U	1.0	1007	
	5-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	5-Jul-01	Vanadium, Total	1.3		0.70		
	5-Jul-01	Zinc, Total	1.3	UB	0.30	500	5000
MISS06A	20-Jun-01	Aluminum, Total	238		12.7	200	200
	20-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	20-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	20-Jun-01	Barium, Total	54.8		0.20	2000	2000
	20-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	20-Jun-01	Boron, Total	165		2.1		
	20-Jun-01	Cadmium, Total	2.7		0.30	5	4
	20-Jun-01	Chromium, Total	2.2	UB	0.90	100	100
	20-Jun-01	Cobalt, Total	0.8	U	0.80		
	20-Jun-01	Copper, Total	17.6		0.70	1300	1000
	20-Jun-01	Iron, Total	308		15.7	300	300
	20-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	20-Jun-01	Lithium, Total	1460	J	0.20		
	20-Jun-01	Manganese, Total	13.6		0.10	50	50
	20-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	20-Jun-01	Nickel, Total	6.5	UB	1.2		100
	20-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	20-Jun-01	Silver, Total	1	U	1.0	1007	
	20-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	20-Jun-01	Vanadium, Total	1.6	UB	0.70		
	20-Jun-01	Zinc, Total	2330		0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
Monitoring wells completed in bedrock							
B38W02D[+A]	28-Jun-01	Aluminum, Total	183		12.7	200	200
Background	28-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	28-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	28-Jun-01	Barium, Total	332		0.20	2000	2000
	28-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	28-Jun-01	Boron, Total	19.7		2.1		
	28-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	28-Jun-01	Chromium, Total	48.9		0.90	100	100
	28-Jun-01	Cobalt, Total	42.1		0.80		
	28-Jun-01	Copper, Total	4		0.70	1300	1000
	28-Jun-01	Iron, Total	362		15.7	300	300
	28-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	28-Jun-01	Lithium, Total	14.3	J	0.20		
	28-Jun-01	Manganese, Total	931		0.10	50	50
	28-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	28-Jun-01	Nickel, Total	20.2		1.2		100
	28-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	28-Jun-01	Silver, Total	1	U	1.0	1007	
	28-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	28-Jun-01	Vanadium, Total	1.5	UB	0.70		
	28-Jun-01	Zinc, Total	7.4	UB	0.30	500	5000
B38W14D	2-Jul-01	Aluminum, Total	99.6	UB	12.7	200	200
	2-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	2-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	2-Jul-01	Barium, Total	88.6		0.20	2000	2000
	2-Jul-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	2-Jul-01	Boron, Total	42.2		2.1		
	2-Jul-01	Cadmium, Total	4.7		0.30	5	4
	2-Jul-01	Chromium, Total	8.7	UB	0.90	100	100
	2-Jul-01	Cobalt, Total	13.5		0.80		
	2-Jul-01	Copper, Total	19.4		0.70	1300	1000
	2-Jul-01	Iron, Total	217	UB	15.7	300	300
	2-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	2-Jul-01	Lithium, Total	27.3	J	0.20		
	2-Jul-01	Manganese, Total	7.3		0.10	50	50
	2-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	2-Jul-01	Nickel, Total	21.6		1.2		100
	2-Jul-01	Selenium, Total	2.8		2.6	50	50
	2-Jul-01	Silver, Total	1	U	1.0	1007	
	2-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	2-Jul-01	Vanadium, Total	0.92	UB	0.70		
	2-Jul-01	Zinc, Total	43.3		0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W15D	27-Jun-01	Aluminum, Total	156		12.7	200	200
	27-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	27-Jun-01	Arsenic, Total	3		2.3	50	0.02/8
	27-Jun-01	Barium, Total	14.8		0.20	2000	2000
	27-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	27-Jun-01	Boron, Total	148		2.1		
	27-Jun-01	Cadmium, Total	0.74		0.30	5	4
	27-Jun-01	Chromium, Total	19.5		0.90	100	100
	27-Jun-01	Cobalt, Total	19.3		0.80		
	27-Jun-01	Copper, Total	13.6		0.70	1300	1000
	27-Jun-01	Iron, Total	301		15.7	300	300
	27-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	27-Jun-01	Lithium, Total	871	J	0.20		
	27-Jun-01	Manganese, Total	45.1		0.10	50	50
	27-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	27-Jun-01	Nickel, Total	12		1.2		100
	27-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	27-Jun-01	Silver, Total	1	U	1.0	1007	
	27-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	27-Jun-01	Vanadium, Total	2.5	UB	0.70		
	27-Jun-01	Zinc, Total	22.5		0.30	500	5000
B38W15D Duplicate	27-Jun-01	Aluminum, Total	121		12.7	200	200
	27-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	27-Jun-01	Arsenic, Total	4.6		2.3	50	0.02/8
	27-Jun-01	Barium, Total	15.9		0.20	2000	2000
	27-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	27-Jun-01	Boron, Total	210		2.1		
	27-Jun-01	Cadmium, Total	0.82		0.30	5	4
	27-Jun-01	Chromium, Total	16.4		0.90	100	100
	27-Jun-01	Cobalt, Total	21.4		0.80		
	27-Jun-01	Copper, Total	13		0.70	1300	1000
	27-Jun-01	Iron, Total	258		15.7	300	300
	27-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	27-Jun-01	Lithium, Total	1150	J	0.20		
	27-Jun-01	Manganese, Total	137		0.10	50	50
	27-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	27-Jun-01	Nickel, Total	11.4		1.2		100
	27-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	27-Jun-01	Silver, Total	1	U	1.0	1007	
	27-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	27-Jun-01	Vanadium, Total	2.6	UB	0.70		
	27-Jun-01	Zinc, Total	20.4		0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W17B	14-Jun-01	Aluminum, Total	68.6		12.7	200	200
	14-Jun-01	Antimony, Total	1.9		1.9	6	2/20
	14-Jun-01	Arsenic, Total	2.3		2.3	50	0.02/8
	14-Jun-01	Barium, Total	74.1		0.20	2000	2000
	14-Jun-01	Beryllium, Total	0.44		0.20	4	0.008/20
	14-Jun-01	Boron, Total	315		2.1		
	14-Jun-01	Cadmium, Total	0.3		0.30	5	4
	14-Jun-01	Chromium, Total	3.6		0.90	100	100
	14-Jun-01	Cobalt, Total	20.1		0.80		
	14-Jun-01	Copper, Total	0.7		0.70	1300	1000
	14-Jun-01	Iron, Total	8450		15.7	300	300
	14-Jun-01	Lead, Total	2.6		2.6	15	5/10
	14-Jun-01	Lithium, Total	1810		0.20		
	14-Jun-01	Manganese, Total	4320		0.10	50	50
	14-Jun-01	Mercury, Total	0.1		0.10	2	2
	14-Jun-01	Nickel, Total	4.9		1.2		100
	14-Jun-01	Selenium, Total	2.6		2.6	50	50
	14-Jun-01	Silver, Total	1		1.0	1007	
	14-Jun-01	Thallium, Total	3.9		3.9	2	0.5/10
	14-Jun-01	Vanadium, Total	2		0.70		
	14-Jun-01	Zinc, Total	6.3		0.30	500	5000
B38W17B Duplicate	14-Jun-01	Aluminum, Total	68.8	U	12.7	200	200
	14-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	14-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	14-Jun-01	Barium, Total	75.4		0.20	2000	2000
	14-Jun-01	Beryllium, Total	0.44	U	0.20	4	0.008/20
	14-Jun-01	Boron, Total	302	J	2.1		
	14-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	14-Jun-01	Chromium, Total	2.8	U	0.90	100	100
	14-Jun-01	Cobalt, Total	19	J	0.80		
	14-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	14-Jun-01	Iron, Total	8270	J	15.7	300	300
	14-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	14-Jun-01	Lithium, Total	1740	J	0.20		
	14-Jun-01	Manganese, Total	4180	J	0.10	50	50
	14-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	14-Jun-01	Nickel, Total	4.3	UJ	1.2		100
	14-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	14-Jun-01	Silver, Total	1	U	1.0	1007	
	14-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	14-Jun-01	Vanadium, Total	1.5	U	0.70		
	14-Jun-01	Zinc, Total	6.3	U	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W18D	20-Jun-01	Aluminum, Total	34.4		12.7	200	200
	20-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	20-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	20-Jun-01	Barium, Total	19		0.20	2000	2000
	20-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	20-Jun-01	Boron, Total	173		2.1		
	20-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	20-Jun-01	Chromium, Total	10.3	UB	0.90	100	100
	20-Jun-01	Cobalt, Total	49.2		0.80		
	20-Jun-01	Copper, Total	0.78		0.70	1300	1000
	20-Jun-01	Iron, Total	647		15.7	300	300
	20-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	20-Jun-01	Lithium, Total	1480	J	0.20		
	20-Jun-01	Manganese, Total	180		0.10	50	50
	20-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	20-Jun-01	Nickel, Total	36.6		1.2		100
	20-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	20-Jun-01	Silver, Total	1	U	1.0	1007	
	20-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	20-Jun-01	Vanadium, Total	0.7	U	0.70		
	20-Jun-01	Zinc, Total	112		0.30	500	5000
B38W19D	13-Jun-01	Aluminum, Total	64.4	U	12.7	200	200
	13-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	13-Jun-01	Arsenic, Total	69.8		2.3	50	0.02/8
	13-Jun-01	Barium, Total	33.2		0.20	2000	2000
	13-Jun-01	Beryllium, Total	0.38	U	0.20	4	0.008/20
	13-Jun-01	Boron, Total	717		2.1		
	13-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	13-Jun-01	Chromium, Total	5	U	0.90	100	100
	13-Jun-01	Cobalt, Total	14.2		0.80		
	13-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	13-Jun-01	Iron, Total	3870		15.7	300	300
	13-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	13-Jun-01	Lithium, Total	5250	J	0.20		
	13-Jun-01	Manganese, Total	2190		0.10	50	50
	13-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	13-Jun-01	Nickel, Total	5	U	1.2		100
	13-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	13-Jun-01	Silver, Total	1	U	1.0	1007	
	13-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	13-Jun-01	Vanadium, Total	4		0.70		
	13-Jun-01	Zinc, Total	6.9	U	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W24D	5-Jul-01	Aluminum, Total	54.3		16.8	200	200
	5-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	5-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	5-Jul-01	Barium, Total	52.7		0.20	2000	2000
	5-Jul-01	Beryllium, Total	0.64	UB	0.30	4	0.008/20
	5-Jul-01	Boron, Total	89.4		2.1		
	5-Jul-01	Cadmium, Total	0.69	UB	0.30	5	4
	5-Jul-01	Chromium, Total	5.4	UB	0.90	100	100
	5-Jul-01	Cobalt, Total	1.2	UB	0.80		
	5-Jul-01	Copper, Total	4.6	UB	0.70	1300	1000
	5-Jul-01	Iron, Total	28600		15.7	300	300
	5-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	5-Jul-01	Lithium, Total	50.8		0.20		
	5-Jul-01	Manganese, Total	5870		0.10	50	50
	5-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	5-Jul-01	Nickel, Total	4		1.2		100
	5-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	5-Jul-01	Silver, Total	1	U	1.0	1007	
	5-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	5-Jul-01	Vanadium, Total	0.7	U	0.70		
	5-Jul-01	Zinc, Total	11.9	UB	0.30	500	5000
B38W25D	10-Jul-01	Aluminum, Total	16.8	U	16.8	200	200
	10-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	10-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	10-Jul-01	Barium, Total	60.8		0.20	2000	2000
	10-Jul-01	Beryllium, Total	0.3	U	0.30	4	0.008/20
	10-Jul-01	Boron, Total	128		2.1		
	10-Jul-01	Cadmium, Total	0.3	U	0.30	5	4
	10-Jul-01	Chromium, Total	4.2	UB	0.90	100	100
	10-Jul-01	Cobalt, Total	7.5		0.80		
	10-Jul-01	Copper, Total	1.5	UB	0.70	1300	1000
	10-Jul-01	Iron, Total	4650		15.7	300	300
	10-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	10-Jul-01	Lithium, Total	981		0.20		
	10-Jul-01	Manganese, Total	1280		0.10	50	50
	10-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	10-Jul-01	Nickel, Total	2.6		1.2		100
	10-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	10-Jul-01	Silver, Total	1	U	1.0	1007	
	10-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	10-Jul-01	Vanadium, Total	0.7	U	0.70		
	10-Jul-01	Zinc, Total	1.5	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W25D Duplicate	10-Jul-01	Aluminum, Total	16.8	U	16.8	200	200
	10-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	10-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	10-Jul-01	Barium, Total	61.4		0.20	2000	2000
	10-Jul-01	Beryllium, Total	0.3	U	0.30	4	0.008/20
	10-Jul-01	Boron, Total	128		2.1		
	10-Jul-01	Cadmium, Total	0.3	U	0.30	5	4
	10-Jul-01	Chromium, Total	5.4		0.90	100	100
	10-Jul-01	Cobalt, Total	8.7		0.80		
	10-Jul-01	Copper, Total	2	UB	0.70	1300	1000
	10-Jul-01	Iron, Total	4770		15.7	300	300
	10-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	10-Jul-01	Lithium, Total	982		0.20		
	10-Jul-01	Manganese, Total	1290		0.10	50	50
	10-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	10-Jul-01	Nickel, Total	3.3		1.2		100
	10-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	10-Jul-01	Silver, Total	1	U	1.0	1007	
	10-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	10-Jul-01	Vanadium, Total	0.7	U	0.70		
	10-Jul-01	Zinc, Total	2.8	UB	0.30	500	5000
MISS01B	19-Jun-01	Aluminum, Total	23.6	UB	12.7	200	200
	19-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	19-Jun-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	19-Jun-01	Barium, Total	71.4		0.20	2000	2000
	19-Jun-01	Beryllium, Total	0.2	U	0.20	4	0.008/20
	19-Jun-01	Boron, Total	62.4		2.1		
	19-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	19-Jun-01	Chromium, Total	3.2	UB	0.90	100	100
	19-Jun-01	Cobalt, Total	3.9	UB	0.80		
	19-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	19-Jun-01	Iron, Total	3990		15.7	300	300
	19-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	19-Jun-01	Lithium, Total	66.7	J	0.20		
	19-Jun-01	Manganese, Total	320		0.10	50	50
	19-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	19-Jun-01	Nickel, Total	4.1		1.2		100
	19-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	19-Jun-01	Silver, Total	1	U	1.0	1007	
	19-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	19-Jun-01	Vanadium, Total	3.4		0.70		
	19-Jun-01	Zinc, Total	6.9	UB	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
MISS02B	5-Jul-01	Aluminum, Total	16.8	U	16.8	200	200
	5-Jul-01	Antimony, Total	1.9	U	1.9	6	2/20
	5-Jul-01	Arsenic, Total	2.3	U	2.3	50	0.02/8
	5-Jul-01	Barium, Total	10.3		0.20	2000	2000
	5-Jul-01	Beryllium, Total	0.3	U	0.30	4	0.008/20
	5-Jul-01	Boron, Total	4110		2.1		
	5-Jul-01	Cadmium, Total	0.5	UB	0.30	5	4
	5-Jul-01	Chromium, Total	24.9		0.90	100	100
	5-Jul-01	Cobalt, Total	11		0.80		
	5-Jul-01	Copper, Total	2	UB	0.70	1300	1000
	5-Jul-01	Iron, Total	37000		15.7	300	300
	5-Jul-01	Lead, Total	2.6	U	2.6	15	5/10
	5-Jul-01	Lithium, Total	11900		0.20		
	5-Jul-01	Manganese, Total	965		0.10	50	50
	5-Jul-01	Mercury, Total	0.1	U	0.10	2	2
	5-Jul-01	Nickel, Total	7.6		1.2		100
	5-Jul-01	Selenium, Total	2.6	U	2.6	50	50
	5-Jul-01	Silver, Total	1	U	1.0	1007	
	5-Jul-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	5-Jul-01	Vanadium, Total	2.8		0.70		
	5-Jul-01	Zinc, Total	5.4	UB	0.30	500	5000
MISS05B	18-Jun-01	Aluminum, Total	89.6	U	12.7	200	200
	18-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	18-Jun-01	Arsenic, Total	24.3		2.3	50	0.02/8
	18-Jun-01	Barium, Total	62.2		0.20	2000	2000
	18-Jun-01	Beryllium, Total	0.52	U	0.20	4	0.008/20
	18-Jun-01	Boron, Total	371		2.1		
	18-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	18-Jun-01	Chromium, Total	5.9	U	0.90	100	100
	18-Jun-01	Cobalt, Total	13.1		0.80		
	18-Jun-01	Copper, Total	0.7	U	0.70	1300	1000
	18-Jun-01	Iron, Total	14900		15.7	300	300
	18-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	18-Jun-01	Lithium, Total	3090	J	0.20		
	18-Jun-01	Manganese, Total	2250		0.10	50	50
	18-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	18-Jun-01	Nickel, Total	6.8	U	1.2		100
	18-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	18-Jun-01	Silver, Total	1	U	1.0	1007	
	18-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	18-Jun-01	Vanadium, Total	4.7		0.70		
	18-Jun-01	Zinc, Total	5.3	U	0.30	500	5000

TABLE 12
2001 Groundwater Analytical Results - Metals

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Detected Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS07B	11-Jun-01	Aluminum, Total	76.8	U	12.7	200	200
	11-Jun-01	Antimony, Total	1.9	U	1.9	6	2/20
	11-Jun-01	Arsenic, Total	82.8		2.3	50	0.02/8
	11-Jun-01	Barium, Total	20.6		0.20	2000	2000
	11-Jun-01	Beryllium, Total	0.36	U	0.20	4	0.008/20
	11-Jun-01	Boron, Total	2860		2.1		
	11-Jun-01	Cadmium, Total	0.3	U	0.30	5	4
	11-Jun-01	Chromium, Total	2.5	U	0.90	100	100
	11-Jun-01	Cobalt, Total	5.6		0.80		
	11-Jun-01	Copper, Total	2.5		0.70	1300	1000
	11-Jun-01	Iron, Total	11100		15.7	300	300
	11-Jun-01	Lead, Total	2.6	U	2.6	15	5/10
	11-Jun-01	Lithium, Total	9100	J	0.20		
	11-Jun-01	Manganese, Total	5230		0.10	50	50
	11-Jun-01	Mercury, Total	0.1	U	0.10	2	2
	11-Jun-01	Nickel, Total	8.8	U	1.2		100
	11-Jun-01	Selenium, Total	2.6	U	2.6	50	50
	11-Jun-01	Silver, Total	1	U	1.0	1007	
	11-Jun-01	Thallium, Total	3.9	U	3.9	2	0.5/10
	11-Jun-01	Vanadium, Total	12.9		0.70		
	11-Jun-01	Zinc, Total	5.3	U	0.30	500	5000

[a] All analytes repoprted, detected and undetected.
[b] USACE data qualifier flags based on the CDQMP-QAPP: J = Reported as an estimated value, U= analyte was not detected.
[c] Federal SDWA MCLs, 40 CFR 141. Regulations pertain to drinking water quality and are listed for comparison purposes only. Not established (NE).
[d] New Jersey Class IIA Groundwater Quality Standards NJAC 7:9-6. Analytes for which the PQL is greater than the GWQC are noted as such: GWQC/PQL.
[e] Monitoring wells B38W01S and B38W02D are the background locations for wells completed in overburden and bedrock wells respectively.

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
Monitoring wells completed in unconsolidated sediment:							
B38W01S[e]	11-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	11-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	11-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	11-Jul-01	1,1-Dichloroethane	1	U	1		70
	11-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	11-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	11-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	11-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	11-Jul-01	2-Butanone	5	U	5		3
	11-Jul-01	2-Chlorotoluene	1	U	1		
	11-Jul-01	2-Hexanone	5	U	5		
	11-Jul-01	3-Chlorotoluene	1	U	1		
	11-Jul-01	4-Chlorotoluene	1	U	1		
	11-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	11-Jul-01	Acetone	5	U	5		700
	11-Jul-01	Benzene	1	U	1	5	0.2
	11-Jul-01	Bromodichloromethane	1	U	1		0.3
	11-Jul-01	Bromoform	1	U	1		4
	11-Jul-01	Bromomethane	2	U	2		10
	11-Jul-01	Carbon Disulfide	1	U	1		
	11-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	11-Jul-01	Chlorobenzene	1	U	1	100	4
	11-Jul-01	Chloroethane	2	U	2		
	11-Jul-01	Chloroform	1	U	1		6
	11-Jul-01	Chloromethane	2	U	2		30
	11-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	11-Jul-01	Dibromochloromethane	1	U	1		10
	11-Jul-01	Ethylbenzene	1	U	1	700	700
	11-Jul-01	Methylene Chloride	2	U	2		2
	11-Jul-01	Styrene	1	U	1	100	100
	11-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	11-Jul-01	Toluene	0.2	J	1	100	1000
	11-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	11-Jul-01	Trichloroethene	1	U	1	5	1
	11-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W01S	11-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
Duplicate	11-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	11-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	11-Jul-01	1,1-Dichloroethane	1	U	1		70
	11-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	11-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	11-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	11-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	11-Jul-01	2-Butanone	5	U	5		3
	11-Jul-01	2-Chlorotoluene	1	U	1		
	11-Jul-01	2-Hexanone	5	U	5		
	11-Jul-01	3-Chlorotoluene	1	U	1		
	11-Jul-01	4-Chlorotoluene	1	U	1		
	11-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	11-Jul-01	Acetone	5	U	5		700
	11-Jul-01	Benzene	1	U	1	5	0.2
	11-Jul-01	Bromodichloromethane	1	U	1		0.3
	11-Jul-01	Bromoform	1	U	1		4
	11-Jul-01	Bromomethane	2	U	2		10
	11-Jul-01	Carbon Disulfide	1	U	1		
	11-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	11-Jul-01	Chlorobenzene	1	U	1	100	4
	11-Jul-01	Chloroethane	2	U	2		
	11-Jul-01	Chloroform	1	U	1		6
	11-Jul-01	Chloromethane	2	U	2		30
	11-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	11-Jul-01	Dibromochloromethane	1	U	1		10
	11-Jul-01	Ethylbenzene	1	U	1	700	700
	11-Jul-01	Methylene Chloride	2	U	2		2
	11-Jul-01	Styrene	1	U	1	100	100
	11-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	11-Jul-01	Toluene	0.2	J	1	100	1000
	11-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	11-Jul-01	Trichloroethene	1	U	1	5	1
	11-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W14S	2-Jul-01	1,1,1-Trichloroethane	2	JD	1	200	30
	2-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	2-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	2-Jul-01	1,1-Dichloroethane	0.7	JD	1		70
	2-Jul-01	1,1-Dichloroethene	4	JD	1	7	1
	2-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	2-Jul-01	1,2-Dichloroethene (total)	26	D	1	70	10
	2-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	2-Jul-01	2-Butanone		U	5		3
	2-Jul-01	2-Chlorotoluene	1	U	1		
	2-Jul-01	2-Hexanone	5	U	5		
	2-Jul-01	3-Chlorotoluene	1	U	1		
	2-Jul-01	4-Chlorotoluene	1	U	1		
	2-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	2-Jul-01	Acetone		U	5		700
	2-Jul-01	Benzene	1	U	1	5	0.2
	2-Jul-01	Bromodichloromethane	1	U	1		0.3
	2-Jul-01	Bromoform	1	U	1		4
	2-Jul-01	Bromomethane	2	U	2		10
	2-Jul-01	Carbon Disulfide	1	U	1		
	2-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	2-Jul-01	Chlorobenzene	1	U	1	100	4
	2-Jul-01	Chloroethane	2	U	2		
	2-Jul-01	Chloroform	2	U	1		6
	2-Jul-01	Chloromethane	2	U	2		30
	2-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	2-Jul-01	Dibromochloromethane	1	U	1		10
	2-Jul-01	Ethylbenzene	1	U	1	700	700
	2-Jul-01	Methylene Chloride	2	U	2		2
	2-Jul-01	Styrene	1	U	1	100	100
	2-Jul-01	Tetrachloroethene	130	D	1	5	0.4
	2-Jul-01	Toluene	1	J	1	100	1000
	2-Jul-01	Total Xylene	1	J	1		
	2-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	2-Jul-01	Trichloroethene	39	D	1	5	1
	2-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W15S	27-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	27-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	27-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	27-Jun-01	1,1-Dichloroethane	1		1		70
	27-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	27-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	27-Jun-01	1,2-Dichloroethene (total)	3		1	70	10
	27-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	27-Jun-01	2-Butanone		R	5		3
	27-Jun-01	2-Chlorotoluene	1		1		
	27-Jun-01	2-Hexanone	5	U	5		
	27-Jun-01	3-Chlorotoluene	1	U	1		
	27-Jun-01	4-Chlorotoluene	1	U	1		
	27-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	27-Jun-01	Acetone	24	J	5		700
	27-Jun-01	Benzene	1	U	1	5	0.2
	27-Jun-01	Bromodichloromethane	1	U	1		0.3
	27-Jun-01	Bromoform	1	U	1		4
	27-Jun-01	Bromomethane	2	U	2		10
	27-Jun-01	Carbon Disulfide	1	U	1		
	27-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	27-Jun-01	Chlorobenzene	1	U	1	100	4
	27-Jun-01	Chloroethane	2	U	2		
	27-Jun-01	Chloroform	1	U	1		6
	27-Jun-01	Chloromethane	2	U	2		30
	27-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Dibromochloromethane	1	U	1		10
	27-Jun-01	Ethylbenzene	1	U	1	700	700
	27-Jun-01	Methylene Chloride	2	U	2		2
	27-Jun-01	Styrene	1	U	1	100	100
	27-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	27-Jun-01	Toluene	1	U	1	100	1000
	27-Jun-01	Total Xylene	1	U	1		40
	27-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Trichloroethene	1	U	1	5	1
	27-Jun-01	Vinyl Chloride	1	J	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W17A	14-Jun-01	1,1,1-Trichloroethane	5	U	5	200	30
	14-Jun-01	1,1,2,2-Tetrachloroethane	5	U	5		2
	14-Jun-01	1,1,2-Trichloroethane	5	U	5	3/5	3
	14-Jun-01	1,1-Dichloroethane	5	U	5		70
	14-Jun-01	1,1-Dichloroethene	5	U	5	7	1
	14-Jun-01	1,2-Dichloroethane	5	U	5	5	0.3
	14-Jun-01	1,2-Dichloroethene (total)	5	U	5	70	10
	14-Jun-01	1,2-Dichloropropane	5	U	5	5	0.5
	14-Jun-01	2,2'-oxybis(1-Chloropropane)	10	U	10		
	14-Jun-01	2-Butanone	25	U	25		3
	14-Jun-01	2-Chlorotoluene	5	UJ	5		
	14-Jun-01	2-Hexanone	25	U	25		
	14-Jun-01	3-Chlorotoluene	5	U	5		
	14-Jun-01	4-Chlorotoluene	5	U	5		
	14-Jun-01	4-Methyl-2-pentanone	25	U	25		400
	14-Jun-01	Acetone	60	UJ	25	5	700
	14-Jun-01	Benzene	5	U	5		0.2
	14-Jun-01	Bromodichloromethane	5	U	5		0.3
	14-Jun-01	Bromoform	5	U	5		4
	14-Jun-01	Bromomethane	10	U	10		10
	14-Jun-01	Carbon Disulfide	5	U	5		
	14-Jun-01	Carbon Tetrachloride	5	U	5	100	0.4
	14-Jun-01	Chlorobenzene	5	U	5		4
	14-Jun-01	Chloroethane	10	U	10		
	14-Jun-01	Chloroform	5	U	5		6
	14-Jun-01	Chloromethane	1	UJ	10		30
	14-Jun-01	cis-1,3-Dichloropropene	5	U	5		
	14-Jun-01	Dibromochloromethane	5	U	5		10
	14-Jun-01	Ethylbenzene	5	U	5	700	700
	14-Jun-01	Methylene Chloride	10	U	10		2
	14-Jun-01	Styrene	5	U	5	100	100
	14-Jun-01	Tetrachloroethene	5	U	5	5	0.4
	14-Jun-01	Toluene	5	U	5	100	1000
	14-Jun-01	Total Xylene	5	U	5		40
	14-Jun-01	Trans-1,3-Dichloropropene	5	U	5		
	14-Jun-01	Trichloroethene	5	U	5	5	1
	14-Jun-01	Vinyl Chloride	10	U	10		0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W19S	13-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	13-Jun-01	1,1,2,2-Tetrachloroethane	1	UJ	1		2
	13-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	13-Jun-01	1,1-Dichloroethane	1	U	1		70
	13-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	13-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	13-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	13-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	13-Jun-01	2-Butanone	5	U	5		3
	13-Jun-01	2-Chlorotoluene	1	U	1		
	13-Jun-01	2-Hexanone	5	U	5		
	13-Jun-01	3-Chlorotoluene	1	U	1		
	13-Jun-01	4-Chlorotoluene	1	U	1		
	13-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	13-Jun-01	Acetone	10	U	5		700
	13-Jun-01	Benzene	1	U	1	5	0.2
	13-Jun-01	Bromodichloromethane	1	U	1		0.3
	13-Jun-01	Bromoform	1	U	1		4
	13-Jun-01	Bromomethane	2	U	2		10
	13-Jun-01	Carbon Disulfide	1	U	1		
	13-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	13-Jun-01	Chlorobenzene	1	U	1	100	4
	13-Jun-01	Chloroethane	2	U	2		
	13-Jun-01	Chloroform	1	U	1		6
	13-Jun-01	Chloromethane	0.1	UJ	2		30
	13-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	13-Jun-01	Dibromochloromethane	1	U	1		10
	13-Jun-01	Ethylbenzene	1	U	1	700	700
	13-Jun-01	Methylene Chloride	0.8	U	2		2
	13-Jun-01	Styrene	1	UJ	1	100	100
	13-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	13-Jun-01	Toluene	1	U	1	100	1000
	13-Jun-01	Total Xylene	1	U	1		40
	13-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	13-Jun-01	Trichloroethene	1	U	1	5	1
	13-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W24S	5-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	5-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	5-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	5-Jul-01	1,1-Dichloroethane	1	U	1		70
	5-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	5-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	5-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	5-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	5-Jul-01	2-Butanone	5	U	5		3
	5-Jul-01	2-Chlorotoluene	0.4	J	1		
	5-Jul-01	2-Hexanone	5	U	5		
	5-Jul-01	3-Chlorotoluene	1	U	1		
	5-Jul-01	4-Chlorotoluene	0.2	J	1		
	5-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	5-Jul-01	Acetone	5	U	5		700
	5-Jul-01	Benzene	1	U	1	5	0.2
	5-Jul-01	Bromodichloromethane	1	U	1		0.3
	5-Jul-01	Bromoform	1	U	1		4
	5-Jul-01	Bromomethane	2	U	2		10
	5-Jul-01	Carbon Disulfide	1	U	1		
	5-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	5-Jul-01	Chlorobenzene	1	U	1	100	4
	5-Jul-01	Chloroethane	2	U	2		
	5-Jul-01	Chloroform	1	U	1		6
	5-Jul-01	Chloromethane	2	U	2		30
	5-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Dibromochloromethane	1	U	1		10
	5-Jul-01	Ethylbenzene	1	U	1	700	700
	5-Jul-01	Methylene Chloride	2	U	2		2
	5-Jul-01	Styrene	1	U	1	100	100
	5-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	5-Jul-01	Toluene	1	U	1	100	1000
	5-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Trichloroethene	1	U	1	5	1
	5-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W25S	10-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	10-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	10-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	10-Jul-01	1,1-Dichloroethane	1	U	1		70
	10-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	10-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	10-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	10-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	10-Jul-01	2-Butanone	5	U	5		3
	10-Jul-01	2-Chlorotoluene	1	U	1		
	10-Jul-01	2-Hexanone	5	U	5		
	10-Jul-01	3-Chlorotoluene	1	U	1		
	10-Jul-01	4-Chlorotoluene	1	U	1		
	10-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	10-Jul-01	Acetone	5	U	5		700
	10-Jul-01	Benzene	1	U	1	5	0.2
	10-Jul-01	Bromodichloromethane	1	U	1		0.3
	10-Jul-01	Bromoform	1	U	1		4
	10-Jul-01	Bromomethane	2	U	2		10
	10-Jul-01	Carbon Disulfide	1	U	1		
	10-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	10-Jul-01	Chlorobenzene	1	U	1	100	4
	10-Jul-01	Chloroethane	2	U	2		
	10-Jul-01	Chloroform	1	U	1		6
	10-Jul-01	Chloromethane	2	U	2		30
	10-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Dibromochloromethane	1	U	1		10
	10-Jul-01	Ethylbenzene	1	U	1	700	700
	10-Jul-01	Methylene Chloride	2	U	2		2
	10-Jul-01	Styrene	1	U	1	100	100
	10-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	10-Jul-01	Toluene	1	U	1	100	1000
	10-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Trichloroethene	1	U	1	5	1
	10-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS01AA	20-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	20-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	20-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	20-Jun-01	1,1-Dichloroethane	1	U	1		70
	20-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	20-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	20-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	20-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	20-Jun-01	2-Butanone		R	5		3
	20-Jun-01	2-Chlorotoluene	1	U	1		
	20-Jun-01	2-Hexanone	5	U	5		
	20-Jun-01	3-Chlorotoluene	1	U	1		
	20-Jun-01	4-Chlorotoluene	1	U	1		
	20-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	20-Jun-01	Acetone		R	5		700
	20-Jun-01	Benzene	1	U	1	5	0.2
	20-Jun-01	Bromodichloromethane	1	U	1		0.3
	20-Jun-01	Bromoform	1	U	1		4
	20-Jun-01	Bromomethane	2	U	2		10
	20-Jun-01	Carbon Disulfide	1	U	1		
	20-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	20-Jun-01	Chlorobenzene	1	U	1	100	4
	20-Jun-01	Chloroethane	2	U	2		
	20-Jun-01	Chloroform	1	U	1		6
	20-Jun-01	Chloromethane	2	U	2		30
	20-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Dibromochloromethane	1	U	1		10
	20-Jun-01	Ethylbenzene	1	U	1	700	700
	20-Jun-01	Methylene Chloride	2	U	2		2
	20-Jun-01	Styrene	1	U	1	100	100
	20-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	20-Jun-01	Toluene	1	U	1	100	1000
	20-Jun-01	Total Xylene	1	U	1		40
	20-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Trichloroethene	1	U	1	5	1
	20-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
MISS02A	5-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	5-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	5-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	5-Jul-01	1,1-Dichloroethane	1	U	1		70
	5-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	5-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	5-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	5-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	5-Jul-01	2-Butanone	5	U	5		3
	5-Jul-01	2-Chlorotoluene	1	U	1		
	5-Jul-01	2-Hexanone	5	U	5		
	5-Jul-01	3-Chlorotoluene	1	U	1		
	5-Jul-01	4-Chlorotoluene	1	U	1		
	5-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	5-Jul-01	Acetone	5	U	5		700
	5-Jul-01	Benzene	1	U	1	5	0.2
	5-Jul-01	Bromodichloromethane	1	U	1		0.3
	5-Jul-01	Bromoform	1	U	1		4
	5-Jul-01	Bromomethane	2	U	2		10
	5-Jul-01	Carbon Disulfide	1	U	1		
	5-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	5-Jul-01	Chlorobenzene	1	U	1	100	4
	5-Jul-01	Chloroethane	2	U	2		
	5-Jul-01	Chloroform	1	U	1		6
	5-Jul-01	Chloromethane	2	U	2		30
	5-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Dibromochloromethane	1	U	1		10
	5-Jul-01	Ethylbenzene	1	U	1	700	700
	5-Jul-01	Methylene Chloride	2	U	2		2
	5-Jul-01	Styrene	1	U	1	100	100
	5-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	5-Jul-01	Toluene	1	U	1	100	1000
	5-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Trichloroethene	1	U	1	5	1
	5-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS05A	19-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	19-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	19-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	19-Jun-01	1,1-Dichloroethane	1	U	1		70
	19-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	19-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	19-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	19-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	19-Jun-01	2-Butanone		R	5		3
	19-Jun-01	2-Chlorotoluene	1	U	1		
	19-Jun-01	2-Hexanone	5	U	5		
	19-Jun-01	3-Chlorotoluene	1	U	1		
	19-Jun-01	4-Chlorotoluene	1	U	1		
	19-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	19-Jun-01	Acetone	10	UB	5		700
	19-Jun-01	Benzene	1	U	1	5	0.2
	19-Jun-01	Bromodichloromethane	1	U	1		0.3
	19-Jun-01	Bromoform	1	U	1		4
	19-Jun-01	Bromomethane	2	U	2		10
	19-Jun-01	Carbon Disulfide	1	U	1		
	19-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	19-Jun-01	Chlorobenzene	1	U	1	100	4
	19-Jun-01	Chloroethane	2	U	2		
	19-Jun-01	Chloroform	1	U	1		6
	19-Jun-01	Chloromethane	0.2	UB	2		30
	19-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	19-Jun-01	Dibromochloromethane	1	U	1		10
	19-Jun-01	Ethylbenzene	1	U	1	700	700
	19-Jun-01	Methylene Chloride	4	UB	2		2
	19-Jun-01	Styrene	1	U	1	100	100
	19-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	19-Jun-01	Toluene	1	U	1	100	1000
	19-Jun-01	Total Xylene	1	U	1		40
	19-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	19-Jun-01	Trichloroethene	1	U	1	5	1
	19-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS06A	20-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	20-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	20-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	20-Jun-01	1,1-Dichloroethane	1	U	1		70
	20-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	20-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	20-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	20-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	20-Jun-01	2-Butanone		R	5		3
	20-Jun-01	2-Chlorotoluene	1	U	1		
	20-Jun-01	2-Hexanone	5	U	5		
	20-Jun-01	3-Chlorotoluene	1	U	1		
	20-Jun-01	4-Chlorotoluene	1	U	1		
	20-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	20-Jun-01	Acetone		R	5		700
	20-Jun-01	Benzene	1	U	1	5	0.2
	20-Jun-01	Bromodichloromethane	1	U	1		0.3
	20-Jun-01	Bromoform	1	U	1		4
	20-Jun-01	Bromomethane	2	U	2		10
	20-Jun-01	Carbon Disulfide	1	U	1		
	20-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	20-Jun-01	Chlorobenzene	1	U	1	100	4
	20-Jun-01	Chloroethane	2	U	2		
	20-Jun-01	Chloroform	0.4	UB	1		6
	20-Jun-01	Chloromethane	2	U	2		30
	20-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Dibromochloromethane	1	U	1		10
	20-Jun-01	Ethylbenzene	1	U	1	700	700
	20-Jun-01	Methylene Chloride	2	U	2		2
	20-Jun-01	Styrene	1	U	1	100	100
	20-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	20-Jun-01	Toluene	1	U	1	100	1000
	20-Jun-01	Total Xylene	1	U	1		40
	20-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Trichloroethene	1	U	1	5	1
	20-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
Monitoring wells completed in bedrock:							
B38W02D[f]	28-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	28-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	28-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	28-Jun-01	1,1-Dichloroethane	1	U	1		70
	28-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	28-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	28-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	28-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	28-Jun-01	2-Butanone		R	5		3
	28-Jun-01	2-Chlorotoluene	1	U	1		
	28-Jun-01	2-Hexanone	5	U	5		
	28-Jun-01	3-Chlorotoluene	1	U	1		
	28-Jun-01	4-Chlorotoluene	1	U	1		
	28-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	28-Jun-01	Acetone		R	5		700
	28-Jun-01	Benzene	1	U	1	5	0.2
	28-Jun-01	Bromodichloromethane	1	U	1		0.3
	28-Jun-01	Bromoform	3	UB	1		4
	28-Jun-01	Bromomethane	2	U	2		10
	28-Jun-01	Carbon Disulfide	1	U	1		
	28-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	28-Jun-01	Chlorobenzene	1	U	1	100	4
	28-Jun-01	Chloroethane	2	U	2		
	28-Jun-01	Chloroform	1	U	1		6
	28-Jun-01	Chloromethane	2	U	2		30
	28-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	28-Jun-01	Dibromochloromethane	1	UB	1		10
	28-Jun-01	Ethylbenzene	1	U	1	700	700
	28-Jun-01	Methylene Chloride	2	U	2		2
	28-Jun-01	Styrene	1	U	1	100	100
	28-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	28-Jun-01	Toluene	1	U	1	100	1000
	28-Jun-01	Total Xylene	1	U	1		40
	28-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	28-Jun-01	Trichloroethene	1	U	1	5	1
	28-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W14D	2-Jul-01	1,1,1-Trichloroethane	2		1	200	30
	2-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	2-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	2-Jul-01	1,1-Dichloroethane	1		1		70
	2-Jul-01	1,1-Dichloroethene	3		1	7	1
	2-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	2-Jul-01	1,2-Dichloroethene (total)	38	D	1	70	10
	2-Jul-01	1,2-Dichloropropane	0.3	J	1	5	0.5
	2-Jul-01	2-Butanone	5	U	5		3
	2-Jul-01	2-Chlorotoluene	1	U	1		
	2-Jul-01	2-Hexanone	5	U	5		
	2-Jul-01	3-Chlorotoluene	1	U	1		
	2-Jul-01	4-Chlorotoluene	1	U	1		
	2-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	2-Jul-01	Acetone	5	U	5		700
	2-Jul-01	Benzene	0.1	J	1	5	0.2
	2-Jul-01	Bromodichloromethane	1	U	1		0.3
	2-Jul-01	Bromoform	1	U	1		4
	2-Jul-01	Bromomethane	2	U	2		10
	2-Jul-01	Carbon Disulfide	1	U	1		
	2-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	2-Jul-01	Chlorobenzene	1	U	1	100	4
	2-Jul-01	Chloroethane	2	U	2		
	2-Jul-01	Chloroform	2	JD	1		6
	2-Jul-01	Chloromethane	2	U	2		30
	2-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	2-Jul-01	Dibromochloromethane	1	U	1		10
	2-Jul-01	Ethylbenzene	1	U	1	700	700
	2-Jul-01	Methylene Chloride	2	U	2		2
	2-Jul-01	Styrene	1	U	1	100	100
	2-Jul-01	Tetrachloroethene	180	D	1	5	0.4
	2-Jul-01	Toluene	1	U	1	100	1000
	2-Jul-01	Total Xylene	1	U	1		40
	2-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	2-Jul-01	Trichloroethene	60	D	1	5	1
	2-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W15D	27-Jun-01	1,1,1-Trichloroethane	0.4	J	1	200	30
	27-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	27-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	27-Jun-01	1,1-Dichloroethane	1		1		70
	27-Jun-01	1,1-Dichloroethene	0.5	J	1	7	1
	27-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	27-Jun-01	1,2-Dichloroethene (total)	25		1	70	10
	27-Jun-01	1,2-Dichloropropane	0.2	J	1	5	0.5
	27-Jun-01	2-Butanone	5	U	5		3
	27-Jun-01	2-Chlorotoluene	1	U	1		
	27-Jun-01	2-Hexanone	5	U	5		
	27-Jun-01	3-Chlorotoluene	1	U	1		
	27-Jun-01	4-Chlorotoluene	1	U	1		
	27-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	27-Jun-01	Acetone	5	U	5		700
	27-Jun-01	Benzene	0.3	J	1	5	0.2
	27-Jun-01	Bromodichloromethane	1	U	1		0.3
	27-Jun-01	Bromoform	1	U	1		4
	27-Jun-01	Bromomethane	2	U	2		10
	27-Jun-01	Carbon Disulfide	1	U	1		
	27-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	27-Jun-01	Chlorobenzene	1	U	1	100	4
	27-Jun-01	Chloroethane	2	U	2		
	27-Jun-01	Chloroform	0.1	J	1		6
	27-Jun-01	Chloromethane	2	U	2		30
	27-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Dibromochloromethane	1	U	1		10
	27-Jun-01	Ethylbenzene	1	U	1	700	700
	27-Jun-01	Methylene Chloride	2	U	2		2
	27-Jun-01	Styrene	1	U	1	100	100
	27-Jun-01	Tetrachloroethene	48	D	1	5	0.4
	27-Jun-01	Toluene	0.2	UB	1	100	1000
	27-Jun-01	Total Xylene	1	U	1		40
	27-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Trichloroethene	21	D	1	5	1
	27-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W15D Duplicate	27-Jun-01	1,1,1-Trichloroethane	0.5	J	1	200	30
	27-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	27-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	27-Jun-01	1,1-Dichloroethane	1		1		70
	27-Jun-01	1,1-Dichloroethene	0.5	J	1	7	1
	27-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	27-Jun-01	1,2-Dichloroethene (total)	27	D	1	70	10
	27-Jun-01	1,2-Dichloropropane	0.2	J	1	5	0.5
	27-Jun-01	2-Butanone	5	U	5		3
	27-Jun-01	2-Chlorotoluene	1	U	1		
	27-Jun-01	2-Hexanone	5	U	5		
	27-Jun-01	3-Chlorotoluene	1	U	1		
	27-Jun-01	4-Chlorotoluene	1	U	1		
	27-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	27-Jun-01	Acetone	5	U	5		700
	27-Jun-01	Benzene	0.3	J	1	5	0.2
	27-Jun-01	Bromodichloromethane	1	U	1		0.3
	27-Jun-01	Bromoform	1	U	1		4
	27-Jun-01	Bromomethane	2	U	2		10
	27-Jun-01	Carbon Disulfide	1	U	1		
	27-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	27-Jun-01	Chlorobenzene	1	U	1	100	4
	27-Jun-01	Chloroethane	2	U	2		
	27-Jun-01	Chloroform	0.1	U	1		6
	27-Jun-01	Chloromethane	2	U	2		30
	27-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Dibromochloromethane	1	U	1		10
	27-Jun-01	Ethylbenzene	1	U	1	700	700
	27-Jun-01	Methylene Chloride	2	U	2		2
	27-Jun-01	Styrene	1	U	1	100	100
	27-Jun-01	Tetrachloroethene	53	D	1	5	0.4
	27-Jun-01	Toluene	0.1	U	1	100	1000
	27-Jun-01	Total Xylene	1	U	1		40
	27-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	27-Jun-01	Trichloroethene	21		1	5	1
	27-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W17B	14-Jun-01	1,1,1-Trichloroethane	1	UJ	1	200	30
	14-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	14-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	14-Jun-01	1,1-Dichloroethane	1	U	1		70
	14-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	14-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	14-Jun-01	1,2-Dichloroethene (total)	0.3	J	1	70	10
	14-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	14-Jun-01	2-Butanone	5	U	5		3
	14-Jun-01	2-Chlorotoluene	24	J	1		
	14-Jun-01	2-Hexanone	5	UJ	5		
	14-Jun-01	3-Chlorotoluene	19	UJ	1		
	14-Jun-01	4-Chlorotoluene	0.3	UJ	1		
	14-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	14-Jun-01	Acetone	140	U	5		700
	14-Jun-01	Benzene	1	U	1	5	0.2
	14-Jun-01	Bromodichloromethane	1	U	1		0.3
	14-Jun-01	Bromoform	1	U	1		4
	14-Jun-01	Bromomethane	2	UJ	2		10
	14-Jun-01	Carbon Disulfide	1	U	1		
	14-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	14-Jun-01	Chlorobenzene	0.2	J	1	100	4
	14-Jun-01	Chloroethane	2	U	2		
	14-Jun-01	Chloroform	1	U	1		6
	14-Jun-01	Chloromethane	0.2	UJ	2		30
	14-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	14-Jun-01	Dibromochloromethane	1	U	1		10
	14-Jun-01	Ethylbenzene	1	U	1	700	700
	14-Jun-01	Methylene Chloride	2	U	2		2
	14-Jun-01	Styrene	1	U	1	100	100
	14-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	14-Jun-01	Toluene	1	U	1	100	1000
	14-Jun-01	Total Xylene	0.1	UJ	1		40
	14-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	14-Jun-01	Trichloroethene	1	U	1	5	1
	14-Jun-01	Vinyl Chloride	0.3	J	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W17B	14-Jun-01	1,1,1-Trichloroethane	1	UJ	1	200	30
Duplicate	14-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	14-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	14-Jun-01	1,1-Dichloroethane	1	U	1		70
	14-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	14-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	14-Jun-01	1,2-Dichloroethene (total)	0.3	J	1	70	10
	14-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	14-Jun-01	2-Butanone	1	J	5		3
	14-Jun-01	2-Chlorotoluene	21	J	1		
	14-Jun-01	2-Hexanone	5	UJ	5		
	14-Jun-01	3-Chlorotoluene	1	U	1		
	14-Jun-01	4-Chlorotoluene	0.3	J	1		
	14-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	14-Jun-01	Acetone	5	UJ	5		700
	14-Jun-01	Benzene	0.1	J	1	5	0.2
	14-Jun-01	Bromodichloromethane	1	U	1		0.3
	14-Jun-01	Bromoform	1	U	1		4
	14-Jun-01	Bromomethane	2	U	2		10
	14-Jun-01	Carbon Disulfide	1	U	1		
	14-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	14-Jun-01	Chlorobenzene	0.2	J	1	100	4
	14-Jun-01	Chloroethane	2	U	2		
	14-Jun-01	Chloroform	1	U	1		6
	14-Jun-01	Chloromethane	0.5	UJ	2		30
	14-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	14-Jun-01	Dibromochloromethane	1	U	1		10
	14-Jun-01	Ethylbenzene	1	U	1	700	700
	14-Jun-01	Methylene Chloride	2	U	2		2
	14-Jun-01	Styrene	1	U	1	100	100
	14-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	14-Jun-01	Toluene	1	U	1	100	1000
	14-Jun-01	Total Xylene	0.2	UJ	1		40
	14-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	14-Jun-01	Trichloroethene	1	U	1	5	1
	14-Jun-01	Vinyl Chloride	0.3	J	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W18D	20-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	20-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	20-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	20-Jun-01	1,1-Dichloroethane	1	U	1		70
	20-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	20-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	20-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	20-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	20-Jun-01	2-Butanone		J	5		3
	20-Jun-01	2-Chlorotoluene	1	U	1		
	20-Jun-01	2-Hexanone	5	U	5		
	20-Jun-01	3-Chlorotoluene	1	U	1		
	20-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	20-Jun-01	Acetone		R	5		700
	20-Jun-01	Benzene	0.6	J	1	5	0.2
	20-Jun-01	Bromodichloromethane	1	U	1		0.3
	20-Jun-01	Bromoform	1	U	1		4
	20-Jun-01	Bromomethane	2	U	2		10
	20-Jun-01	Carbon Disulfide	1	U	1		
	20-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	20-Jun-01	Chlorobenzene	1	U	1	100	4
	20-Jun-01	Chloroethane	2	U	2		
	20-Jun-01	Chloroform	1	J	1		6
	20-Jun-01	Chloromethane	2	U	2		30
	20-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Dibromochloromethane	1	U	1		10
	20-Jun-01	Ethylbenzene	1	U	1	700	700
	20-Jun-01	Methylene Chloride	2	U	2		2
	20-Jun-01	Styrene	1	U	1	100	100
	20-Jun-01	Tetrachloroethene	1	U	1	5	0.4
	20-Jun-01	Toluene	0.2	J	1	100	1000
	20-Jun-01	Total Xylene	1	J	1		40
	20-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	20-Jun-01	Trichloroethene	1	U	1	5	1
	20-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W19D	13-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	13-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	13-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	13-Jun-01	1,1-Dichloroethane	1	U	1		70
	13-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	13-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	13-Jun-01	1,2-Dichloroethene (total)	1	U	1	70	10
	13-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	13-Jun-01	2-Butanone	5	U	5		3
	13-Jun-01	2-Chlorotoluene	2	J	1		
	13-Jun-01	2-Hexanone	5	U	5		
	13-Jun-01	3-Chlorotoluene	1	U	1		
	13-Jun-01	4-Chlorotoluene	0.8	J	1		
	13-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	13-Jun-01	Acetone	10	U	5		700
	13-Jun-01	Benzene			1	5	0.2
	13-Jun-01	Bromodichloromethane	1	U	1		0.3
	13-Jun-01	Bromoform	1	U	1		4
	13-Jun-01	Bromomethane	2	U	2		10
	13-Jun-01	Carbon Disulfide	1	U	1		
	13-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	13-Jun-01	Chlorobenzene	0.3	U	1	100	4
	13-Jun-01	Chloroethane	2	U	2		
	13-Jun-01	Chloroform	1	U	1		6
	13-Jun-01	Chloromethane	2	U	2		30
	13-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	13-Jun-01	Dibromochloromethane	1	U	1		10
	13-Jun-01	Ethylbenzene	1	U	1	700	700
	13-Jun-01	Methylene Chloride	2	U	2		2
	13-Jun-01	Styrene	1	U	1	100	100
	13-Jun-01	Tetrachloroethene	0.3	U	1	5	0.4
	13-Jun-01	Toluene	2	UJ	1	100	1000
	13-Jun-01	Total Xylene	1	U	1		40
	13-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	13-Jun-01	Trichloroethene	0.1	U	1	5	1
	13-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	State[d] (ug/L)
B38W24D	5-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	5-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	5-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	5-Jul-01	1,1-Dichloroethane	1	U	1		70
	5-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	5-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	5-Jul-01	1,2-Dichloroethene (total)	0.5	J	1	70	10
	5-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	5-Jul-01	2-Butanone	5	U	5		3
	5-Jul-01	2-Chlorotoluene	6		1		
	5-Jul-01	2-Hexanone	5	U	5		
	5-Jul-01	3-Chlorotoluene	1	U	1		
	5-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	5-Jul-01	Acetone	10	UB	5		700
	5-Jul-01	Benzene	0.1	J	1	5	0.2
	5-Jul-01	Bromodichloromethane	1	U	1		0.3
	5-Jul-01	Bromoform	1	U	1		4
	5-Jul-01	Bromomethane	2	U	2		10
	5-Jul-01	Carbon Disulfide	1	U	1		
	5-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	5-Jul-01	Chlorobenzene	1	U	1	100	4
	5-Jul-01	Chloroethane	2	U	2		
	5-Jul-01	Chloroform	1	U	1		6
	5-Jul-01	Chloromethane	2	U	2		30
	5-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Dibromochloromethane	1	U	1		10
	5-Jul-01	Ethylbenzene	0.2	J	1	700	700
	5-Jul-01	Methylene Chloride	2	U	2		2
	5-Jul-01	Styrene	1	UB	1	100	100
	5-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	5-Jul-01	Toluene	1	U	1	100	1000
	5-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Trichloroethene	1	U	1	5	1
	5-Jul-01	Vinyl Chloride	2	U	2	1/5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W25D	10-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	10-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	10-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	10-Jul-01	1,1-Dichloroethane	1	U	1		70
	10-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	10-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	10-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	10-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	10-Jul-01	2-Butanone	5	U	5		3
	10-Jul-01	2-Chlorotoluene	1	U	1		
	10-Jul-01	2-Hexanone	5	U	5		
	10-Jul-01	3-Chlorotoluene	1	U	1		
	10-Jul-01	4-Chlorotoluene	1	U	1		
	10-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	10-Jul-01	Acetone	5	U	5		700
	10-Jul-01	Benzene	1	U	1	5	0.2
	10-Jul-01	Bromodichloromethane	1	U	1		0.3
	10-Jul-01	Bromoform	1	U	1		4
	10-Jul-01	Bromomethane	2	U	2		10
	10-Jul-01	Carbon Disulfide	1	U	1		
	10-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	10-Jul-01	Chlorobenzene	1	U	1	100	4
	10-Jul-01	Chloroethane	2	U	2		
	10-Jul-01	Chloroform	1	U	1		6
	10-Jul-01	Chloromethane	2	U	2		30
	10-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Dibromochloromethane	1	U	1		10
	10-Jul-01	Ethylbenzene	1	U	1	700	700
	10-Jul-01	Methylene Chloride	2	U	2		2
	10-Jul-01	Styrene	1	U	1	100	100
	10-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	10-Jul-01	Toluene	0.1	UB	1	100	1000
	10-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Trichloroethene	1	U	1	5	1
	10-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
B38W25D Duplicate	10-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	10-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	10-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	10-Jul-01	1,1-Dichloroethane	1	U	1		70
	10-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	10-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	10-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	10-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	10-Jul-01	2-Butanone	5	U	5		3
	10-Jul-01	2-Chlorotoluene	1	U	1		
	10-Jul-01	2-Hexanone	5	U	5		
	10-Jul-01	3-Chlorotoluene	1	U	1		
	10-Jul-01	4-Chlorotoluene	1	U	1		
	10-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	10-Jul-01	Acetone	5	U	5		700
	10-Jul-01	Benzene	1	U	1	5	0.2
	10-Jul-01	Bromodichloromethane	1	U	1		0.3
	10-Jul-01	Bromoform	1	U	1		4
	10-Jul-01	Bromomethane	2	U	2		10
	10-Jul-01	Carbon Disulfide	1	U	1		
	10-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	10-Jul-01	Chlorobenzene	1	U	1	100	4
	10-Jul-01	Chloroethane	2	U	2		
	10-Jul-01	Chloroform	1	U	1		6
	10-Jul-01	Chloromethane	2	U	2		30
	10-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Dibromochloromethane	1	U	1		10
	10-Jul-01	Ethylbenzene	1	U	1	700	700
	10-Jul-01	Methylene Chloride	2	U	2		2
	10-Jul-01	Styrene	1	U	1	100	100
	10-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	10-Jul-01	Toluene	1	U	1	100	1000
	10-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	10-Jul-01	Trichloroethene	1	U	1	5	1
	10-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS01B	19-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	19-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	19-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	19-Jun-01	1,1-Dichloroethane	0.1	J	1		70
	19-Jun-01	1,1-Dichloroethene	0.2	J	1	7	1
	19-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	19-Jun-01	1,2-Dichloroethene (total)	2		1	70	10
	19-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	19-Jun-01	2-Butanone		R	5		3
	19-Jun-01	2-Chlorotoluene	1	U	1		
	19-Jun-01	2-Hexanone	5	U	5		
	19-Jun-01	3-Chlorotoluene	1	U	1		
	19-Jun-01	4-Chlorotoluene	1	U	1		
	19-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	19-Jun-01	Acetone	10	UB	5		700
	19-Jun-01	Benzene	1	U	1	5	0.2
	19-Jun-01	Bromodichloromethane	1	U	1		0.3
	19-Jun-01	Bromoform	1	U	1		4
	19-Jun-01	Bromomethane	2	U	2		10
	19-Jun-01	Carbon Disulfide	1	U	1		
	19-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	19-Jun-01	Chlorobenzene	1	U	1	100	4
	19-Jun-01	Chloroethane	2	U	2		
	19-Jun-01	Chloroform	0.2	J	1		6
	19-Jun-01	Chloromethane	0.1	UB	2		30
	19-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	19-Jun-01	Dibromochloromethane	1	U	1		10
	19-Jun-01	Ethylbenzene	1	U	1	700	700
	19-Jun-01	Methylene Chloride	3	UB	2		2
	19-Jun-01	Styrene	1	U	1	100	100
	19-Jun-01	Tetrachloroethene	21		1	5	0.4
	19-Jun-01	Toluene	1	U	1	100	1000
	19-Jun-01	Total Xylene	1	U	1		40
	19-Jun-01	Trans-1,3-Dichloropropene	1	U	1	5	
	19-Jun-01	Trichloroethene	1		1	5	1
	19-Jun-01	Vinyl Chloride	2	U	2		0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS02B	5-Jul-01	1,1,1-Trichloroethane	1	U	1	200	30
	5-Jul-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	5-Jul-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	5-Jul-01	1,1-Dichloroethane	0.2	J	1		70
	5-Jul-01	1,1-Dichloroethene	1	U	1	7	1
	5-Jul-01	1,2-Dichloroethane	1	U	1	5	0.3
	5-Jul-01	1,2-Dichloroethene (total)	1	U	1	70	10
	5-Jul-01	1,2-Dichloropropane	1	U	1	5	0.5
	5-Jul-01	2-Butanone	5	U	5		3
	5-Jul-01	2-Chlorotoluene	2		1		
	5-Jul-01	2-Hexanone	5	U	5		
	5-Jul-01	3-Chlorotoluene	1	U	1		
	5-Jul-01	4-Chlorotoluene	1	U	1		
	5-Jul-01	4-Methyl-2-pentanone	5	U	5		400
	5-Jul-01	Acetone	3	UB	5		700
	5-Jul-01	Benzene	0.3	J	1	5	0.2
	5-Jul-01	Bromodichloromethane	1	U	1		0.3
	5-Jul-01	Bromoform	1	U	1		4
	5-Jul-01	Bromomethane	2	U	2		10
	5-Jul-01	Carbon Disulfide	1	U	1		
	5-Jul-01	Carbon Tetrachloride	1	U	1		0.4
	5-Jul-01	Chlorobenzene	0.1	J	1	100	4
	5-Jul-01	Chloroethane	2	U	2		
	5-Jul-01	Chloroform	1	U	1		6
	5-Jul-01	Chloromethane	2	U	2		30
	5-Jul-01	cis-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Dibromochloromethane	1	U	1		10
	5-Jul-01	Ethylbenzene	1	U	1	700	700
	5-Jul-01	Methylene Chloride	2	U	2		2
	5-Jul-01	Styrene	1	UB	1	100	100
	5-Jul-01	Tetrachloroethene	1	U	1	5	0.4
	5-Jul-01	Toluene	0.2	UB	1	100	1000
	5-Jul-01	Trans-1,3-Dichloropropene	1	U	1		
	5-Jul-01	Trichloroethene	1	U	1	5	1
	5-Jul-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS05B	18-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	18-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	18-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	18-Jun-01	1,1-Dichloroethane	1	U	1		70
	18-Jun-01	1,1-Dichloroethene	1	U	1	7	1
	18-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	18-Jun-01	1,2-Dichloroethene (total)	0.1	U	1	70	10
	18-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	18-Jun-01	2-Butanone	5	U	5		3
	18-Jun-01	2-Chlorotoluene			1		
	18-Jun-01	2-Hexanone	5	U	5		
	18-Jun-01	3-Chlorotoluene	1	U	1		
	18-Jun-01	4-Chlorotoluene	39	U	1		
	18-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	18-Jun-01	Acetone	80	U	5		700
	18-Jun-01	Benzene	330	D	1	25	0.2
	18-Jun-01	Bromodichloromethane	1	U	1		0.3
	18-Jun-01	Bromoform	1	U	1		4
	18-Jun-01	Bromomethane	2	U	2		10
	18-Jun-01	Carbon Disulfide	0.4	U	1		
	18-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	18-Jun-01	Chlorobenzene	1		1	100	4
	18-Jun-01	Chloroethane	2	U	2		
	18-Jun-01	Chloroform	1	U	1		6
	18-Jun-01	Chloromethane	2	U	2		30
	18-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	18-Jun-01	Dibromochloromethane	1	U	1		10
	18-Jun-01	Ethylbenzene	0.2	U	1	700	700
	18-Jun-01	Methylene Chloride	2	U	2		2
	18-Jun-01	Styrene	1	U	1	100	100
	18-Jun-01	Tetrachloroethene	0.1	U	1	5	0.4
	18-Jun-01	Toluene	0.8	UJ	1	100	1000
	18-Jun-01	Total Xylene	1	U	1		40
	18-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	18-Jun-01	Trichloroethene	1	U	1	5	1
	18-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Sampling Location	Date Collected	Analyte[a]	Result (ug/L)	Data Qualifiers[b]	Reporting Limit (ug/L)	Related Regulations Federal[c] (ug/L)	Related Regulations State[d] (ug/L)
MISS07B	11-Jun-01	1,1,1-Trichloroethane	1	U	1	200	30
	11-Jun-01	1,1,2,2-Tetrachloroethane	1	U	1		2
	11-Jun-01	1,1,2-Trichloroethane	1	U	1	3/5	3
	11-Jun-01	1,1-Dichloroethane	0.6	J	1		70
	11-Jun-01	1,1-Dichloroethene	0.4	J	1	7	1
	11-Jun-01	1,2-Dichloroethane	1	U	1	5	0.3
	11-Jun-01	1,2-Dichloroethene (total)	5		1	70	10
	11-Jun-01	1,2-Dichloropropane	1	U	1	5	0.5
	11-Jun-01	2-Butanone	5	U	5		3
	11-Jun-01	2-Chlorotoluene	1	U	1		
	11-Jun-01	2-Hexanone	5	U	5		
	11-Jun-01	3-Chlorotoluene	1	U	1		
	11-Jun-01	4-Chlorotoluene	1	U	1		
	11-Jun-01	4-Methyl-2-pentanone	5	U	5		400
	11-Jun-01	Acetone	10	U	5		700
	11-Jun-01	Benzene	0.2	J	1	5	0.2
	11-Jun-01	Bromodichloromethane	1	U	1		0.3
	11-Jun-01	Bromoform	1	U	1		4
	11-Jun-01	Bromomethane	2	U	2		10
	11-Jun-01	Carbon Disulfide	1	U	1		
	11-Jun-01	Carbon Tetrachloride	1	U	1		0.4
	11-Jun-01	Chlorobenzene	1	U	1	100	4
	11-Jun-01	Chloroethane	2	U	2		
	11-Jun-01	Chloroform	1	U	1		6
	11-Jun-01	Chloromethane	2	U	2		30
	11-Jun-01	cis-1,3-Dichloropropene	1	U	1		
	11-Jun-01	Dibromochloromethane	1	U	1		10
	11-Jun-01	Ethylbenzene	1	U	1	700	700
	11-Jun-01	Methylene Chloride	2	U	2		2
	11-Jun-01	Styrene	1	U	1	100	100
	11-Jun-01	Tetrachloroethene	5		1	5	0.4
	11-Jun-01	Toluene	1	U	1	100	1000
	11-Jun-01	Total Xylene	1	U	1		40
	11-Jun-01	Trans-1,3-Dichloropropene	1	U	1		
	11-Jun-01	Trichloroethene	0.8	J	1	5	1
	11-Jun-01	Vinyl Chloride	2	U	2	5	0.08

TABLE 13
2001 Groundwater Analytical Results - Volatile Organic Compounds

Maywood Interim Storage Site - 2001

FOOTNOTES:

[a] All analytes were reported, detected and undetected.

[b] USACE and laboratory data qualifier flags based on the CDQMP-QAPP;
U= Analyte was analyzed for but not detected.
J = Reported as an estimated value. Data quality evaluation indicates that the analytical result is an estimate of the actual value.
D = Diluted out.
B= The analyte is found in the associated blank as well as in the sample. It indicates possible blank contamination.
UJ= Analyte was analyzed for but not detected, it must be estimated due to quality control consideration.

[c] Federal SDWA MCLs, 40 CFR 141 (October 1999).

[d] New Jersey Class IIA Groundwater Quality Standards, NJAC 7:9-6 (October 1999). Analytes for which the published PQL is greater than the GWQC are noted as such: GWQC / PQL.

[e] Monitoring well B38W01S is the background location for wells that are completed in unconsolidated sediment.

[f] Monitoring well B38W02D is the background location for wells that are completed in bedrock.

Table 14
2001 List of Analytes and Detection Limits for Metals and Volatile Organic Compounds

Maywood Interim Storage Site - 2001

Metals	Detection Limit Groundwater (µg/L)	Detection Limit Sediment (mg/kg)
Aluminum, Total	12.7	1.6
Antimony, Total	1.9	0.24
Arsenic, Total	2.3	0.29
Barium, Total	0.2	0.02
Beryllium, Total	0.2	0.02
Boron, Total	2.1	0.26
Cadmium, Total	0.3	0.04
Chromium, Total	0.9	0.11
Cobalt, Total	0.8	0.1
Copper, Total	0.7	0.09
Iron, Total	15.7	2
Lead, Total	2.6	0.32
Lithium	0.2	0.02
Manganese, Total	0.1	0.01
Mercury, Total	0.1	0.02
Nickel, Total	1.2	0.15
Selenium, Total	2.6	0.32
Silver, Total	1	0.12
Thallium, Total	3.9	0.49
Vanadium, Total	0.7	0.09
Zinc, Total	0.3	0.04

Note: The detection limit listed is the maximum sample quantitation limit from all nondetects of the specified analyte. If there were no nondetects, then the maximum sample quantitation limit is provided.

Groundwater Volatile Organic Compounds	Detection Limit (µg/L)
1,1,1-Trichloroethane	1
1,1,2,2-Tetrachloroethane	1
1,1,2-Trichloroethane	1
1,1-Dichloroethane	1
1,1-Dichloroethene	1
1,2-Dichloroethane	1
1,2-Dichloroethene (total)	1
1,2-Dichloropropane	1
2-Butanone	5
2-Hexanone	5
4-Methyl-2-pentanone	5
Acetone	5
Benzene	1
Bromodichloromethane	1
Bromoform	1
Bromomethane	2
Carbon Disulfide	1
Carbon Tetrachloride	1
Chlorobenzene	1
Chloroethane	2
Chloroform	1
Chloromethane	2
cis-1,3-Dichloropropene	1
Dibromochloromethane	1
Ethylbenzene	1
Methylene Chloride	2
Styrene	1
Tetrachloroethene	1
Toluene	1
Total Xylene	1
Trans-1,3-Dichloropropene	1
Trichloroethene	1
Vinyl Chloride	2

FIGURES

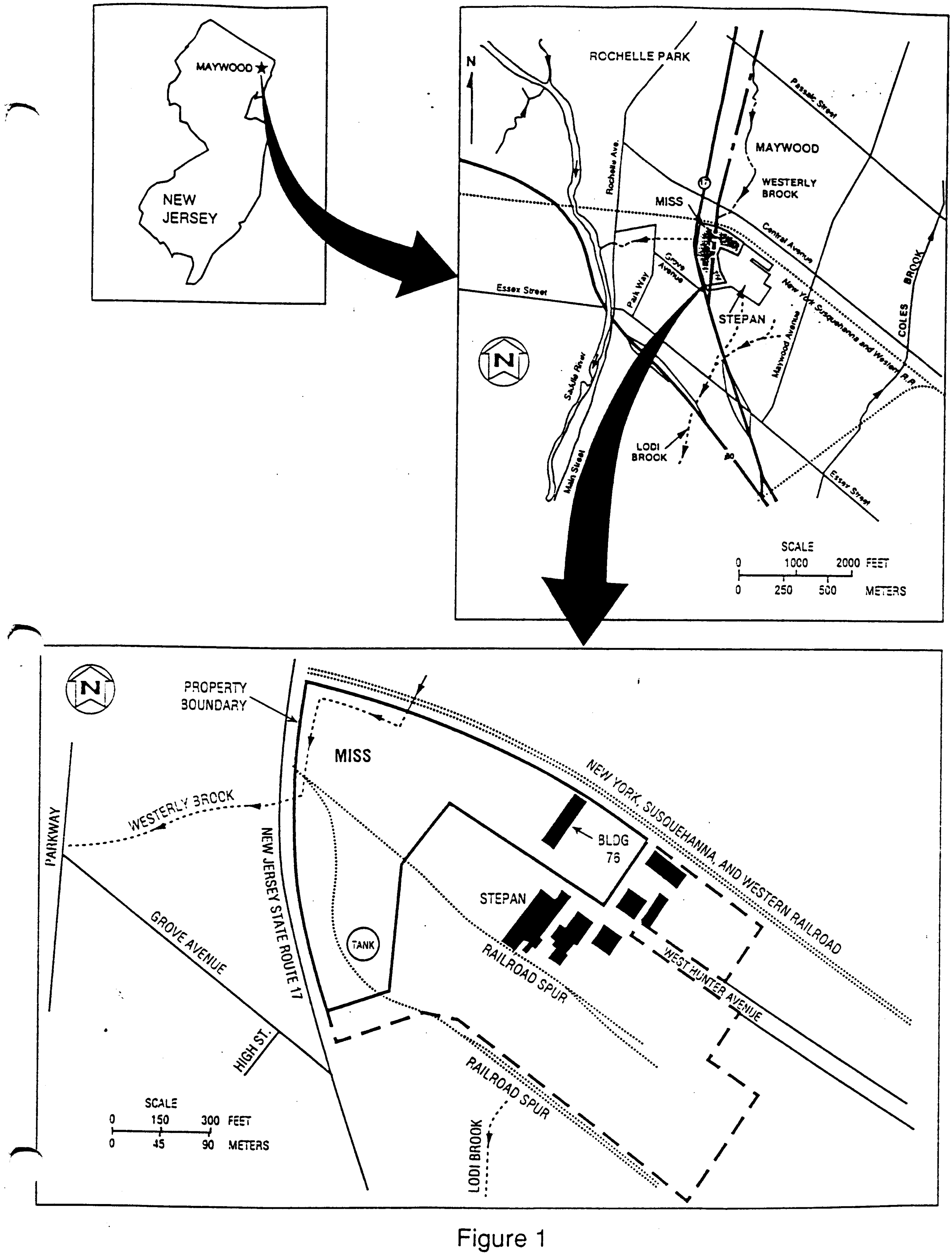


Figure 1
Maywood Interim Storage Site, Site Location and Site Map

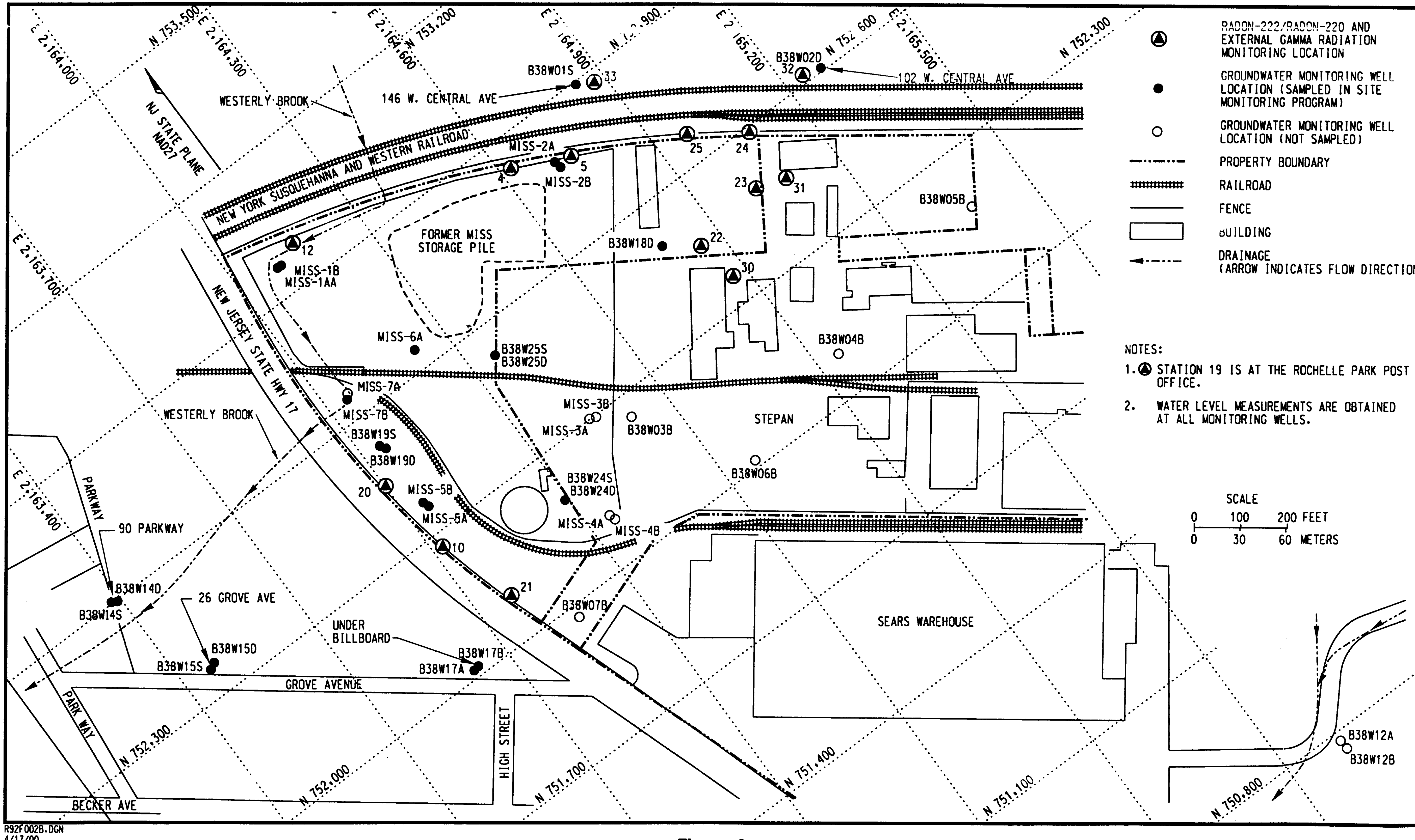
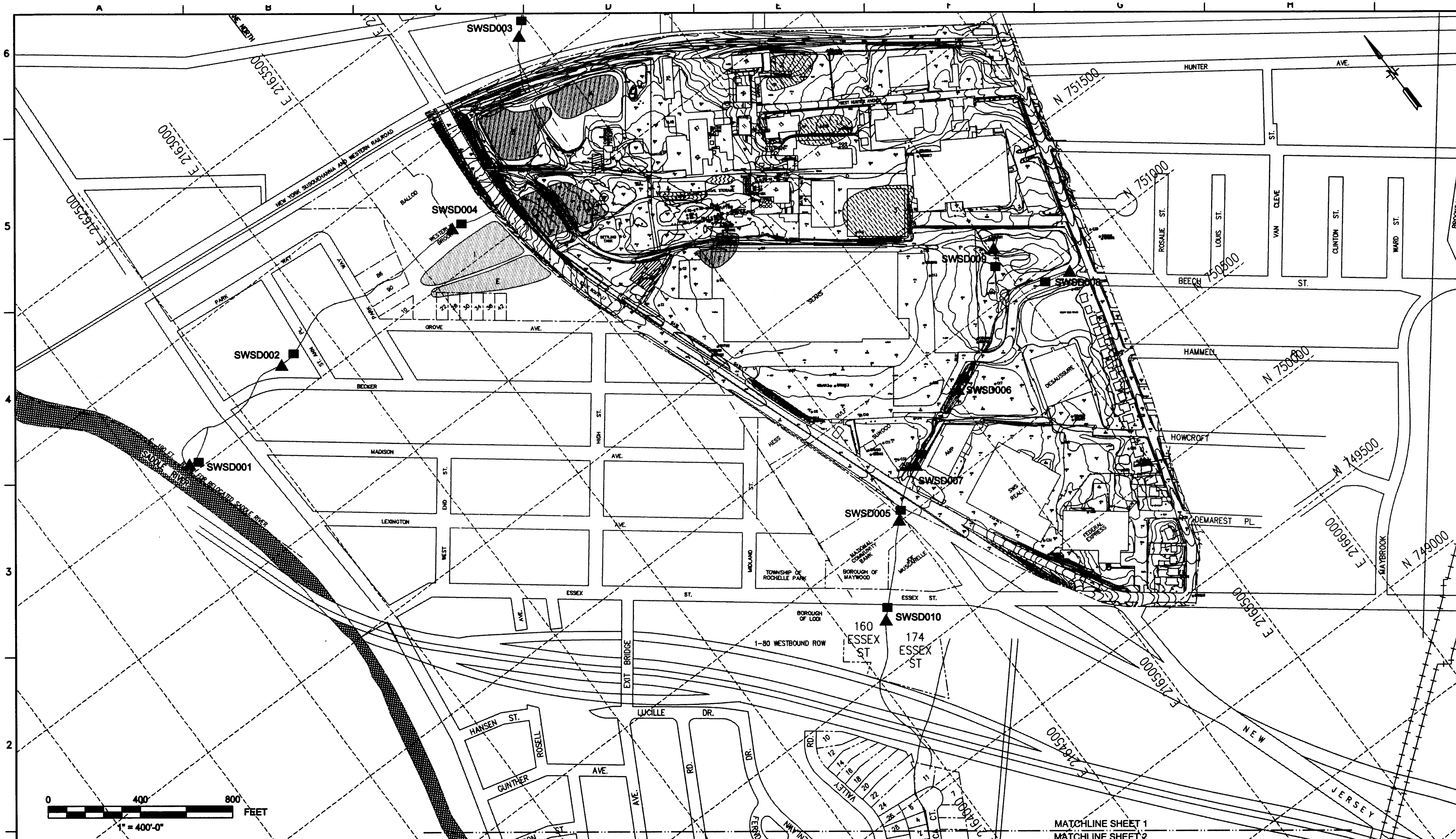


Figure 2
Maywood Interim Storage Site Environmental Monitoring Sampling Locations: External Gamma Radiation, Radon-222/Radon-220, and Groundwater



LEGEND

▲	SURFACE WATER SAMPLE LOCATION
■	SEDIMENT SAMPLE LOCATION
SWSD015	DISCHARGE OF LODI BROOK TO SADDLE RIVER
	FORMER RETENTION POND
	FORMER RETENTION POND (REMEDIATED)
	BURIAL PITS
	COAL STORAGE
	APPROXIMATE AREAS OF LEATHER MATERIAL CONTAINING CHROMIUM

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NEW YORK DISTRICT

US ARMY CORPS OF ENGINEERS
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FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE
Reviewed by:
Date:
Drawn by: KPT
Date: 9/19/2001
File Name: PROP-SAMP1

SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-98-R-0034
Job Number 08575
WAD# 1
WBS# 14
Figure Number:
3-A

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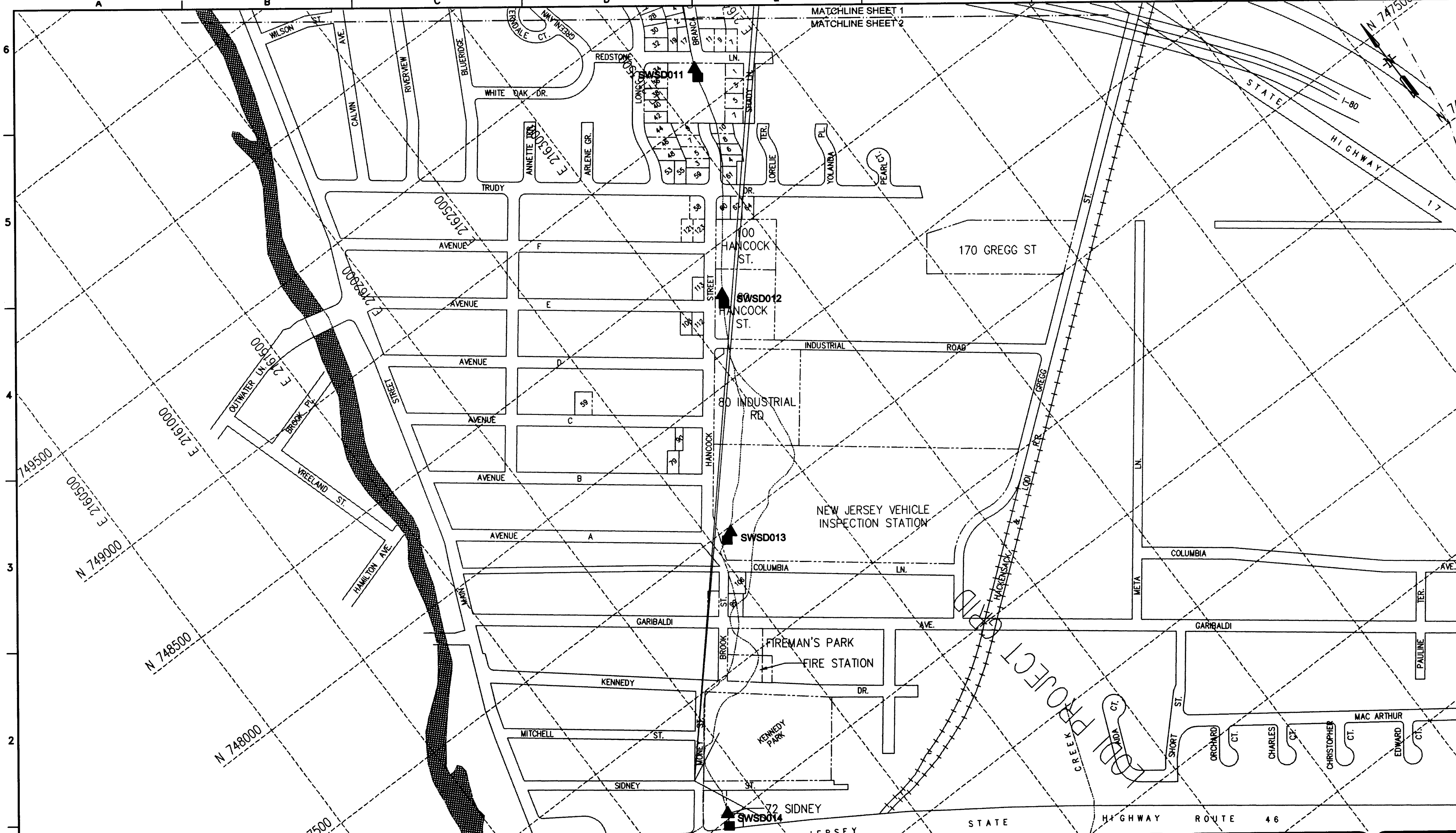

LEGEND

▲ SURFACE WATER SAMPLE LOCATION

■ SEDIMENT SAMPLE LOCATION

SWSD015 DISCHARGE OF LODI BROOK TO SADDLE RIVER

0 400 800 FEET

1" = 400'-0"

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STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE | Reviewed by: | Date:

Drawn by: KPT | Date: 9/19/2001 | File Name: PROP-SAMP2

SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-98-R-0034
Job Number 08575
WAD# 1
WBS# 14
Figure Number: # 3-B

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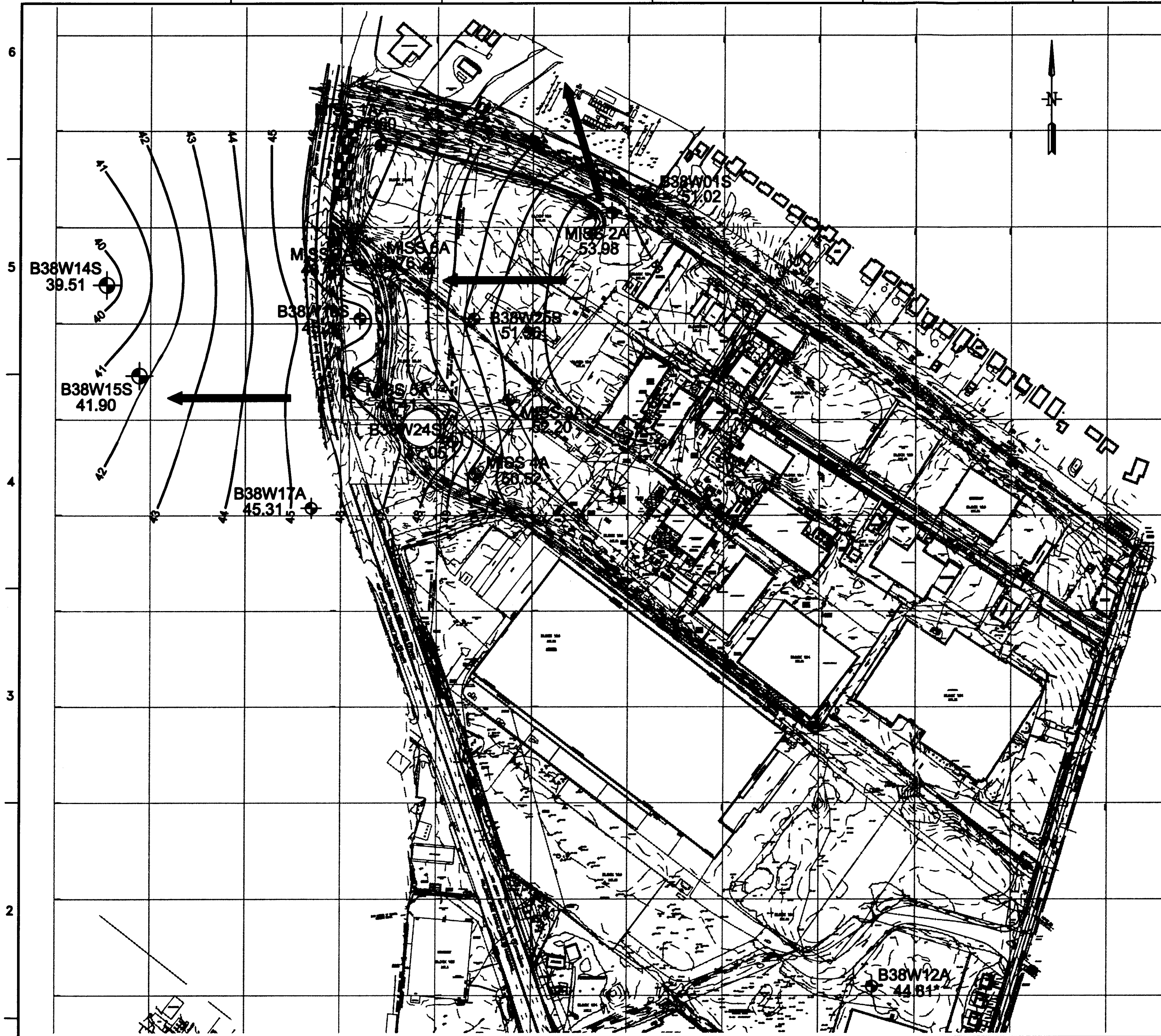
SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS (OVERBURDEN)
FEBRUARY 7, 2001

Well ID	G.W. Elev.
	FT MSL
B38W01S	51.02
B38W12A	44.81*
B38W14S	39.51
B38W15S	41.90
B38W17A	45.31
B38W19S	45.24
B38W24S	47.05
B38W25S	51.56
MISS 1AA	47.60
MISS 2A	53.98
MISS 3A	52.20
MISS 4A	50.52
MISS 5A	47.41
MISS 6A	48.76
MISS 7A	48.48



0 300 600 FEET
1" = 300'-0"

LEGEND

50	GROUNDWATER CONTOUR
	OVERBURDEN WELL
	GROUNDWATER FLOW DIRECTION
NG	NOT GAUGED
*	NOT CONTOURED DUE TO LACK OF CONTROL

NOTES:

1. THIS SURVEY SHOWS CONDITIONS AS OF OCTOBER 1999 BASED ON AERIAL MAPPING PREPARED BY GEOD CORP. AND GROUND SURVEY BY GARDEN STATE ENGINEERING SURVEYING AND PLANNING.
2. VERTICAL DATUM IS REFERENCED TO NGVD 1929.
3. HORIZONTAL DATUM IS REFERENCED TO NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 1927.
4. LOCATION OF HISTORIC LODI BROOK SHOWN ON THIS MAP IS APPROXIMATE ONLY. IT HAS BEEN TRANSFERRED FROM HISTORIC RECORDS THAT UTILIZED BASE MAPPING THAT DOES NOT CORRELATE WELL WITH BASE MAPPING SHOWN ON THIS SHEET.

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FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE
Reviewed by:
Date:
Drawn by: KPT
Date: 03/04/2002
File Name: OVRBRDN

GROUNDWATER CONTOUR MAP
OVERBURDEN - 02/07/01

GROUNDWATER REMEDIAL INVESTIGATION
PHASE I - INTERIM REPORT
FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND
ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-96-R-0034
Job Number 08575
WAD# 3
WBS# 10
Figure Number: # 4

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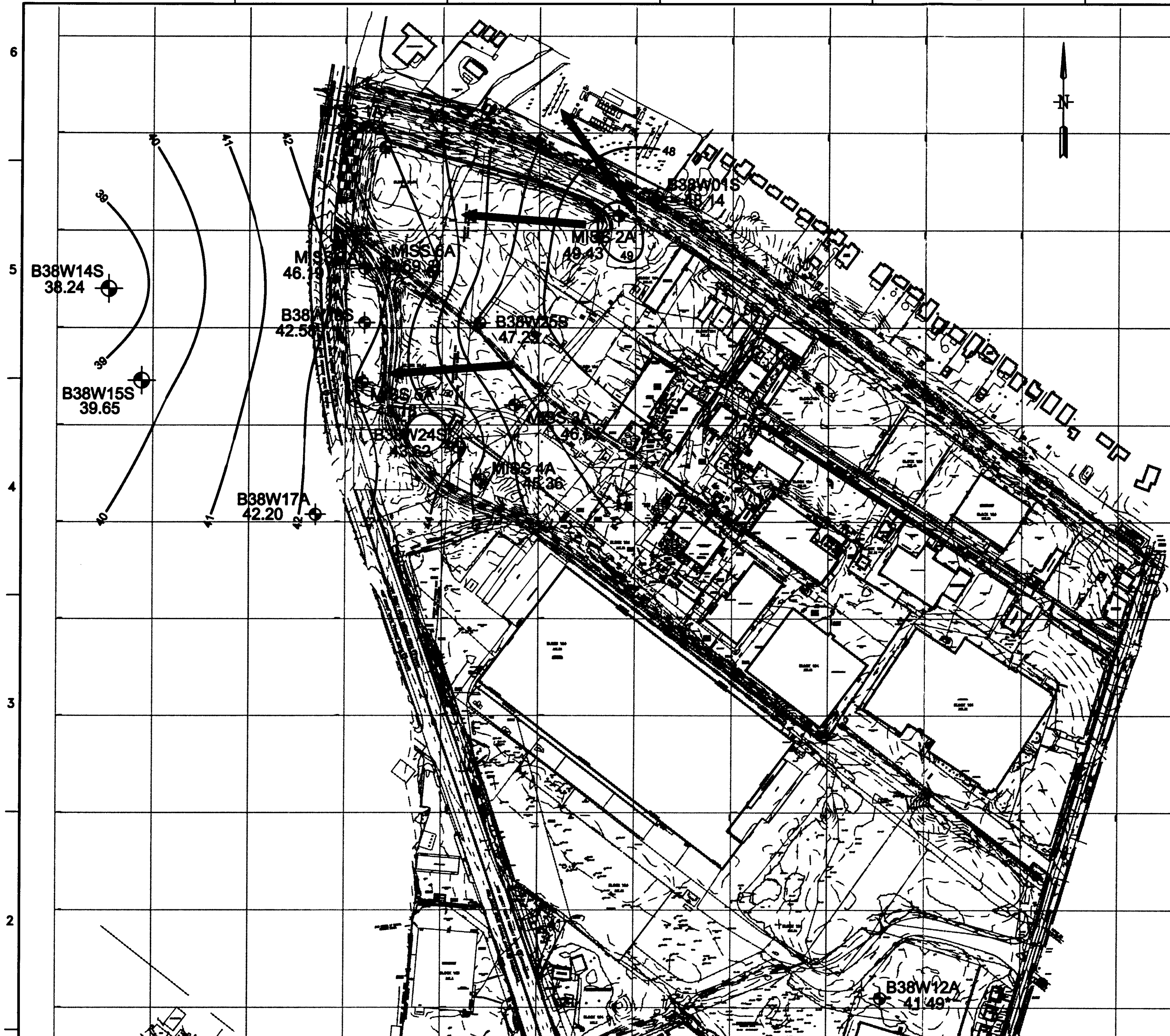

SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS (OVERBURDEN)

NOVEMBER 21, 2001

Well ID	G.W. Elev.
	FT MSL
B38W01S	48.14
B38W12A	41.49 *
B38W14S	38.24
B38W15S	39.65
B38W17A	42.20
B38W19S	42.58
B38W24S	43.62
B38W25S	47.23
MISS 1AA	43.92
MISS 2A	49.43
MISS 3A	46.61
MISS 4A	45.36
MISS 5A	43.18
MISS 6A	43.69
MISS 7A	46.19

LEGEND

- 50 — GROUNDWATER CONTOUR
- OVERBURDEN WELL
- GROUNDWATER FLOW DIRECTION
- NG — NOT GAUGED
- * — NOT CONTOURED DUE TO LACK OF CONTROL

NOTES:

1. THIS SURVEY SHOWS CONDITIONS AS OF OCTOBER 1999 BASED ON AERIAL MAPPING PREPARED BY GEOD CORP. AND GROUND SURVEY BY GARDEN STATE ENGINEERING SURVEYING AND PLANNING.
2. VERTICAL DATUM IS REFERENCED TO NGVD 1929.
3. HORIZONTAL DATUM IS REFERENCED TO NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 1927.
4. LOCATION OF HISTORIC LODI BROOK SHOWN ON THIS MAP IS APPROXIMATE ONLY. IT HAS BEEN TRANSFERRED FROM HISTORIC RECORDS THAT UTILIZED BASE MAPPING THAT DOES NOT CORRELATE WELL WITH BASE MAPPING SHOWN ON THIS SHEET.

0 300 600 FEET
1" = 300'-0"

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FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE
Reviewed by:
Date:
Drawn by: KPT
Date: 03/04/2002
File Name: OVRBRDN

GROUNDWATER CONTOUR MAP
OVERBURDEN - 11/21/01

GROUNDWATER REMEDIAL INVESTIGATION
PHASE I - INTERIM REPORT
FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND
ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-96-R-0034
Job Number 08575
WAD# 3
WBS# 10
Figure Number: # 5

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0 300 600 FEET
1" = 300'-0"

SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS (DEEP AND SHALLOW BEDROCK)
FEBRUARUY 7, 2001

Well ID	G.W. Elev. FT MSL
B38W02D	63.29
B38W03B	49.55
B38W04B	56.39
B38W05B	NG
B38W06B	49.10
B38W07B	47.33
B38W12B	44.89 *
B38W14D	39.39
B38W15D	43.15
B38W17B	45.41
B38W18D	54.71
B38W19D	45.08
B38W24D	47.29
B38W25D	51.42
MISS 1B	46.73
MISS 2B	51.05
MISS 3B	49.04
MISS 4B	46.75
MISS 5B	45.30
MISS 7B	45.87

LEGEND

- 50 — GROUNDWATER CONTOUR
- BEDROCK WELL (SCREENED)
- OPEN HOLE WELL
- GROUNDWATER FLOW DIRECTION
- NG — NOT GAUGED
- * — NOT CONTOURED DUE TO LACK OF CONTROL

NOTES:

1. THIS SURVEY SHOWS CONDITIONS AS OF OCTOBER 1999 BASED ON AERIAL MAPPING PREPARED BY GEOD CORP. AND GROUND SURVEY BY GARDEN STATE ENGINEERING SURVEYING AND PLANNING.
2. VERTICAL DATUM IS REFERENCED TO NGVD 1929.
3. HORIZONTAL DATUM IS REFERENCED TO NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 1927.
4. LOCATION OF HISTORIC LODI BROOK SHOWN ON THIS MAP IS APPROXIMATE ONLY. IT HAS BEEN TRANSFERRED FROM HISTORIC RECORDS THAT UTILIZED BASE MAPPING THAT DOES NOT CORRELATE WELL WITH BASE MAPPING SHOWN ON THIS SHEET.

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NEW YORK DISTRICT

US ARMY CORPS OF ENGINEERS
FUSRAP
FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE
Reviewed by: Date:
Drawn by: KPT Date: 03/04/2002
File Name: COMPOSIT

GROUNDWATER CONTOUR MAP
SHALLOW & DEEP BEDROCK-02/07/01

GROUNDWATER REMEDIAL INVESTIGATION PHASE I - INTERIM REPORT
FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-98-R-0034
Job Number 08575
WAD# 3
WBS# 10
Figure Number: # 6

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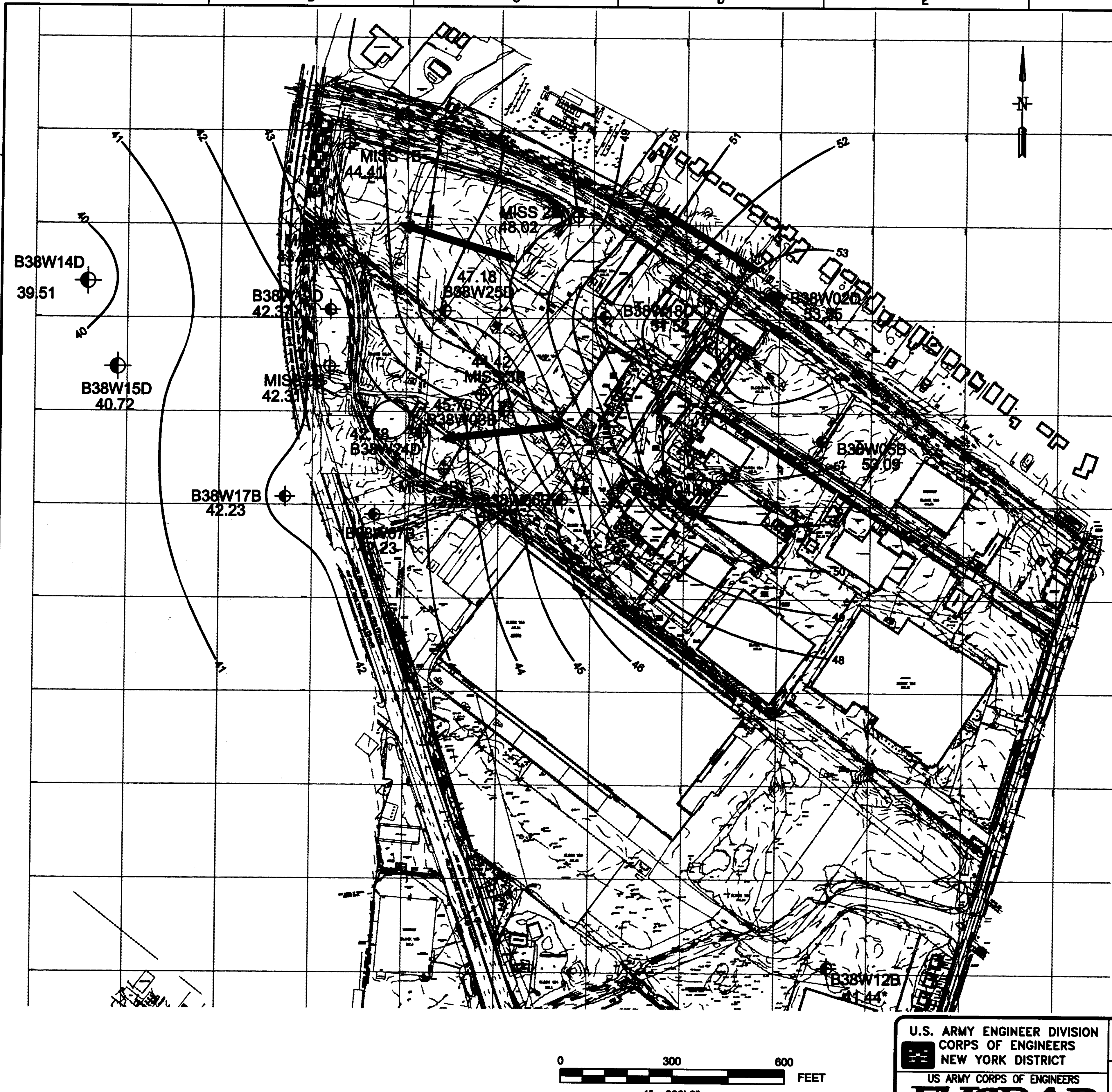

SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS (DEEP AND SHALLOW BEDROCK)

NOVEMBER 21, 2001

Well ID	G.W. Elev. FT MSL
B38W02D	53.55
B38W03B	45.70
B38W04B	52.12
B38W05B	53.09
B38W07B	42.23
B38W12B	41.44 *
B38W14D	39.51
B38W15D	40.72
B38W17B	42.23
B38W18D	51.52
B38W19D	42.37
B38W24D	42.78
B38W25D	47.18
MISS 1B	44.41
MISS 2B	48.02
MISS 3B	44.42
MISS 4B	43.46
MISS 5B	42.31
MISS 7B	43.25
B38W06B	46.26

LEGEND

- 50 — GROUNDWATER CONTOUR
- BEDROCK WELL
- OPEN HOLE WELL
- GROUNDWATER FLOW DIRECTION
- NG NOT GAUGED
- * NOT CONTOURED DUE TO LACK OF CONTROL

NOTES:

1. THIS SURVEY SHOWS CONDITIONS AS OF OCTOBER 1999 BASED ON AERIAL MAPPING PREPARED BY GEOD CORP. AND GROUND SURVEY BY GARDEN STATE ENGINEERING SURVEYING AND PLANNING.
2. VERTICAL DATUM IS REFERENCED TO NGVD 1929.
3. HORIZONTAL DATUM IS REFERENCED TO NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 1927.
4. LOCATION OF HISTORIC LODI BROOK SHOWN ON THIS MAP IS APPROXIMATE ONLY. IT HAS BEEN TRANSFERRED FROM HISTORIC RECORDS THAT UTILIZED BASE MAPPING THAT DOES NOT CORRELATE WELL WITH BASE MAPPING SHOWN ON THIS SHEET.

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FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

Prepared by: MALCOLM PIRNIE
Reviewed by: Date:
Drawn by: KPT Date: 3/4/2002
File Name: COMPOSIT

GROUNDWATER CONTOUR MAP
SHALLOW & DEEP BEDROCK-11/21/01

GROUNDWATER REMEDIAL INVESTIGATION
PHASE I - INTERIM REPORT
FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, LODI, AND
ROCHELLE PARK, NEW JERSEY

Contract Number: DACW41-98-R-0034
Job Number 08575
WAD# 3
WBS# 10
Figure Number: # 7

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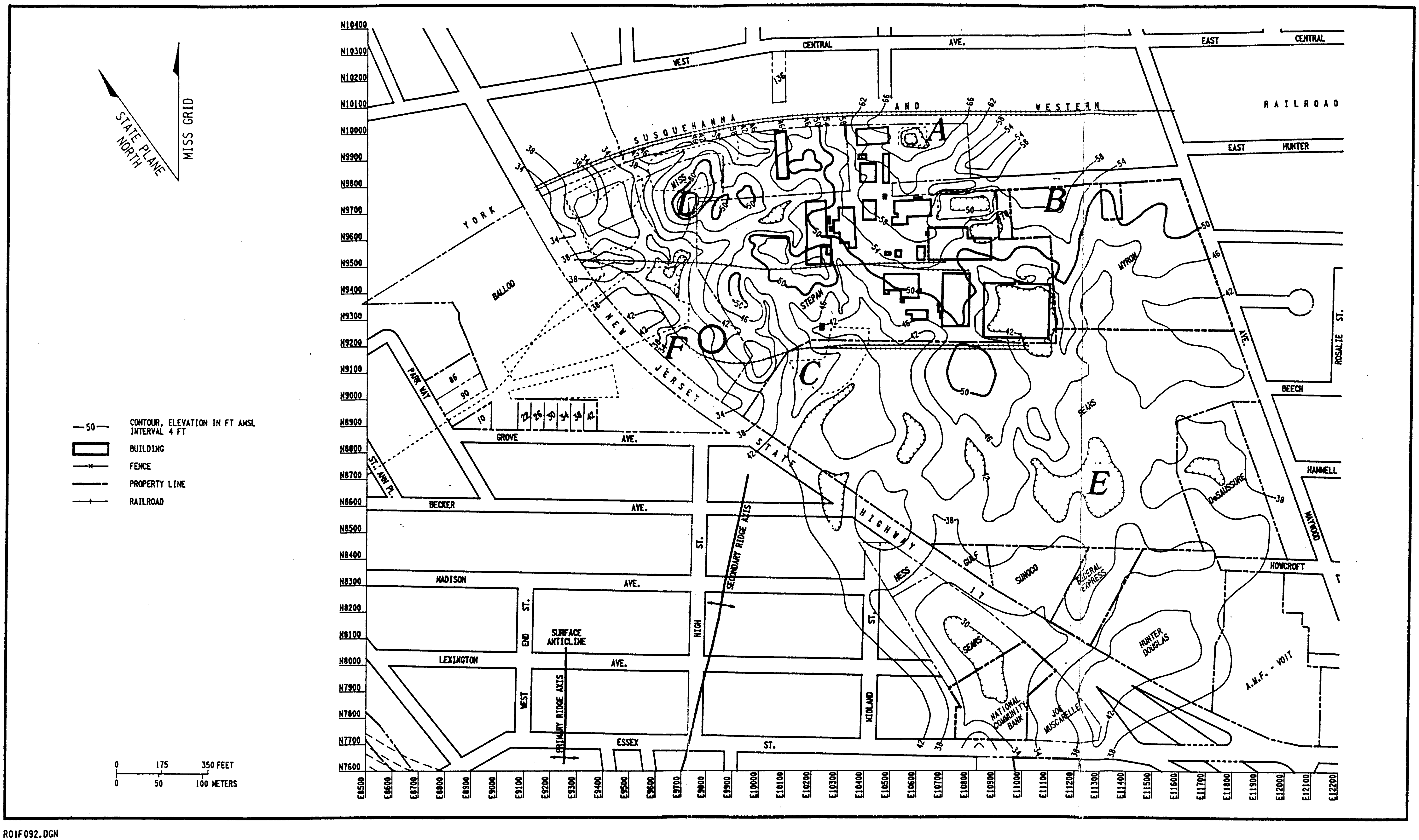

Figure 8

Contour Map of the Top of Bedrock in the Maywood Area

Excerpted from Remedial Investigation Report (DOE 1992)

APPENDICES

APPENDIX A

TABLE A-1
Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD002	04/10/92	Radium-226	0.55		J	0.00
SWSD002	10/26/92	Radium-226	0.25			0.18
SWSD002	04/21/93	Radium-226	0.44			0.27
SWSD002	10/07/93	Radium-226	0.57		J	0.28
SWSD002	05/30/94	Radium-226	0.47			0.23
SWSD002	05/08/95	Radium-226	0.48			0.09
SWSD002	11/13/95	Radium-226	0.30			0.09
SWSD002	05/08/96	Radium-226	0.41			0.13
SWSD002	10/15/96	Radium-226	0.57			0.11
SWSD002	05/05/97	Radium-226	0.67			0.13
SWSD002	06/02/98	Radium-226	0.31			1.00
SWSD002	11/03/98	Radium-226	0.52			1.00
SWSD002	05/21/99	Radium-226	0.36			0.18
SWSD002	07/24/00	Radium-226	0.58		J	0.12
SWSD002	07/16/01	Radium-226	0.66		J	0.18
SWSD003	04/10/92	Radium-226	0.52		J	0.00
SWSD003	10/26/92	Radium-226	0.45			0.16
SWSD003	04/21/93	Radium-226	0.35			0.33
SWSD003	10/07/93	Radium-226	0.39		J	0.30
SWSD003	05/30/94	Radium-226	0.46			0.29
SWSD003	05/08/95	Radium-226	0.55			0.08
SWSD003	11/13/95	Radium-226	0.29			0.05
SWSD003	05/08/96	Radium-226	0.52			0.12
SWSD003	10/15/96	Radium-226	0.70			0.10
SWSD003	05/05/97	Radium-226	0.49			0.10
SWSD003	06/02/98	Radium-226	0.28			1.00
SWSD003	11/03/98	Radium-226	0.28			1.00
SWSD003	05/21/99	Radium-226	0.3			0.19
SWSD003	07/16/01	Radium-226	0.24		J	0.05
SWSD005	04/10/92	Radium-226	0.51		J	0.00
SWSD005	10/26/92	Radium-226	0.44			0.16
SWSD005	04/21/93	Radium-226	0.35		UJ	0.35
SWSD005	10/07/93	Radium-226	0.00		UJ	0.44
SWSD005	05/30/94	Radium-226	0.76			0.26
SWSD005	05/30/94	Radium-226	0.87		J	0.25
SWSD005	08/31/94	Radium-226	1.30		U	0.11
SWSD005	05/08/95	Radium-226	1.50			0.09
SWSD005	05/08/95	Radium-226	1.70			0.12
SWSD005	11/13/95	Radium-226	1.28			0.16
SWSD005	11/13/95	Radium-226	2.79			0.09
SWSD005	05/08/96	Radium-226	0.50			0.09
SWSD005	10/15/96	Radium-226	0.97			0.07
SWSD005	05/05/97	Radium-226	0.90			0.15

TABLE A-1
Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD005	06/02/98	Radium-226	1.26			1.00
SWSD005	11/03/98	Radium-226	1.01			1.00
SWSD005	05/21/99	Radium-226	1.44			0.16
SWSD005	07/16/01	Radium-226	0.87		J	0.15
SWSD006	05/30/94	Radium-226	3.10			0.99
SWSD006	08/31/94	Radium-226	2.90			0.14
SWSD006	05/08/95	Radium-226	1.30			0.12
SWSD006	11/13/95	Radium-226	4.45			0.15
SWSD006	05/08/96	Radium-226	0.99			0.09
SWSD006	10/15/96	Radium-226	4.50			0.08
SWSD006	05/05/97	Radium-226	3.50			0.15
SWSD006	06/02/98	Radium-226	4.65			1.00
SWSD006	11/03/98	Radium-226	3.86			1.00
SWSD006	05/21/99	Radium-226	8.04			0.28
SWSD006	07/20/00	Radium-226	0.64		J	0.17
SWSD006	07/16/01	Radium-226	1.41		J	0.18
SWSD007	08/31/94	Radium-226	0.99		U	0.11
SWSD007	05/08/95	Radium-226	5.40			0.12
SWSD007	11/13/95	Radium-226	3.32			0.12
SWSD007	05/08/96	Radium-226	3.70			0.05
SWSD007	05/08/96	Radium-226	3.29			0.18
SWSD007	10/15/96	Radium-226	5.05			0.14
SWSD007	10/15/96	Radium-226	4.04			0.11
SWSD007	05/05/97	Radium-226	4.25			0.18
SWSD007	05/05/97	Radium-226	5.23			0.20
SWSD007	06/02/98	Radium-226	6.97			1.00
SWSD007	11/03/98	Radium-226	2.22			1.00
SWSD007	05/21/99	Radium-226	1.07			0.12
SWSD007	07/20/00	Radium-226	-0.07		R	0.18
SWSD007	07/16/01	Radium-226	0.89		J	0.24
SWSD002	04/10/92	Radium-228	0.98		J	0.00
SWSD002	10/26/92	Radium-228	0.29		J	0.32
SWSD002	04/21/93	Radium-228	0.44		UJ	0.44
SWSD002	10/07/93	Radium-228	0.00		UJ	0.71
SWSD002	05/30/94	Radium-228	0.81		J	0.41
SWSD002	11/13/95	Radium-228	1.60			0.42
SWSD002	05/08/96	Radium-228	0.60			0.16
SWSD002	10/15/96	Radium-228	0.72			0.13
SWSD002	05/05/97	Radium-228	0.56			0.17
SWSD002	06/02/98	Radium-228	0.55			1.00
SWSD002	11/03/98	Radium-228	0.54			1.00
SWSD002	05/21/99	Radium-228	0.74			0.17
SWSD002	07/24/00	Radium-228	0.31		J	0.66

TABLE A-1
Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD002	07/16/01	Radium-228	0.85		J	0.70
SWSD003	04/10/92	Radium-228	0.74		J	0.00
SWSD003	10/26/92	Radium-228	0.65		J	0.29
SWSD003	04/21/93	Radium-228	0.77			0.31
SWSD003	10/07/93	Radium-228	0.00		UJ	0.61
SWSD003	11/13/95	Radium-228	0.90			0.50
SWSD003	05/08/96	Radium-228	0.40		U	0.11
SWSD003	10/15/96	Radium-228	0.43			0.14
SWSD003	05/05/97	Radium-228	0.45			0.14
SWSD003	06/02/98	Radium-228	0.4			1.00
SWSD003	11/03/98	Radium-228	0.65			1.00
SWSD003	05/21/99	Radium-228	0.35			0.19
SWSD003	07/16/01	Radium-228	0.21		UJ	0.32
SWSD005	04/10/92	Radium-228	0.73		J	0.00
SWSD005	10/26/92	Radium-228	0.47		J	0.29
SWSD005	04/21/93	Radium-228	0.69			0.24
SWSD005	10/07/93	Radium-228	0.00		UJ	0.76
SWSD005	05/30/94	Radium-228	3.00		J	0.44
SWSD005	05/30/94	Radium-228	3.60		J	0.46
SWSD005	11/13/95	Radium-228	1.60			0.58
SWSD005	11/13/95	Radium-228	13.60			0.69
SWSD005	05/08/96	Radium-228	0.90			0.13
SWSD005	10/15/96	Radium-228	3.34			0.11
SWSD005	05/05/97	Radium-228	2.84			0.16
SWSD005	06/02/98	Radium-228	2.32			1.00
SWSD005	11/03/98	Radium-228	4.41			1.00
SWSD005	05/21/99	Radium-228	3.13			0.19
SWSD005	07/20/00	Radium-228	2.39		J	0.59
SWSD005	07/16/01	Radium-228	3.45			0.50
SWSD006	05/30/94	Radium-228	19.60		J	1.70
SWSD006	11/13/95	Radium-228	9.60			0.53
SWSD006	05/08/96	Radium-228	5.15			0.16
SWSD006	10/15/96	Radium-228	20.33			0.30
SWSD006	05/05/97	Radium-228	17.33			0.13
SWSD006	06/02/98	Radium-228	16.22		J	1.00
SWSD006	11/03/98	Radium-228	17.74			1.00
SWSD006	05/21/99	Radium-228	7.67			0.26
SWSD006	07/20/00	Radium-228	0.39		J	0.20
SWSD006	07/16/01	Radium-228	4.09			0.74
SWSD007	11/13/95	Radium-228	11.70			0.56
SWSD007	05/08/96	Radium-228	14.22			0.12
SWSD007	05/08/96	Radium-228	8.16			0.10
SWSD007	10/15/96	Radium-228	22.41			0.29

TABLE A-1
Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD007	10/15/96	Radium-228	16.79			0.25
SWSD007	05/05/97	Radium-228	8.75			0.17
SWSD007	05/05/97	Radium-228	8.78			0.18
SWSD007	06/02/98	Radium-228	16.46		J	1.00
SWSD007	11/03/98	Radium-228	8.49			1.00
SWSD007	05/21/99	Radium-228	1.79			0.17
SWSD007	07/20/00	Radium-228	1.42		J	0.55
SWSD007	07/16/01	Radium-228	2.91		J	0.83
SWSD002	05/08/96	Thorium-230	1.11		U	0.09
SWSD002	10/15/96	Thorium-230	0.67			0.05
SWSD002	05/05/97	Thorium-230	0.80		U	0.12
SWSD002	06/02/98	Thorium-230	0.52		U	1.00
SWSD002	11/03/98	Thorium-230	0.91			1.00
SWSD002	05/21/99	Thorium-230	0.55		U	0.17
SWSD002	07/24/00	Thorium-230	0.90		J	0.05
SWSD002	07/16/01	Thorium-230	0.47			0.13
SWSD003	05/08/96	Thorium-230	1.33		U	0.15
SWSD003	10/15/96	Thorium-230	0.47			0.06
SWSD003	05/05/97	Thorium-230	0.66		U	0.09
SWSD003	06/02/98	Thorium-230	0.52		U	1.00
SWSD003	11/03/98	Thorium-230	0.64			1.00
SWSD003	05/21/99	Thorium-230	0.96			0.15
SWSD003	07/16/01	Thorium-230	0.4			0.04
SWSD005	05/08/96	Thorium-230	0.97		U	0.08
SWSD005	10/15/96	Thorium-230	1.33			0.06
SWSD005	05/05/97	Thorium-230	2.08			0.16
SWSD005	06/02/98	Thorium-230	0.7		U	1.00
SWSD005	11/03/98	Thorium-230	1.42			1.00
SWSD005	05/21/99	Thorium-230	1.81			0.10
SWSD005	07/20/00	Thorium-230	0.64		J	0.12
SWSD005	07/16/01	Thorium-230	2.00			0.18
SWSD006	05/08/96	Thorium-230	1.48		U	0.12
SWSD006	10/15/96	Thorium-230	4.72			0.11
SWSD006	05/05/97	Thorium-230	3.54			0.05
SWSD006	06/02/98	Thorium-230	3.28		J	1.00
SWSD006	11/03/98	Thorium-230	4.29			1.00
SWSD006	05/21/99	Thorium-230	1.62			0.22
SWSD006	07/20/00	Thorium-230	0.27		J	0.11
SWSD006	07/16/01	Thorium-230	1.49			0.18
SWSD007	05/08/96	Thorium-230	3.19			0.09
SWSD007	05/08/96	Thorium-230	1.81			0.05
SWSD007	10/15/96	Thorium-230	4.52			0.18
SWSD007	10/15/96	Thorium-230	3.31			0.14

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Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD007	05/05/97	Thorium-230	2.64			0.16
SWSD007	05/05/97	Thorium-230	2.09			0.09
SWSD007	06/02/98	Thorium-230	3.37		J	1.00
SWSD007	11/03/98	Thorium-230	2.42			1.00
SWSD007	05/21/99	Thorium-230	1.18			0.13
SWSD007	07/20/00	Thorium-230	0.51		J	0.09
SWSD007	07/16/01	Thorium-230	6.64			0.10
SWSD002	04/10/92	Thorium-232	0.80			0.00
SWSD002	10/26/92	Thorium-232	0.42			0.25
SWSD002	04/21/93	Thorium-232	0.70			0.20
SWSD002	10/07/93	Thorium-232	0.59			0.40
SWSD002	05/30/94	Thorium-232	0.71			0.36
SWSD002	05/08/95	Thorium-232	0.50			0.08
SWSD002	11/13/95	Thorium-232	0.39		U	0.05
SWSD002	05/08/96	Thorium-232	0.44			0.15
SWSD002	10/15/96	Thorium-232	0.62			0.08
SWSD002	05/05/97	Thorium-232	0.33			0.06
SWSD002	06/02/98	Thorium-232	0.33			1.00
SWSD002	11/03/98	Thorium-232	0.5		U	1.00
SWSD002	05/21/99	Thorium-232	0.39		U	0.12
SWSD002	07/24/00	Thorium-232	0.35		J	0.15
SWSD002	07/16/01	Thorium-232	0.35		J	0.10
SWSD003	04/10/92	Thorium-232	0.85		J	0.00
SWSD003	10/26/92	Thorium-232	0.65			0.23
SWSD003	04/21/93	Thorium-232	0.66			0.24
SWSD003	10/07/93	Thorium-232	0.00		UJ	0.49
SWSD003	05/30/94	Thorium-232	0.65		UJ	0.65
SWSD003	05/08/95	Thorium-232	0.56			0.10
SWSD003	11/13/95	Thorium-232	0.32		U	0.04
SWSD003	05/08/96	Thorium-232	0.57			0.11
SWSD003	10/15/96	Thorium-232	0.30			0.06
SWSD003	05/05/97	Thorium-232	0.37			0.10
SWSD003	06/02/98	Thorium-232	0.39			1.00
SWSD003	11/03/98	Thorium-232	0.57		U	1.00
SWSD003	05/21/99	Thorium-232	0.48		U	0.11
SWSD003	07/16/01	Thorium-232	0.34		J	0.04
SWSD005	04/10/92	Thorium-232	0.76		J	0.00
SWSD005	10/26/92	Thorium-232	0.55			0.23
SWSD005	04/21/93	Thorium-232	0.65			0.19
SWSD005	10/07/93	Thorium-232	0.00		UJ	0.60
SWSD005	05/30/94	Thorium-232	3.20		J	0.38
SWSD005	05/30/94	Thorium-232	3.60			0.39
SWSD005	08/31/94	Thorium-232	1.00			0.05

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Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD005	05/08/95	Thorium-232	2.40			0.08
SWSD005	05/08/95	Thorium-232	2.20			0.05
SWSD005	11/13/95	Thorium-232	2.53			0.06
SWSD005	11/13/95	Thorium-232	12.62			0.10
SWSD005	05/08/96	Thorium-232	0.92			0.10
SWSD005	10/15/96	Thorium-232	3.18			0.11
SWSD005	05/05/97	Thorium-232	2.94			0.13
SWSD005	06/02/98	Thorium-232	2.33			1.00
SWSD005	11/03/98	Thorium-232	4			1.00
SWSD005	05/21/99	Thorium-232	3.56			0.15
SWSD005	07/20/00	Thorium-232	1.73			0.12
SWSD005	07/16/01	Thorium-232	6.91		J	0.13
SWSD006	05/30/94	Thorium-232	20.90			1.50
SWSD006	08/31/94	Thorium-232	16.80			0.04
SWSD006	05/08/95	Thorium-232	2.50			0.04
SWSD006	11/13/95	Thorium-232	11.47			0.04
SWSD006	05/08/96	Thorium-232	4.93			0.13
SWSD006	10/15/96	Thorium-232	21.66			0.11
SWSD006	05/05/97	Thorium-232	17.34			0.09
SWSD006	06/02/98	Thorium-232	15.78		J	1.00
SWSD006	11/03/98	Thorium-232	17.97			1.00
SWSD006	05/21/99	Thorium-232	8.13			0.15
SWSD006	07/20/00	Thorium-232	0.33		J	0.08
SWSD006	07/16/01	Thorium-232	4.19		J	0.14
SWSD007	08/31/94	Thorium-232	1.10			0.10
SWSD007	05/08/95	Thorium-232	14.60			0.07
SWSD007	11/13/95	Thorium-232	9.49			0.04
SWSD007	05/08/96	Thorium-232	14.75			0.05
SWSD007	05/08/96	Thorium-232	7.63			0.08
SWSD007	10/15/96	Thorium-232	18.47			0.14
SWSD007	10/15/96	Thorium-232	22.50			0.21
SWSD007	05/05/97	Thorium-232	7.39			0.07
SWSD007	05/05/97	Thorium-232	8.54			0.07
SWSD007	06/02/98	Thorium-232	17.08		J	1.00
SWSD007	11/03/98	Thorium-232	8.76			1.00
SWSD007	05/21/99	Thorium-232	1.9			0.11
SWSD007	07/20/00	Thorium-232	0.33		J	0.08
SWSD007	07/16/01	Thorium-232	3.06			0.16
SWSD002	04/10/92	Total Uranium	2.90	4.29		0.00
SWSD002	10/26/92	Total Uranium	1.42	2.10		0.10
SWSD002	04/21/93	Total Uranium	1.62	2.40	J	0.10
SWSD002	10/07/93	Total Uranium	0.88	1.30	U	0.10
SWSD002	05/30/94	Total Uranium	0.88	1.30		0.10

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Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	(ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD002	05/08/95	Total Uranium	0.74	1.10	U	0.10
SWSD002	11/13/95	Total Uranium	1.10	1.62	U	0.10
SWSD002	05/08/96	Total Uranium	1.16	1.72		0.10
SWSD002	10/15/96	Total Uranium	1.20	1.77	U	0.10
SWSD002	05/05/97	Total Uranium	0.93	1.38		0.10
SWSD002	06/02/98	Total Uranium	1.23	1.91		1.00
SWSD002	11/03/98	Total Uranium	2.01	3.12	U	1.00
SWSD002	05/21/99	Total Uranium	1.27	1.87		0.10
SWSD002	00/24/00	Total Uranium	0.84	1.24		0.09
SWSD002	07/16/01	Total Uranium	1.61			0.42
SWSD003	04/10/92	Total Uranium	2.72	4.02		0.00
SWSD003	10/26/92	Total Uranium	2.10	3.10		0.10
SWSD003	04/21/93	Total Uranium	2.57	3.80	J	0.10
SWSD003	10/07/93	Total Uranium	0.81	1.20	U	0.10
SWSD003	05/30/94	Total Uranium	0.68	1.00	U	0.10
SWSD003	05/08/95	Total Uranium	1.29	1.90	U	0.10
SWSD003	11/13/95	Total Uranium	1.27	1.88	U	0.10
SWSD003	05/08/96	Total Uranium	1.02	1.50	U	0.10
SWSD003	10/15/96	Total Uranium	1.16	1.72	U	0.10
SWSD003	05/05/97	Total Uranium	1.06	1.56		0.10
SWSD003	06/02/98	Total Uranium	1.11	1.72		1.00
SWSD003	11/03/98	Total Uranium	2.13	3.3	U	1.00
SWSD003	05/21/99	Total Uranium	1.19	1.76		0.10
SWSD003	07/16/01	Total Uranium	0.77			0.22
SWSD005	04/10/92	Total Uranium	2.94	4.34		0.00
SWSD005	10/26/92	Total Uranium	2.30	3.40		0.10
SWSD005	04/21/93	Total Uranium	2.71	4.00	J	0.10
SWSD005	10/07/93	Total Uranium	0.74	1.10	U	0.10
SWSD005	05/30/94	Total Uranium	1.42	2.10		0.10
SWSD005	05/30/94	Total Uranium	1.56	2.30		0.10
SWSD005	08/31/94	Total Uranium	1.49	2.20	U	0.10
SWSD005	05/08/95	Total Uranium	1.42	2.10	U	0.10
SWSD005	05/08/95	Total Uranium	1.22	1.80	U	0.10
SWSD005	11/13/95	Total Uranium	1.66	2.45	U	0.10
SWSD005	11/13/95	Total Uranium	3.22	4.76		0.10
SWSD005	05/08/96	Total Uranium	1.21	1.79		0.10
SWSD005	10/15/96	Total Uranium	1.79	2.64		0.10
SWSD005	05/05/97	Total Uranium	1.20	1.77		0.10
SWSD005	06/02/98	Total Uranium	1.24	1.92		1.00
SWSD005	11/03/98	Total Uranium	3.97	6.17		1.00
SWSD005	05/21/99	Total Uranium	1.18	1.75		0.10
SWSD005	07/20/00	Total Uranium	1.79	2.65		0.09
SWSD005	07/16/01	Total Uranium	2.51			0.57

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Historical Results for Radioactive Parameters in Sediment at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (pCi/g)	RESULT (ug/g)	QUALIFIER	DETECTION LIMIT(pCi/g)
SWSD006	05/30/94	Total Uranium	7.04	10.40		0.10
SWSD006	08/31/94	Total Uranium	9.27	13.70		0.10
SWSD006	05/08/95	Total Uranium	1.35	2.00	U	0.10
SWSD006	11/13/95	Total Uranium	7.18	10.61		0.10
SWSD006	05/08/96	Total Uranium	2.86	4.22		0.10
SWSD006	10/15/96	Total Uranium	8.86	13.09		0.10
SWSD006	05/05/97	Total Uranium	7.39	10.91		0.10
SWSD006	06/02/98	Total Uranium	8.06	12.51		1.00
SWSD006	11/03/98	Total Uranium	10.05	15.61		1.00
SWSD006	05/21/99	Total Uranium	12.41	18.33		0.10
SWSD006	07/20/00	Total Uranium	0.7	1.03		0.09
SWSD006	07/16/01	Total Uranium	4.18			0.44
SWSD007	08/31/94	Total Uranium	2.03	3.00	U	0.10
SWSD007	05/08/95	Total Uranium	6.16	9.10		0.10
SWSD007	11/13/95	Total Uranium	6.11	9.03		0.10
SWSD007	05/08/96	Total Uranium	5.84	8.62		0.10
SWSD007	05/08/96	Total Uranium	3.97	5.86		0.10
SWSD007	10/15/96	Total Uranium	8.88	13.12		0.10
SWSD007	10/15/96	Total Uranium	8.77	12.96		0.10
SWSD007	05/05/97	Total Uranium	5.29	7.82		0.10
SWSD007	05/05/97	Total Uranium	5.04	7.44		0.10
SWSD007	06/02/98	Total Uranium	5.13	8.02		1.00
SWSD007	11/03/98	Total Uranium	5.15	7.99		1.00
SWSD007	05/21/99	Total Uranium	2.00	3.00		0.10
SWSD007	07/20/00	Total Uranium	1.57	2.32		0.10
SWSD007	07/16/01	Total Uranium	7.50			0.45

TABLE A-2
Historical Results for Radioactive Parameters in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION_II	DATE	ANALYTE NAME	RESULT	REV Q	ERROR	SQL	UNITS
B38W19D	23-Jul-93	RADIUM-226	0.04	UJ	0.08	0.21	PCI/L
B38W19D	16-May-94	RADIUM-226	1.3	U	0.37	0.15	PCI/L
B38W19D	10-May-95	RADIUM-226	0.09	UJ	0.1	0.16	PCI/L
B38W19D	16-May-96	RADIUM-226	0.19		0.12	0.14	PCI/L
B38W19D	16-May-97	RADIUM-226	0.29		0.16	0.16	PCI/L
B38W19D	17-Jun-98	RADIUM-226	0.15	UJ	0.2	0.41	PCI/L
B38W19D	27-May-99	RADIUM-226	0.33	UJ	0.26	0.38	PCI/L
B38W19D	12-Jul-00	RADIUM-226	0.16	UJ	0.13	0.2	PCI/L
B38W19D	13-Jun-01	RADIUM-226	0.28	J	0.17	0.21	PCI/L
B38W19S	27-May-94	RADIUM-226	0.78		0.28	0.11	PCI/L
B38W19S	17-May-95	RADIUM-226	0.11		0.09	0.05	PCI/L
B38W19S	10-May-96	RADIUM-226	0.11		0.09	0.09	PCI/L
B38W19S	29-Jun-98	RADIUM-226	0.32	UJ	0.24	0.34	PCI/L
B38W19S	14-May-99	RADIUM-226	0.35	UJ	0.3	0.4	PCI/L
B38W19S	13-Jun-01	RADIUM-226	0.51	J	0.23	0.24	PCI/L
B38W25S	3-Aug-93	RADIUM-226	0.34		0.22	0.09	PCI/L
B38W25S	24-May-94	RADIUM-226	0.37		0.19	0.13	PCI/L
B38W25S	15-May-95	RADIUM-226	0.16		0.12	0.09	PCI/L
B38W25S	15-May-96	RADIUM-226	0.26	UJ	0	0.26	PCI/L
B38W25S	5-Jun-97	RADIUM-226	0.13	UJ	0.1	0.14	PCI/L
B38W25S	1-Jul-98	RADIUM-226	0.13	UJ	0.17	0.34	PCI/L
B38W25S	17-May-99	RADIUM-226	0.08	UJ	0.13	0.27	PCI/L
B38W25S	10-Jul-01	RADIUM-226	0.32	J	0.18	0.21	PCI/L
MISS02B	20-Jul-93	RADIUM-226	0.05	UJ	0.1	0.29	PCI/L
MISS02B	13-May-94	RADIUM-226	2	U	0.46	0.14	PCI/L
MISS02B	9-May-95	RADIUM-226	0.1		0.09	0.06	PCI/L
MISS02B	14-May-96	RADIUM-226	0.11	UJ	0.11	0.2	PCI/L
MISS02B	19-May-97	RADIUM-226	0.28		0.16	0.12	PCI/L
MISS02B	10-Jun-98	RADIUM-226	0.35		0.24	0.3	PCI/L
MISS02B	18-May-99	RADIUM-226	0.46		0.31	0.42	PCI/L
MISS02B	23-Jun-00	RADIUM-226	0.25	J	0.33	0.55	PCI/L
MISS02B	5-Jul-01	RADIUM-226	0.23	J	0.17	0.28	PCI/L
MISS05A	27-May-94	RADIUM-226	1.33		0.54	0.14	PCI/L
MISS05A	12-May-95	RADIUM-226	0.2	UJ	0.18	0.22	PCI/L
MISS05A	10-May-96	RADIUM-226	0.04	UJ	0.06	0.16	PCI/L
MISS05A	2-Jun-97	RADIUM-226	0.52		0.27	0.27	PCI/L
MISS05A	29-Jun-98	RADIUM-226	0.23	UJ	0.24	0.42	PCI/L
MISS05A	14-May-99	RADIUM-226	0.68		0.48	0.64	PCI/L
MISS05A	19-Jun-01	RADIUM-226	0.6	J	0.28	0.34	PCI/L
B38W19D	16-May-96	RADIUM-228	0.04	UJ	0.08	0.24	PCI/L
B38W19D	16-May-97	RADIUM-228	0.08	UJ	0.12	0.22	PCI/L
B38W19D	17-Jun-98	RADIUM-228	0.04	UJ	0.18	0.46	PCI/L
B38W19D	27-May-99	RADIUM-228	0.13	UJ	0.39	0.91	PCI/L
B38W19D	12-Jul-00	RADIUM-228	0.43	U	0.4	0.66	PCI/L
B38W19D	13-Jun-01	RADIUM-228	0.7	UJ	0.69	0.74	PCI/L

TABLE A-2
Historical Results for Radioactive Parameters in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION_II	DATE	ANALYTE NAME	RESULT	REV Q	ERROR	SQL	UNITS
B38W19S	10-May-96	RADIUM-228	0.11	UJ	0.15	0.31	PCI/L
B38W19S	29-Jun-98	RADIUM-228	0.26	UJ	0.27	0.41	PCI/L
B38W19S	14-May-99	RADIUM-228	0.48	UJ	0.15	0.48	PCI/L
B38W19S	13-Jun-01	RADIUM-228	2.49	J	0.72	0.7	PCI/L
B38W25S	15-May-96	RADIUM-228	0.21		0.19	0.19	PCI/L
B38W25S	5-Jun-97	RADIUM-228	0.13	UJ	0.15	0.26	PCI/L
B38W25S	1-Jul-98	RADIUM-228	0.3	UJ	0.31	0.48	PCI/L
B38W25S	17-May-99	RADIUM-228	0.12	UJ	0.22	0.44	PCI/L
B38W25S	7-Jul-00	RADIUM-228	0.17	U	0.42	0.71	PCI/L
B38W25S	10-Jul-01	RADIUM-228	0.76	UJ	0.72	0.77	PCI/L
MISS02B	14-May-96	RADIUM-228	0.09	UJ	0.12	0.39	PCI/L
MISS02B	19-May-97	RADIUM-228	0.05	UJ	0.14	0.34	PCI/L
MISS02B	10-Jun-98	RADIUM-228	0.01	UJ	0.12	0.37	PCI/L
MISS02B	18-May-99	RADIUM-228	0.02	UJ	0.17	0.48	PCI/L
MISS02B	23-Jun-00	RADIUM-228	0.32	U	0.33	0.55	PCI/L
MISS02B	5-Jul-01	RADIUM-228	1.36	J	1.05	1.11	PCI/L
MISS05A	10-May-96	RADIUM-228	0.14	UJ	0.21	0.46	PCI/L
MISS05A	2-Jun-97	RADIUM-228	0.67		0.44	0.51	PCI/L
MISS05A	29-Jun-98	RADIUM-228	0.55		0.42	0.53	PCI/L
MISS05A	14-May-99	RADIUM-228	0.16	UJ	0.31	0.66	PCI/L
MISS05A	19-Jun-01	RADIUM-228	2.05	J	0.85	0.87	PCI/L
B38W19D	16-May-96	THORIUM-228	0.04	UJ	0.08	0.24	PCI/L
B38W19D	16-May-97	THORIUM-228	0.08	UJ	0.12	0.22	PCI/L
B38W19D	17-Jun-98	THORIUM-228	0.04	UJ	0.18	0.46	PCI/L
B38W19D	17-May-99	THORIUM-228	0.13	U	0.39	0.91	PCI/L
B38W19D	13-Jun-01	THORIUM-228	0.42	UJ	0.44	0.66	PCI/L
B38W19S	10-May-96	THORIUM-228	0.11	UJ	0.15	0.31	PCI/L
B38W19S	29-Jun-98	THORIUM-228	0.26	UJ	0.27	0.41	PCI/L
B38W19S	14-May-99	THORIUM-228	0.48	U	0.15	0.48	PCI/L
B38W19S	13-Jun-01	THORIUM-228	0.36	UJ	0.35	0.52	PCI/L
B38W25S	15-May-96	THORIUM-228	0.21		0.19	0.19	PCI/L
B38W25S	15-May-96	THORIUM-228	0.21	UJ	0.19	0.33	PCI/L
B38W25S	5-Jun-97	THORIUM-228	0.13	UJ	0.15	0.26	PCI/L
B38W25S	1-Jul-98	THORIUM-228	0.3	UJ	0.31	0.48	PCI/L
B38W25S	17-May-99	THORIUM-228	0.12	UJ	0.22	0.44	PCI/L
B38W25S	7-Jul-00	THORIUM-228	0.46	J	0.32	0.38	PCI/L
B38W25S	10-Jul-01	THORIUM-228	0.53	U	0.14	0.53	PCI/L
MISS02B	14-May-96	THORIUM-228	0.09	UJ	0.12	0.39	PCI/L
MISS02B	19-May-97	THORIUM-228	0.05	UJ	0.14	0.34	PCI/L
MISS02B	10-Jun-98	THORIUM-228	0.01	UJ	0.12	0.37	PCI/L
MISS02B	18-May-99	THORIUM-228	0.02	UJ	0.17	0.48	PCI/L
MISS02B	23-Jun-00	THORIUM-228	0.04	U	0.09	0.2	PCI/L
MISS02B	5-Jul-01	THORIUM-228	0.23	UJ	0.26	0.41	PCI/L
MISS05A	10-May-96	THORIUM-228	0.14	UJ	0.21	0.46	PCI/L
MISS05A	2-Jun-97	THORIUM-228	0.67		0.44	0.51	PCI/L
MISS05A	29-Jun-98	THORIUM-228	0.55		0.42	0.53	PCI/L
MISS05A	14-May-99	THORIUM-228	0.16	UJ	0.31	0.66	PCI/L
MISS05A	19-Jun-01	THORIUM-228	0.07	U	0.2	0.49	PCI/L

TABLE A-2
Historical Results for Radioactive Parameters in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION_II	DATE	ANALYTE NAME	RESULT	REV Q	ERROR	SQL	UNITS
B38W19D	10-May-95	THORIUM-230	0.37	U	0.23	0.09	PCI/L
B38W19D	16-May-96	THORIUM-230	0.24		0.2	0.11	PCI/L
B38W19D	16-May-97	THORIUM-230	0.5	U	0.3	0.25	PCI/L
B38W19D	17-Jun-98	THORIUM-230	0.17	UJ	0.24	0.42	PCI/L
B38W19D	27-May-99	THORIUM-230	0.67	UJ	0.57	0.76	PCI/L
B38W19D	12-Jul-00	THORIUM-230	0.11	UJ	0.12	0.18	PCI/L
B38W19D	13-Jun-01	THORIUM-230	0.72	UJ	0.6	0.87	PCI/L
B38W19S	17-May-95	THORIUM-230	0.35	U	0.25	0.18	PCI/L
B38W19S	10-May-96	THORIUM-230	3.4	J	1.03	0.14	PCI/L
B38W19S	29-Jun-98	THORIUM-230	0.17	UJ	0.21	0.34	PCI/L
B38W19S	29-May-99	THORIUM-230	0.07	UJ	0.17	0.4	PCI/L
B38W19S	13-Jun-01	THORIUM-230	1.51	J	0.7	0.52	PCI/L
B38W25S	15-May-95	THORIUM-230	0.14	UJ	0.16	0.21	PCI/L
B38W25S	15-May-96	THORIUM-230	0.5		0.3	0.19	PCI/L
B38W25S	5-Jun-97	THORIUM-230	0.44	U	0.29	0.26	PCI/L
B38W25S	1-Jul-98	THORIUM-230	0.14	UJ	0.2	0.33	PCI/L
B38W25S	17-May-99	THORIUM-230	0.26	UJ	0.26	0.36	PCI/L
B38W25S	7-Jul-00	THORIUM-230	0.38	J	0.28	0.28	PCI/L
B38W25S	10-Jul-01	THORIUM-230	0.65	J	0.42	0.33	PCI/L
MISS02B	9-May-95	THORIUM-230	0.08	UJ	0.12	0.19	PCI/L
MISS02B	14-May-96	THORIUM-230	0.38		0.26	0.19	PCI/L
MISS02B	19-May-97	THORIUM-230	0.81	U	0.4	0.21	PCI/L
MISS02B	10-Jun-98	THORIUM-230	0.18	UJ	0.22	0.32	PCI/L
MISS02B	18-May-99	THORIUM-230	0.59		0.4	0.43	PCI/L
MISS02B	23-Jun-00	THORIUM-230	0.4	J	0.25	0.27	PCI/L
MISS02B	5-Jul-01	THORIUM-230	0.66	J	0.42	0.44	PCI/L
MISS05A	12-May-95	THORIUM-230	0.43	U	0.28	0.22	PCI/L
MISS05A	10-May-96	THORIUM-230	1.7	J	0.77	0.33	PCI/L
MISS05A	2-Jun-97	THORIUM-230	0.92		0.52	0.43	PCI/L
MISS05A	29-Jun-98	THORIUM-230	0.28	UJ	0.3	0.46	PCI/L
MISS05A	14-May-99	THORIUM-230	0.69		0.48	0.44	PCI/L
MISS05A	19-Jun-01	THORIUM-230	1.25	J	0.67	0.72	PCI/L
MISS07B	11-May-95	THORIUM-230	0.34	U	0.22	0.09	PCI/L
MISS07B	16-May-96	THORIUM-230	0.26	U	0.22	0.26	PCI/L
MISS07B	16-May-97	THORIUM-230	0.44	U	0.27	0.22	PCI/L
MISS07B	27-May-99	THORIUM-230	0.39	U	0.88	0.49	PCI/L
MISS07B	12-Jul-00	THORIUM-230	0.37	J	0.24	0.21	PCI/L
MISS07B	11-Jun-01	THORIUM-230	0.19	U	0.38	0.84	PCI/L
B38W19D	23-Jul-93	THORIUM-232	0.14	UJ	0.29	0.43	PCI/L
B38W19D	16-May-94	THORIUM-232	0.04	UJ	0.07	0.1	PCI/L
B38W19D	10-May-95	THORIUM-232	0.09	UJ		0.09	PCI/L
B38W19D	16-May-96	THORIUM-232	0.19	UJ	0	0.19	PCI/L
B38W19D	16-May-97	THORIUM-232	0.29	U	0.22	0.22	PCI/L
B38W19D	17-Jun-98	THORIUM-232	0.15	UJ	0.2	0.31	PCI/L
B38W19D	27-May-99	THORIUM-232	0.22	UJ	0.32	0.54	PCI/L
B38W19D	12-Jul-00	THORIUM-232	0.01	U	0.05	0.13	PCI/L
B38W19D	13-Jun-01	THORIUM-232	0.52	UJ	0.5	0.78	PCI/L

TABLE A-2
Historical Results for Radioactive Parameters in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION_II	DATE	ANALYTE NAME	RESULT	REV Q	ERROR	SQL	UNITS
B38W19S	27-May-94	THORIUM-232	0.04	UJ	0.09	0.12	PCI/L
B38W19S	17-May-95	THORIUM-232	-0.01	UJ	0.02	0.21	PCI/L
B38W19S	10-May-96	THORIUM-232	0.24	UJ	0	0.24	PCI/L
B38W19S	29-Jun-98	THORIUM-232	0.03	UJ	0.11	0.32	PCI/L
B38W19S	14-May-99	THORIUM-232	0.02	UJ	0.1	0.29	PCI/L
B38W19S	13-Jun-01	THORIUM-232	0.3	UJ	0.32	0.52	PCI/L
B38W25S	3-Aug-93	THORIUM-232	0.24		0.16	0.14	PCI/L
B38W25S	24-May-94	THORIUM-232	0.13	UJ	0	0.13	PCI/L
B38W25S	15-May-95	THORIUM-232	0.06	UJ	0.11	0.2	PCI/L
B38W25S	15-May-96	THORIUM-232	0.08	UJ	0.12	0.19	PCI/L
B38W25S	5-Jun-97	THORIUM-232	0.17	UJ	0.18	0.2	PCI/L
B38W25S	1-Jul-98	THORIUM-232	0.04	UJ	0.11	0.3	PCI/L
B38W25S	17-May-99	THORIUM-232	0.13	UJ	0.18	0.3	PCI/L
B38W25S	7-Jul-00	THORIUM-232	0.13	U	0.17	0.28	PCI/L
˘ USACE dat	10-Jul-01	THORIUM-232	0.03	UJ	0.13	0.36	PCI/L
MISS02B	20-Jul-93	THORIUM-232	0	UJ	0	0.2	PCI/L
MISS02B	9-May-95	THORIUM-232	0.07	UJ	0.12	0.22	PCI/L
MISS02B	14-May-96	THORIUM-232	0.25	UJ	0	0.25	PCI/L
MISS02B	19-May-97	THORIUM-232	0.14	UJ	0.16	0.12	PCI/L
MISS02B	10-Jun-98	THORIUM-232	0.05	UJ	0.11	0.14	PCI/L
MISS02B	18-May-99	THORIUM-232	0.04	UJ	0.11	0.3	PCI/L
MISS02B	23-Jun-00	THORIUM-232	0.02	U	0.06	0.14	PCI/L
MISS02B	5-Jul-01	THORIUM-232	0.54		0.39	0.45	PCI/L
MISS05A	27-May-94	THORIUM-232	0.4	J	0.29	0.21	PCI/L
MISS05A	12-May-95	THORIUM-232	0.23		0.2	0.18	PCI/L
MISS05A	10-May-96	THORIUM-232	0.21	UJ	0.25	0.19	PCI/L
MISS05A	2-Jun-97	THORIUM-232	0.13	UJ	0.19	0.51	PCI/L
MISS05A	29-Jun-98	THORIUM-232	0.04	UJ	0.17	0.48	PCI/L
MISS05A	14-May-99	THORIUM-232	0.17	UJ	0.26	0.47	PCI/L
MISS05A	19-Jun-01	THORIUM-232	0.29	UJ	0.3	0.43	PCI/L
B38W19D	23-Jul-93	TOTAL URANIUM	0.36		0.04	0.03	UG/L
B38W19D	16-May-94	TOTAL URANIUM	0.35		0.04	0.03	UG/L
B38W19D	10-May-95	TOTAL URANIUM	0.29		0.03	0.03	UG/L
B38W19D	16-May-96	TOTAL URANIUM	1.27		0.03	0.03	UG/L
B38W19D	16-May-97	TOTAL URANIUM	0.3		0.01	0.03	UG/L
B38W19D	17-Jun-98	TOTAL URANIUM	0.03	UJ	0	0.03	UG/L
B38W19D	27-May-99	TOTAL URANIUM	0.26	UJ	0.02	0.03	UG/L
B38W19D	12-Jul-00	TOTAL URANIUM	1.82				UG/L
B38W19D	13-Jun-01	TOTAL URANIUM	1.00				UG/L
B38W19S	27-May-94	TOTAL URANIUM	0.38		0.04	0.03	UG/L
B38W19S	17-May-95	TOTAL URANIUM	1.4		0.15	0.03	UG/L
B38W19S	10-May-96	TOTAL URANIUM	0.58		0.01	0.03	UG/L
B38W19S	29-Jun-98	TOTAL URANIUM	0.03	UJ	0	0.03	UG/L
B38W19S	14-May-99	TOTAL URANIUM	0.02	UJ	0.01	0.03	UG/L
B38W19S	13-Jun-01	TOTAL URANIUM	0.89				UG/L

TABLE A-2
Historical Results for Radioactive Parameters in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION_II	DATE	ANALYTE NAME	RESULT	REV Q	ERROR	SQL	UNITS
B38W25S	3-Aug-93	TOTAL URANIUM	0.5		0.05	0.03	UG/L
B38W25S	24-May-94	TOTAL URANIUM	0.06		0.01	0.03	UG/L
B38W25S	15-May-95	TOTAL URANIUM	0.09		0.01	0.03	UG/L
B38W25S	15-May-96	TOTAL URANIUM	0.45		0.01	0.03	UG/L
B38W25S	5-Jun-97	TOTAL URANIUM	0.5		0.01	0.03	UG/L
B38W25S	1-Jul-98	TOTAL URANIUM	0.03	UJ	0	0.03	UG/L
B38W25S	17-May-99	TOTAL URANIUM	0.17	UJ	0.01	0.03	UG/L
B38W25S	7-Jul-00	TOTAL URANIUM	0.41				UG/L
B38W25S	10-Jul-01	TOTAL URANIUM	3.74				UG/L
MISS02B	20-Jul-93	TOTAL URANIUM	0.33		0.04	0.03	UG/L
MISS02B	13-May-94	TOTAL URANIUM	0.29		0.03	0.03	UG/L
MISS02B	9-May-95	TOTAL URANIUM	0.29		0.03	0.03	UG/L
MISS02B	14-May-96	TOTAL URANIUM	0.68		0.02	0.03	UG/L
MISS02B	19-May-97	TOTAL URANIUM	0.28		0.02	0.03	UG/L
MISS02B	10-Jun-98	TOTAL URANIUM	0.03	UJ	0	0.03	UG/L
MISS02B	18-May-99	TOTAL URANIUM	0.12		0.01	0.03	UG/L
MISS02B	23-Jun-00	TOTAL URANIUM	0.48				UG/L
MISS02B	5-Jul-01	TOTAL URANIUM	2.98				UG/L
MISS05A	27-May-94	TOTAL URANIUM	86.8		10.3	0.03	UG/L
MISS05A	12-May-95	TOTAL URANIUM	41.2		4.8	0.03	UG/L
MISS05A	10-May-96	TOTAL URANIUM	140		8.6	0.03	UG/L
MISS05A	15-OCT-96	TOTAL URANIUM	139.05		8.95	0.03	UG/L
MISS05A	2-Jun-97	TOTAL URANIUM	96.15		6.03	0.03	UG/L
MISS05A	29-Jun-98	TOTAL URANIUM	181.71		12.18	0.03	UG/L
MISS05A	14-May-99	TOTAL URANIUM	110.46		2.51	0.03	UG/L
MISS05A	19-Jun-01	TOTAL URANIUM	52.87				UG/L

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	22-Jun-00	REG	ALUMINUM	360		
MISS02A	5-Jul-01	REG	ALUMINUM	29.5		
B38W17A	19-Jun-00	REG	ALUMINUM	785		
B38W17A	14-Jun-01	REG	ALUMINUM	128		
B38W17B	19-Jun-00	REG	ALUMINUM	40.6		J
B38W17B	14-Jun-01	REG	ALUMINUM	68.6		
B38W15D	6-Jul-98	REG	ANTIMONY	0.7		
B38W15D	26-Jun-00	REG	ANTIMONY	2.1		
B38W15D	27-Jun-01	REG	ANTIMONY	1.9		
B38W15S	6-Jul-98	REG	ANTIMONY	0.75		
B38W15S	27-Jun-01	REG	ANTIMONY	1.9		
B38W17A	28-Jul-93	REG	ANTIMONY	445	=	
B38W17A	2-Jul-98	REG	ANTIMONY	1		
B38W17A	19-Jun-00	REG	ANTIMONY	37.6		
B38W17A	14-Jun-01	REG	ANTIMONY	1.9		
B38W19S	29-Jun-98	REG	ANTIMONY	0.65		
B38W24D	2-Jul-98	REG	ANTIMONY	0.6		
B38W24D	5-Jul-01	REG	ANTIMONY	1.9		
B38W24S	2-Jul-98	REG	ANTIMONY	0.7		
B38W24S	27-Jun-01	REG	ANTIMONY	1.9		
B38W25D	12-May-95	REG	ANTIMONY	2.9	=	
B38W25D	15-May-97	REG	ANTIMONY	2		
B38W25D	1-Jul-98	REG	ANTIMONY	0.65		
B38W25D	10-Jul-01	REG	ANTIMONY	1.9		
B38W25S	15-May-95	REG	ANTIMONY	1.5	=	
B38W25S	10-Jul-01	REG	ANTIMONY	1.9		
MISS02A	10-May-95	REG	ANTIMONY	2.4	=	
MISS02A	15-May-97	DUP	ANTIMONY	5.1		
MISS02A	11-Jun-98	DUP	ANTIMONY	3.2		
MISS02A	18-May-99	DUP	ANTIMONY	3.9		
MISS02A	5-Jul-01	REG	ANTIMONY	1.9		
MISS05A	27-May-94	REG	ANTIMONY	36.4	=	
MISS05A	12-May-95	REG	ANTIMONY	1.8	=	
MISS05A	29-Jun-98	REG	ANTIMONY	1.2		
MISS05A	14-May-99	REG	ANTIMONY	0.7		
MISS05A	19-Jun-01	REG	ANTIMONY	1.9		
MISS06A	24-May-94	REG	ANTIMONY	34.9	=	
MISS06A	1-Jul-98	REG	ANTIMONY	1.8		
MISS06A	17-May-99	REG	ANTIMONY	0.81		
MISS06A	20-Jun-01	REG	ANTIMONY	1.9		
MISS07B	18-May-94	REG	ANTIMONY	25.7	=	
MISS07B	18-May-95	REG	ANTIMONY	25.7		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS07B	11-Jun-01	REG	ANTIMONY	1.9		
MISS07B	16-Jun-98	REG	ARSENIC	57.3		
MISS07B	27-May-99	REG	ARSENIC	49.9		J
MISS07B	12-Jul-00	REG	ARSENIC	52.6		
MISS07B	11-Jun-01	REG	ARSENIC	82.8		
B38W02D	30-Jun-98	REG	ARSENIC	0.75		
B38W02D	20-May-99	REG	ARSENIC	0.61		
B38W02D	28-Jun-01	REG	ARSENIC	2.3		
B38W14S	4-Aug-93	REG	ARSENIC	2.1	B	J
B38W14S	4-Jun-97	REG	ARSENIC	4.7		
B38W14S	17-May-99	REG	ARSENIC	0.52		
B38W14S	2-Jul-01	REG	ARSENIC	2.3		
B38W15D	2-Aug-93	REG	ARSENIC	6.8	B	J
B38W15D	26-May-94	REG	ARSENIC	2.6	=	J
B38W15D	13-May-96	REG	ARSENIC	5.4	=	
B38W15D	3-Jun-97	REG	ARSENIC	5.7		
B38W15D	6-Jul-98	REG	ARSENIC	7.5		
B38W15D	26-Jun-00	REG	ARSENIC	11.1		
B38W15D	27-Jun-01	DUP	ARSENIC	4.6		
B38W15S	2-Aug-93	REG	ARSENIC	3.9	B	J
B38W15S	19-May-95	REG	ARSENIC	4.9	=	
B38W15S	19-May-95	DUP	ARSENIC	4.8	=	
B38W15S	3-Jun-97	REG	ARSENIC	2.6		
B38W15S	6-Jul-98	REG	ARSENIC	3.1		
B38W15S	27-Jun-01	REG	ARSENIC	4.4		
B38W17A	28-Jul-93	REG	ARSENIC	8.9	B	
B38W17A	2-Jul-98	REG	ARSENIC	2.9		
B38W17A	14-Jun-01	REG	ARSENIC	2.3		
B38W17B	3-Jun-97	REG	ARSENIC	1.8		
B38W17B	2-Jul-98	REG	ARSENIC	1.3		
B38W17B	13-May-99	REG	ARSENIC	0.76		
B38W17B	14-Jun-01	REG	ARSENIC	2.3		
B38W18D	21-Jul-93	REG	ARSENIC	2.5	B	
B38W18D	8-Jun-98	REG	ARSENIC	1.7		
B38W18D	20-May-99	REG	ARSENIC	2.3		
B38W18D	6-Jul-00	REG	ARSENIC	8.2		J
B38W18D	20-Jun-01	REG	ARSENIC	2.3		
B38W19D	23-Jul-93	REG	ARSENIC	93	=	
B38W19D	16-May-94	REG	ARSENIC	68.7	=	
B38W19D	10-May-95	REG	ARSENIC	48.8	=	J
B38W19D	16-May-96	REG	ARSENIC	50.5	=	
B38W19D	16-May-97	REG	ARSENIC	59.5		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19D	17-Jun-98	REG	ARSENIC	60.8		
B38W19D	27-May-99	REG	ARSENIC	55.1	=	J
B38W19D	12-Jul-00	REG	ARSENIC	70.3		
B38W19D	13-Jun-01	REG	ARSENIC	69.8		
B38W19S	27-May-94	REG	ARSENIC	8.6	=	
B38W19S	10-May-96	REG	ARSENIC	5.4	=	
B38W19S	29-Jun-98	REG	ARSENIC	18.1		
B38W19S	14-May-99	REG	ARSENIC	17.8		
B38W19S	13-Jun-01	REG	ARSENIC	28.7		
B38W24S	2-Jul-98	REG	ARSENIC	1.8		
B38W24S	27-Jun-01	REG	ARSENIC	2.3		
B38W24D	22-Jun-00	REG	ARSENIC	2.1		J
B38W25D	15-May-97	REG	ARSENIC	2.9		
B38W25D	1-Jul-98	REG	ARSENIC	1.1		
B38W25D	10-Jul-01	REG	ARSENIC	2.3		
B38W25S	3-Aug-93	REG	ARSENIC	3.9	B	J
B38W25S	15-May-95	DUP	ARSENIC	2.5	=	
B38W25S	5-Jun-97	REG	ARSENIC	1.3		
B38W25S	1-Jul-98	REG	ARSENIC	2.8		
B38W25S	17-May-99	REG	ARSENIC	2.3		
B38W25S	7-Jul-00	REG	ARSENIC	13.4		
B38W25S	10-Jul-01	REG	ARSENIC	20.8		
MISS01AA	31-Jul-93	REG	ARSENIC	2.8	B	J
MISS01AA	18-May-95	REG	ARSENIC	18.7	=	
MISS01AA	23-May-97	REG	ARSENIC	4.2		
MISS01AA	18-Jun-98	REG	ARSENIC	5.2		
MISS01AA	12-May-99	REG	ARSENIC	6.5		
MISS01AA	20-Jun-01	REG	ARSENIC	2.3		
MISS01B	21-Jul-93	REG	ARSENIC	3.6	B	
MISS01B	16-May-94	REG	ARSENIC	3.6	=	
MISS01B	10-May-95	REG	ARSENIC	2.7	=	J
MISS01B	18-Jun-98	REG	ARSENIC	2.1		
MISS01B	25-May-99	REG	ARSENIC	1.1		J
MISS01B	19-Jun-01	REG	ARSENIC	2.3		
MISS02A	20-Jul-93	REG	ARSENIC	2840	=	
MISS02A	12-May-94	REG	ARSENIC	6600	=	J
MISS02A	10-May-95	REG	ARSENIC	6000	=	J
MISS02A	16-May-96	REG	ARSENIC	6360	=	
MISS02A	15-May-97	REG	ARSENIC	5660		
MISS02A	15-May-97	DUP	ARSENIC	5580		
MISS02A	11-Jun-98	REG	ARSENIC	4310		
MISS02A	11-Jun-98	DUP	ARSENIC	5150		
MISS02A	18-May-99	DUP	ARSENIC	6350		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	22-Jun-00	REG	ARSENIC	3520		
MISS02A	5-Jul-01	REG	ARSENIC	2210		
MISS05A	27-May-94	REG	ARSENIC	3.5	=	
MISS05A	12-May-95	REG	ARSENIC	3.8	=	
MISS05A	2-Jun-97	REG	ARSENIC	16.6		
MISS05A	29-Jun-98	REG	ARSENIC	16.4		
MISS05A	14-May-99	REG	ARSENIC	2		
MISS05A	19-Jun-01	REG	ARSENIC	2.3		
MISS05B	23-Jul-93	REG	ARSENIC	16.6	=	
MISS05B	17-May-94	REG	ARSENIC	11.9	=	J
MISS05B	11-May-95	REG	ARSENIC	10.9	=	J
MISS05B	16-May-96	REG	ARSENIC	10.6	=	
MISS05B	14-May-97	REG	ARSENIC	10.1		J
MISS05B	30-Jun-98	REG	ARSENIC	9.9		
MISS05B	11-Jul-00	REG	ARSENIC	20.5		
MISS05B	18-Jun-01	REG	ARSENIC	24.3		
MISS06A	3-Jun-97	REG	ARSENIC	3.4		
MISS06A	1-Jul-98	REG	ARSENIC	5.4		
MISS06A	17-May-99	REG	ARSENIC	2.2		
MISS06A	10-Jul-00	REG	ARSENIC	4		J
MISS06A	20-Jun-01	REG	ARSENIC	2.3		
B38W01S	23-May-94	REG	BARIUM	17.8	=	
B38W01S	21-May-95	REG	BARIUM	13.1	=	
B38W01S	17-May-96	REG	BARIUM	14.4	=	
B38W01S	4-Jun-97	REG	BARIUM	16.8		
B38W01S	7-Jul-98	REG	BARIUM	16.3		
B38W01S	11-Jul-01	DUP	BARIUM	15.1		
B38W02D	27-Jul-93	REG	BARIUM	385	=	
B38W02D	19-May-94	REG	BARIUM	342	=	
B38W02D	20-May-95	REG	BARIUM	298	=	
B38W02D	17-May-96	REG	BARIUM	349	=	
B38W02D	4-Jun-97	REG	BARIUM	391		
B38W02D	30-Jun-98	REG	BARIUM	364		
B38W02D	20-May-99	REG	BARIUM	342		
B38W02D	13-Jul-00	REG	BARIUM	299		
B38W02D	28-Jun-01	REG	BARIUM	332		
MISS07B	16-Jun-98	REG	BARIUM	28.1		
MISS07B	27-May-99	REG	BARIUM	21.4		
MISS07B	11-Jun-01	REG	BARIUM	20.6		
B38W14D	4-Aug-93	REG	BARIUM	106	B	
B38W14D	20-May-95	REG	BARIUM	73.6	=	
B38W14D	17-May-96	REG	BARIUM	97.3	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14D	4-Jun-97	REG	BARIUM	113		
B38W14D	7-Jul-98	REG	BARIUM	111		
B38W14D	7-Jul-98	DUP	BARIUM	113		
B38W14D	17-May-99	DUP	BARIUM	116		
B38W14D	5-Jul-00	REG	BARIUM	105		
B38W14D	2-Jul-01	REG	BARIUM	88.6		
B38W14S	4-Aug-93	REG	BARIUM	106	B	
B38W14S	20-May-95	REG	BARIUM	61.6	=	
[b] USACE data	17-May-96	REG	BARIUM	85.2	=	
B38W14S	17-May-96	DUP	BARIUM	77.8	=	
B38W14S	4-Jun-97	REG	BARIUM	90		
B38W14S	7-Jul-98	REG	BARIUM	108		
B38W14S	17-May-99	REG	BARIUM	86.6		
B38W14S	5-Jul-00	REG	BARIUM	91.3		
B38W14S	2-Jul-01	REG	BARIUM	85.6		
B38W15D	2-Aug-93	REG	BARIUM	32.4	B	
B38W15D	26-May-94	REG	BARIUM	30.3	=	
B38W15D	19-May-95	REG	BARIUM	22.3	=	
B38W15D	13-May-96	REG	BARIUM	39.4	=	
B38W15D	3-Jun-97	REG	BARIUM	27.5		
B38W15D	6-Jul-98	REG	BARIUM	22.6		
B38W15D	26-Jun-00	REG	BARIUM	30.2		
B38W15D	27-Jun-01	DUP	BARIUM	15.9		
B38W15S	2-Aug-93	REG	BARIUM	50	B	
B38W15S	26-May-94	REG	BARIUM	34	=	
B38W15S	19-May-95	REG	BARIUM	50.9	=	
B38W15S	19-May-95	DUP	BARIUM	46.1	=	
B38W15S	13-May-96	REG	BARIUM	35.7	=	
B38W15S	3-Jun-97	REG	BARIUM	32.2		
B38W15S	6-Jul-98	REG	BARIUM	32.5		
B38W15S	26-Jun-00	REG	BARIUM	37.6		
B38W15S	27-Jun-01	REG	BARIUM	46		
B38W17A	28-Jul-93	REG	BARIUM	299	=	
B38W17A	25-May-94	REG	BARIUM	46.9	=	
B38W17A	20-May-95	REG	BARIUM	36.4	=	
B38W17A	13-May-96	REG	BARIUM	60.3	=	
B38W17A	3-Jun-97	REG	BARIUM	49.3		
B38W17A	2-Jul-98	REG	BARIUM	78.1		
B38W17A	13-May-99	REG	BARIUM	63.1		
B38W17A	19-Jun-00	REG	BARIUM	94.1		
B38W17A	14-Jun-01	REG	BARIUM	44.7		
B38W17B	29-Jul-93	REG	BARIUM	64.9	B	
B38W17B	25-May-94	REG	BARIUM	89.4	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W17B	20-May-95	REG	BARIUM	71.8	=	
B38W17B	13-May-96	REG	BARIUM	98.3	=	
B38W17B	3-Jun-97	REG	BARIUM	96.5		
B38W17B	2-Jul-98	REG	BARIUM	71.6		
B38W17B	13-May-99	REG	BARIUM	89.1		
B38W17B	19-Jun-00	REG	BARIUM	69.4		
B38W17B	14-Jun-01	DUP	BARIUM	75.4		
B38W18D	21-Jul-93	REG	BARIUM	13.1	B	
B38W18D	13-May-94	REG	BARIUM	14.7	=	
B38W18D	15-May-95	REG	BARIUM	22.7	=	
B38W18D	14-May-96	REG	BARIUM	22.1	=	
B38W18D	9-May-97	REG	BARIUM	17.2		
B38W18D	8-Jun-98	REG	BARIUM	18.8		
B38W18D	20-May-99	REG	BARIUM	20.8		
B38W18D	6-Jul-00	REG	BARIUM	22.9		
B38W18D	20-Jun-01	REG	BARIUM	19		
B38W19D	16-May-94	REG	BARIUM	30.8	=	
B38W19D	10-May-95	REG	BARIUM	22.4	=	
B38W19D	16-May-96	REG	BARIUM	29.7	=	
B38W19D	16-May-97	REG	BARIUM	29.5		
B38W19D	17-Jun-98	REG	BARIUM	32.4		
B38W19D	23-Jul-93	REG	BARIUM	23.9	B	
B38W19D	23-May-99	REG	BARIUM	31		
B38W19D	12-Jul-00	REG	BARIUM	26.9		
B38W19D	13-Jun-01	REG	BARIUM	33.2		
B38W19S	27-May-94	REG	BARIUM	50.2	=	
B38W19S	17-May-95	REG	BARIUM	47.5	=	
B38W19S	10-May-96	REG	BARIUM	43.1	=	
B38W19S	29-Jun-98	REG	BARIUM	42.7		
B38W19S	14-May-99	REG	BARIUM	43.2		
B38W19S	13-Jun-01	REG	BARIUM	36.5		
B38W24D	9-Aug-93	REG	BARIUM	49.6	B	
B38W24D	18-May-94	REG	BARIUM	41.2	=	
B38W24D	17-May-95	REG	BARIUM	24.6	=	
B38W24D	9-May-96	REG	BARIUM	56.2	=	
B38W24D	2-Jun-97	REG	BARIUM	50.6		
B38W24D	2-Jul-98	REG	BARIUM	96.5		
B38W24D	13-May-99	REG	BARIUM	45.6		
B38W24D	22-Jun-00	REG	BARIUM	240		J
B38W24D	5-Jul-01	REG	BARIUM	52.7		
B38W24S	5-Aug-93	REG	BARIUM	45	B	
B38W24S	25-May-94	REG	BARIUM	46	=	
B38W24S	17-May-95	REG	BARIUM	45.6	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24S	9-May-96	REG	BARIUM	39.4	=	
B38W24S	2-Jun-97	REG	BARIUM	43.9		
B38W24S	2-Jul-98	REG	BARIUM	43.3		
B38W24S	2-May-99	DUP	BARIUM	39.1		
B38W24S	21-Jun-00	REG	BARIUM	36.2		
B38W24S	27-Jun-01	REG	BARIUM	34.1		
B38W25D	3-Aug-93	REG	BARIUM	49	B	
B38W25D	18-May-94	REG	BARIUM	51.7	=	
B38W25D	12-May-95	REG	BARIUM	62.7	=	
B38W25D	15-May-96	REG	BARIUM	54.5	=	
B38W25D	15-May-97	REG	BARIUM	48.3		
B38W25D	1-Jul-98	REG	BARIUM	48.1		
B38W25D	26-May-99	REG	BARIUM	58.4		
B38W25D	7-Jul-00	REG	BARIUM	61.4		
B38W25D	10-Jul-01	DUP	BARIUM	61.4		
B38W25S	3-Aug-93	REG	BARIUM	126	B	
B38W25S	24-May-94	REG	BARIUM	50.5	=	
B38W25S	15-May-95	REG	BARIUM	68.5	=	
B38W25S	15-May-95	DUP	BARIUM	43.1	=	
B38W25S	15-May-96	REG	BARIUM	39	=	
B38W25S	15-May-96	DUP	BARIUM	39.4	=	
B38W25S	5-Jun-97	REG	BARIUM	47		
B38W25S	1-Jul-98	REG	BARIUM	112		
B38W25S	17-May-99	REG	BARIUM	73.6		
B38W25S	7-Jul-00	REG	BARIUM	166		
B38W25S	10-Jul-01	REG	BARIUM	198		
MISS01AA	31-Jul-93	REG	BARIUM	159	B	
MISS01AA	23-May-94	REG	BARIUM	19.5	=	
MISS01AA	18-May-95	REG	BARIUM	10.6	=	
MISS01AA	9-May-96	REG	BARIUM	14.4	=	
MISS01AA	23-May-97	REG	BARIUM	7		
MISS01AA	18-Jun-98	REG	BARIUM	8.1		
MISS01AA	12-May-99	REG	BARIUM	8.7		
MISS01AA	20-Jun-00	REG	BARIUM	6.9		
MISS01AA	20-Jun-01	REG	BARIUM	9		
MISS01B	21-Jul-93	REG	BARIUM	72.9	B	
MISS01B	21-Jul-93	REG	BARIUM	69.6	B	
[b] USACE qua	16-May-94	REG	BARIUM	82.9	=	
[c] Federal SDV	10-May-95	REG	BARIUM	66.9	=	
MISS01B	15-May-96	REG	BARIUM	98.3	=	
MISS01B	18-Jun-98	REG	BARIUM	80		
MISS01B	25-May-99	REG	BARIUM	73.5		
MISS01B	20-Jun-00	REG	BARIUM	66.7		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01B	19-Jun-01	REG	BARIUM	71.4		
MISS02A	20-Jul-93	REG	BARIUM	10	=	
MISS02A	12-May-94	REG	BARIUM	10.1	=	J
MISS02A	10-May-95	REG	BARIUM	12	=	
MISS02A	16-May-96	REG	BARIUM	9.5	=	
MISS02A	15-May-97	DUP	BARIUM	8.4		
MISS02A	11-Jun-98	DUP	BARIUM	6.2		
MISS02A	18-May-99	DUP	BARIUM	21		
MISS02A	22-Jun-00	REG	BARIUM	8.6		
MISS02A	5-Jul-01	REG	BARIUM	1.5		
MISS02B	20-Jul-93	REG	BARIUM	13.3	=	
MISS02B	13-May-94	REG	BARIUM	7.8	=	
MISS02B	9-May-95	REG	BARIUM	18.1	=	
MISS02B	14-May-96	REG	BARIUM	9.2	=	
MISS02B	19-May-97	REG	BARIUM	9		
MISS02B	10-Jun-98	REG	BARIUM	10		
MISS02B	18-May-99	REG	BARIUM	11		
MISS02B	23-Jun-00	REG	BARIUM	11.4		
MISS02B	5-Jul-01	REG	BARIUM	10.3		
MISS05A	27-May-94	REG	BARIUM	28.2	=	
MISS05A	12-May-95	REG	BARIUM	37.8	=	
MISS05A	10-May-96	REG	BARIUM	32	=	
MISS05A	2-Jun-97	REG	BARIUM	23.1		
MISS05A	29-Jun-98	REG	BARIUM	18.4		
MISS05A	14-May-99	REG	BARIUM	20.3		
MISS05A	19-Jun-01	REG	BARIUM	17.2		
MISS05B	23-Jul-93	REG	BARIUM	52.2	B	
MISS05B	17-May-94	REG	BARIUM	89.9	=	
MISS05B	11-May-95	REG	BARIUM	128	=	
MISS05B	16-May-96	REG	BARIUM	38.3	=	
MISS05B	14-May-97	REG	BARIUM	37.9		
MISS05B	30-Jun-98	REG	BARIUM	26.3		
MISS05B	11-Jul-00	REG	BARIUM	41.6		
MISS05B	18-Jun-01	REG	BARIUM	62.2		
MISS06A	4-Aug-93	REG	BARIUM	80.3	B	
MISS06A	24-May-94	REG	BARIUM	44.3	=	
MISS06A	16-May-95	REG	BARIUM	122	=	
MISS06A	10-May-96	REG	BARIUM	39.4	=	
MISS06A	3-Jun-97	REG	BARIUM	57.9		
MISS06A	1-Jul-98	REG	BARIUM	48.1		
MISS06A	17-May-99	REG	BARIUM	48		
MISS06A	10-Jul-00	REG	BARIUM	51.4		
MISS06A	20-Jun-01	REG	BARIUM	54.8		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS07B	12-Jul-00	REG	BARIUM	20		
B38W01S	28-Jul-93	REG	BERYLLIUM	4	B	
B38W01S	23-May-94	REG	BERYLLIUM	1.1	=	
B38W01S	21-May-95	REG	BERYLLIUM	3.1	=	
B38W01S	17-May-96	REG	BERYLLIUM	2.3	=	
B38W01S	4-Jun-97	REG	BERYLLIUM	2.7		
B38W01S	7-Jul-98	REG	BERYLLIUM	1.9		
B38W01S	11-Jul-01	DUP	BERYLLIUM	2.2		
B38W02D	4-Jun-97	REG	BERYLLIUM	0.24		
B38W02D	28-Jun-01	REG	BERYLLIUM	0.2		
MISS07B	16-Jun-98	REG	BERYLLIUM	0.14		
MISS07B	11-Jun-01	REG	BERYLLIUM	0.36		
B38W14D	4-Jun-97	REG	BERYLLIUM	0.2		
B38W14D	2-Jul-01	REG	BERYLLIUM	0.2		
B38W14S	4-Jun-97	REG	BERYLLIUM	0.28		
B38W14S	2-Jul-01	REG	BERYLLIUM	0.2		
B38W15D	26-May-94	REG	BERYLLIUM	0.5	=	
B38W15D	3-Jun-97	REG	BERYLLIUM	0.24		
B38W15D	27-Jun-01	REG	BERYLLIUM	0.2		
B38W15S	3-Jun-97	REG	BERYLLIUM	0.2		
B38W15S	27-Jun-01	REG	BERYLLIUM	0.2		
B38W17A	28-Jul-93	REG	BERYLLIUM	2.7	B	
B38W17A	3-Jun-97	REG	BERYLLIUM	0.2		
B38W17A	19-Jun-00	REG	BERYLLIUM	0.21		J
B38W17A	14-Jun-01	REG	BERYLLIUM	0.24		
B38W17B	3-Jun-97	REG	BERYLLIUM	0.26		
B38W17B	14-Jun-01	REG	BERYLLIUM	0.44		
B38W18D	15-May-95	REG	BERYLLIUM	1.1	=	
B38W18D	14-May-96	REG	BERYLLIUM	0.84	=	
B38W18D	9-May-97	REG	BERYLLIUM	0.46		
B38W18D	8-Jun-98	REG	BERYLLIUM	0.86		
B38W18D	20-May-99	DUP	BERYLLIUM	0.99		
B38W18D	6-Jul-00	REG	BERYLLIUM	0.52		J
B38W18D	20-Jun-01	REG	BERYLLIUM	0.2		
B38W24D	2-Jun-97	REG	BERYLLIUM	0.52		
B38W24D	2-Jul-98	REG	BERYLLIUM	0.82		
B38W24D	13-May-99	REG	BERYLLIUM	0.42		
B38W24D	5-Jul-01	REG	BERYLLIUM	0.64		
B38W24S	25-May-94	REG	BERYLLIUM	1.5	=	
B38W24S	17-May-95	REG	BERYLLIUM	0.77	=	
B38W24S	9-May-96	REG	BERYLLIUM	2	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24S	2-Jun-97	REG	BERYLLIUM	6.3		
B38W24S	2-Jul-98	REG	BERYLLIUM	4.5		
B38W24S	13-May-99	REG	BERYLLIUM	1.1		
B38W24S	21-Jun-00	REG	BERYLLIUM	1.1		
B38W24S	27-Jun-01	REG	BERYLLIUM	1.4		
B38W25S	3-Aug-93	REG	BERYLLIUM	1.1	B	
B38W25S	5-Jun-97	REG	BERYLLIUM	0.3		
B38W25S	10-Jul-01	REG	BERYLLIUM	0.3		
MISS02B	20-Jul-93	REG	BERYLLIUM	1.8	=	
MISS02B	14-May-96	REG	BERYLLIUM	0.68	=	
MISS02B	19-May-97	REG	BERYLLIUM	0.66		
MISS02B	10-Jun-98	REG	BERYLLIUM	0.74		
MISS02B	18-May-99	REG	BERYLLIUM	0.84		
MISS02B	23-Jun-00	REG	BERYLLIUM	0.57		J
MISS02B	5-Jul-01	REG	BERYLLIUM	0.3		
MISS05A	2-Jun-97	REG	BERYLLIUM	0.48		
MISS05A	29-Jun-98	REG	BERYLLIUM	0.14		
MISS05A	19-Jun-01	REG	BERYLLIUM	0.2		
B38W01S	28-Jul-93	REG	BORON	516	=	
B38W01S	23-May-94	REG	BORON	496	=	
B38W01S	21-May-95	REG	BORON	444	=	
B38W01S	4-Jun-97	REG	BORON	373		
B38W01S	7-Jul-98	REG	BORON	270		
B38W01S	11-Jul-01	DUP	BORON	276		
B38W02D	20-May-95	REG	BORON	125	=	
B38W02D	4-Jun-97	REG	BORON	23.3		
B38W02D	30-Jun-98	REG	BORON	24.8		
B38W02D	20-May-99	REG	BORON	24.2		
B38W02D	28-Jun-01	REG	BORON	19.7		
B38W14D	4-Aug-93	REG	BORON	63.9	=	
B38W14D	20-May-95	REG	BORON	108	=	
B38W14D	4-Jun-97	REG	BORON	49.8		
B38W14D	7-Jul-98	DUP	BORON	49.8		
B38W14D	17-May-99	REG	BORON	47.5		
B38W14D	2-Jul-01	REG	BORON	42.2		
B38W14S	4-Aug-93	REG	BORON	68	=	
B38W14S	20-May-95	REG	BORON	142	=	
B38W14S	4-Jun-97	REG	BORON	40.6		
B38W14S	7-Jul-98	REG	BORON	39.3		
B38W14S	17-May-99	REG	BORON	38.6		
B38W14S	2-Jul-01	REG	BORON	34.5		
B38W15D	2-Aug-93	REG	BORON	297	=	
B38W15D	26-May-94	REG	BORON	520	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W15D	19-May-95	REG	BORON	338	=	
B38W15D	13-May-96	REG	BORON	521	=	
B38W15D	3-Jun-97	REG	BORON	415		
B38W15D	6-Jul-98	REG	BORON	235		
B38W15D	27-Jun-01	DUP	BORON	210		
B38W15S	2-Aug-93	REG	BORON	532	=	
B38W15S	26-May-94	REG	BORON	425	=	
B38W15S	19-May-95	REG	BORON	608	=	
B38W15S	19-May-95	DUP	BORON	566	=	
B38W15S	13-May-96	REG	BORON	432	=	
B38W15S	3-Jun-97	REG	BORON	492		
B38W15S	6-Jul-98	REG	BORON	455		
B38W15S	27-Jun-01	REG	BORON	642		
B38W17A	20-May-95	REG	BORON	156	=	
B38W17A	13-May-96	REG	BORON	143	=	
B38W17A	3-Jun-97	REG	BORON	72.3		
B38W17A	2-Jul-98	REG	BORON	63.7		
B38W17A	13-May-99	REG	BORON	66.2		
B38W17A	14-Jun-01	REG	BORON	62.4		
B38W17B	29-Jul-93	REG	BORON	392	=	
B38W17B	25-May-94	REG	BORON	355	=	
B38W17B	20-May-95	REG	BORON	382	=	
B38W17B	13-May-96	REG	BORON	303	=	
B38W17B	3-Jun-97	REG	BORON	365		
B38W17B	2-Jul-98	REG	BORON	289		
B38W17B	13-May-99	REG	BORON	317		
B38W17B	14-Jun-01	REG	BORON	315		
B38W18D	21-Jul-93	REG	BORON	491	=	
B38W18D	13-May-94	REG	BORON	449	=	J
B38W18D	15-May-95	REG	BORON	425	=	
B38W18D	9-May-97	REG	BORON	405		
B38W18D	8-Jun-98	REG	BORON	425		
B38W18D	20-May-99	REG	BORON	366		
B38W18D	20-Jun-01	REG	BORON	173		
B38W19D	23-Jul-93	REG	BORON	2020	=	
B38W19D	16-May-94	REG	BORON	1020	=	
B38W19D	10-May-95	REG	BORON	885	=	
B38W19D	16-May-96	REG	BORON	762	=	J
B38W19D	16-May-97	REG	BORON	879		
B38W19D	17-Jun-98	REG	BORON	962		
B38W19D	27-May-99	REG	BORON	1120		
B38W19D	13-Jun-01	REG	BORON	717		
B38W19S	27-May-94	REG	BORON	1130	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19S	17-May-95	REG	BORON	1240	=	
B38W19S	10-May-96	REG	BORON	1030	=	
B38W19S	29-Jun-98	REG	BORON	741		
B38W19S	14-May-99	REG	BORON	756		
B38W19S	13-Jun-01	REG	BORON	746		
B38W24D	9-Aug-93	REG	BORON	142	=	
B38W24D	9-May-96	REG	BORON	138	=	
B38W24D	2-Jun-97	REG	BORON	90.4		
B38W24D	2-Jul-98	REG	BORON	76.6		
B38W24D	13-May-99	REG	BORON	98.3		
B38W24D	5-Jul-01	REG	BORON	89.4		
B38W24S	5-Aug-93	REG	BORON	104	=	
B38W24S	17-May-95	REG	BORON	132	=	
B38W24S	9-May-96	REG	BORON	105	=	
B38W24S	2-Jun-97	REG	BORON	79.3		
B38W24S	2-Jul-98	REG	BORON	82		
B38W24S	13-May-99	REG	BORON	104		
B38W24S	27-Jun-01	REG	BORON	92.8		
B38W25D	3-Aug-93	REG	BORON	168	=	
B38W25D	18-May-94	REG	BORON	172	=	
B38W25D	12-May-95	REG	BORON	236	=	J
B38W25D	15-May-96	REG	BORON	159	=	
B38W25D	15-May-97	REG	BORON	154		
B38W25D	1-Jul-98	REG	BORON	138		
B38W25D	26-May-99	REG	BORON	146		
B38W25D	10-Jul-01	REG	BORON	128		
B38W25S	3-Aug-93	REG	BORON	134	=	
B38W25S	24-May-94	REG	BORON	133	=	UJ
B38W25S	15-May-95	REG	BORON	227	=	
B38W25S	15-May-95	DUP	BORON	171	=	
B38W25S	15-May-96	REG	BORON	150	=	
B38W25S	15-May-96	DUP	BORON	142	=	
B38W25S	5-Jun-97	REG	BORON	126		
B38W25S	1-Jul-98	REG	BORON	98.4		
B38W25S	17-May-99	REG	BORON	79.6		
B38W25S	10-Jul-01	REG	BORON	79.3		
MISS01AA	31-Jul-93	REG	BORON	189	=	
MISS01AA	23-May-94	REG	BORON	204	=	
MISS01AA	18-May-95	REG	BORON	222	=	
MISS01AA	9-May-96	REG	BORON	178	=	
MISS01AA	23-May-97	REG	BORON	234		
MISS01AA	18-Jun-98	REG	BORON	270		
MISS01AA	12-May-99	REG	BORON	278		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	20-Jun-01	REG	BORON	376		
MISS01B	21-Jul-93	REG	BORON	106	=	
MISS01B	21-Jul-93	REG	BORON	85.3	=	
MISS01B	15-May-96	REG	BORON	94.9	=	
MISS01B	18-Jun-98	REG	BORON	72.1		
MISS01B	25-May-99	REG	BORON	61.6		
MISS01B	19-Jun-01	REG	BORON	62.4		
MISS02A	20-Jul-93	REG	BORON	1300	=	
MISS02A	12-May-94	REG	BORON	897	=	J
MISS02A	10-May-95	REG	BORON	1190	=	
MISS02A	16-May-96	REG	BORON	878	=	J
MISS02A	15-May-97	REG	BORON	1000		
MISS02A	15-May-97	DUP	BORON	910		
MISS02A	11-Jun-98	DUP	BORON	818		
MISS02A	18-May-99	REG	BORON	1680		
MISS02A	5-Jul-01	REG	BORON	977		
MISS02B	20-Jul-93	REG	BORON	2150	=	
MISS02B	13-May-94	REG	BORON	1260	=	J
MISS02B	9-May-95	REG	BORON	1220	=	
MISS02B	14-May-96	REG	BORON	1680	=	
MISS02B	19-May-97	REG	BORON	1450		
MISS02B	10-Jun-98	REG	BORON	1620		
MISS02B	18-May-99	REG	BORON	1580		
MISS02B	5-Jul-01	REG	BORON	4110		
MISS05A	27-May-94	REG	BORON	420	=	
MISS05A	12-May-95	REG	BORON	588	=	J
MISS05A	10-May-96	REG	BORON	385	=	
MISS05A	2-Jun-97	REG	BORON	402		
MISS05A	29-Jun-98	REG	BORON	291		
MISS05A	14-May-99	REG	BORON	352		
MISS05A	19-Jun-01	REG	BORON	326		
MISS05B	17-May-94	REG	BORON	747	=	
MISS05B	11-May-95	REG	BORON	665	=	J
MISS05B	14-May-97	REG	BORON	662		
MISS05B	30-Jun-98	REG	BORON	281		
MISS05B	23-Jul-93	REG	BORON	806	=	
MISS05B	18-Jun-01	REG	BORON	371		
MISS06A	4-Aug-93	REG	BORON	1800	=	
MISS06A	24-May-94	REG	BORON	498	=	J
MISS06A	16-May-95	REG	BORON	2080	=	
MISS06A	10-May-96	REG	BORON	326	=	
MISS06A	3-Jun-97	REG	BORON	482		
MISS06A	1-Jul-98	REG	BORON	327		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS06A	17-May-99	REG	BORON	352		
MISS06A	20-Jun-01	REG	BORON	165		
MISS07B	22-Jul-93	REG	BORON	1180	=	
MISS07B	18-May-94	REG	BORON	757	=	
MISS07B	11-May-95	REG	BORON	1210	=	J
MISS07B	16-May-96	REG	BORON	963	=	
MISS07B	16-May-97	REG	BORON	1050		
MISS07B	16-Jun-98	REG	BORON	1260		
MISS07B	27-May-99	REG	BORON	1670		
MISS07B	11-Jun-01	REG	BORON	2860		
B38W01S	23-May-94	REG	CADMIUM	2.4	=	
B38W01S	4-Jun-97	REG	CADMIUM	0.66		
B38W01S	7-Jul-98	REG	CADMIUM	1.2		
B38W01S	11-Jul-01	REG	CADMIUM	0.37		
B38W14D	4-Aug-93	REG	CADMIUM	9.7	=	J
B38W14D	4-Jun-97	REG	CADMIUM	1		
B38W14D	7-Jul-98	DUP	CADMIUM	2.4		
B38W14D	7-Jul-98	REG	CADMIUM	2.4		
B38W14D	5-Jul-00	REG	CADMIUM	2.9		
B38W14D	2-Jul-01	REG	CADMIUM	4.7		
B38W14S	4-Aug-93	REG	CADMIUM	9.5	=	J
B38W14S	4-Jun-97	REG	CADMIUM	1.3		
B38W14S	7-Jul-98	REG	CADMIUM	11.9		
B38W14S	5-Jul-00	REG	CADMIUM	1.1		
B38W14S	2-Jul-01	REG	CADMIUM	0.48		
B38W15D	2-Aug-93	REG	CADMIUM	6.4	=	
B38W15D	6-Jul-98	REG	CADMIUM	0.44		
B38W15D	27-Jun-01	DUP	CADMIUM	0.82		
B38W15S	3-Jun-97	REG	CADMIUM	2.6		
B38W15S	6-Jul-98	REG	CADMIUM	2.2		
B38W15S	27-Jun-01	REG	CADMIUM	0.51		
B38W17A	2-Jul-98	REG	CADMIUM	0.79		
B38W17A	14-Jun-01	REG	CADMIUM	0.3		
B38W17B	3-Jun-97	REG	CADMIUM	0.33		
B38W17B	2-Jul-98	REG	CADMIUM	0.36		
B38W17B	14-Jun-01	REG	CADMIUM	0.3		
B38W19D	16-May-97	REG	CADMIUM	0.44		
B38W19D	17-Jun-98	REG	CADMIUM	0.26		
B38W19D	13-Jun-01	REG	CADMIUM	0.3		
B38W19S	29-Jun-98	REG	CADMIUM	0.54		
B38W19S	13-Jun-01	REG	CADMIUM	0.3		
B38W24D	2-Jul-98	REG	CADMIUM	2.6		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24D	5-Jul-01	REG	CADMIUM	0.69		
B38W24S	2-Jul-98	REG	CADMIUM	0.79		
B38W24S	27-Jun-01	REG	CADMIUM	0.44		
B38W25S	5-Jun-97	REG	CADMIUM	0.4		
B38W25S	1-Jul-98	REG	CADMIUM	1.4		
B38W25S	7-Jul-00	REG	CADMIUM	1.4		
B38W25S	10-Jul-01	REG	CADMIUM	0.46		
MISS01AA	31-Jul-93	REG	CADMIUM	7	=	
MISS01AA	23-May-97	REG	CADMIUM	1.4		
MISS01AA	18-Jun-98	REG	CADMIUM	0.82		
MISS01AA	20-Jun-01	REG	CADMIUM	0.3		
MISS02A	12-May-94	REG	CADMIUM	7.9	=	
MISS02A	15-May-97	REG	CADMIUM	0.46		
MISS02A	15-May-97	DUP	CADMIUM	0.32		
MISS02A	5-Jul-01	REG	CADMIUM	0.3		
MISS02B	23-Jun-00	REG	CADMIUM	0.97		
MISS05A	29-Jun-98	REG	CADMIUM	0.98		
MISS05A	19-Jun-01	REG	CADMIUM	0.3		
MISS05B	30-Jun-98	REG	CADMIUM	0.48		
MISS05B	18-Jun-01	REG	CADMIUM	0.3		
MISS06A	24-May-94	REG	CADMIUM	4.2	=	UJ
MISS06A	3-Jun-97	REG	CADMIUM	2.6		
MISS06A	1-Jul-98	REG	CADMIUM	2.2		
MISS06A	10-Jul-00	REG	CADMIUM	1.5		
MISS06A	20-Jun-01	REG	CADMIUM	2.7		
B38W01S	28-Jul-93	REG	CALCIUM	427000	=	
B38W01S	23-May-94	REG	CALCIUM	392000	=	
B38W01S	21-May-95	REG	CALCIUM	371000	=	
B38W01S	17-May-96	REG	CALCIUM	420000	=	
B38W01S	4-Jun-97	REG	CALCIUM	433000		
B38W01S	7-Jul-98	REG	CALCIUM	404000		
B38W02D	27-Jul-93	REG	CALCIUM	89000	=	
B38W02D	19-May-94	REG	CALCIUM	77700	=	
B38W02D	20-May-95	REG	CALCIUM	73700	=	
B38W02D	17-May-96	REG	CALCIUM	87700	=	
B38W02D	4-Jun-97	REG	CALCIUM	88700		
B38W02D	30-Jun-98	REG	CALCIUM	84700		
B38W02D	20-May-99	REG	CALCIUM	95600		
B38W02D	13-Jul-00	REG	CALCIUM	86300		
B38W14D	4-Aug-93	REG	CALCIUM	97900	=	J
B38W14D	20-May-95	REG	CALCIUM	77400	=	
B38W14D	17-May-96	REG	CALCIUM	111000	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14D	4-Jun-97	REG	CALCIUM	110000		
B38W14D	7-Jul-98	DUP	CALCIUM	109000		
B38W14D	17-May-99	DUP	CALCIUM	119000		
B38W14D	5-Jul-00	REG	CALCIUM	102000		
B38W14S	4-Aug-93	REG	CALCIUM	47800	=	J
B38W14S	20-May-95	REG	CALCIUM	70800	=	
B38W14S	17-May-96	REG	CALCIUM	99700	=	
B38W14S	17-May-96	DUP	CALCIUM	90600	=	
B38W14S	4-Jun-97	REG	CALCIUM	90500		
B38W14S	7-Jul-98	REG	CALCIUM	85200		
B38W14S	17-May-99	REG	CALCIUM	95600		
B38W14S	5-Jul-00	REG	CALCIUM	94600		
B38W15D	2-Aug-93	REG	CALCIUM	48600	=	
B38W15D	26-May-94	REG	CALCIUM	92800	=	
B38W15D	19-May-95	REG	CALCIUM	58700	=	J
B38W15D	13-May-96	REG	CALCIUM	98600	=	J
B38W15D	3-Jun-97	REG	CALCIUM	71300		
B38W15D	6-Jul-98	REG	CALCIUM	44400		
B38W15D	26-Jun-00	REG	CALCIUM	102000		
B38W15S	2-Aug-93	REG	CALCIUM	75700	=	
B38W15S	26-May-94	REG	CALCIUM	55100	=	
B38W15S	19-May-95	REG	CALCIUM	80500	=	J
B38W15S	19-May-95	DUP	CALCIUM	75100	=	J
B38W15S	13-May-96	REG	CALCIUM	52500	=	J
B38W15S	3-Jun-97	REG	CALCIUM	57200		
B38W15S	6-Jul-98	REG	CALCIUM	55400		
B38W15S	26-Jun-00	REG	CALCIUM	80500		
B38W17A	28-Jul-93	REG	CALCIUM	133000	=	
B38W17A	25-May-94	REG	CALCIUM	75000	=	
B38W17A	20-May-95	REG	CALCIUM	57300	=	
B38W17A	13-May-96	REG	CALCIUM	93800	=	J
B38W17A	3-Jun-97	REG	CALCIUM	53400		
B38W17A	2-Jul-98	REG	CALCIUM	60800		
B38W17A	17-May-99	DUP	CALCIUM	88300		
B38W17A	19-Jun-00	REG	CALCIUM	54000		
B38W17B	29-Jul-93	REG	CALCIUM	219000	=	J
B38W17B	25-May-94	REG	CALCIUM	291000	=	
B38W17B	20-May-95	REG	CALCIUM	223000	=	
B38W17B	13-May-96	REG	CALCIUM	309000	=	J
B38W17B	3-Jun-97	REG	CALCIUM	313000		
B38W17B	2-Jul-98	REG	CALCIUM	235000		
B38W17B	13-May-99	REG	CALCIUM	303000		
B38W17B	19-Jun-00	REG	CALCIUM	258000		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W18D	21-Jul-93	REG	CALCIUM	151000	=	
B38W18D	13-May-94	REG	CALCIUM	164000	=	J
B38W18D	15-May-95	REG	CALCIUM	154000	=	
B38W18D	14-May-96	REG	CALCIUM	166000	=	
B38W18D	9-May-97	REG	CALCIUM	154000		
B38W18D	8-Jun-98	REG	CALCIUM	162000		
B38W18D	20-May-99	REG	CALCIUM	161000		
B38W18D	6-Jul-00	REG	CALCIUM	143000		
B38W19D	23-Jul-93	REG	CALCIUM	214000	=	
B38W19D	16-May-94	REG	CALCIUM	296000	=	
B38W19D	10-May-95	REG	CALCIUM	180000	=	
B38W19D	16-May-96	REG	CALCIUM	262000	=	
B38W19D	16-May-97	REG	CALCIUM	256000		
B38W19D	17-Jun-98	REG	CALCIUM	226000		
B38W19D	17-Jun-98	REG	CALCIUM	209000		
B38W19D	27-May-99	REG	CALCIUM	258000		
B38W19D	12-Jul-00	REG	CALCIUM	192000		
B38W19S	27-May-94	REG	CALCIUM	629000	=	
B38W19S	17-May-95	REG	CALCIUM	657000	=	
B38W19S	10-May-96	REG	CALCIUM	611000	=	J
B38W19S	29-Jun-98	REG	CALCIUM	670000		
B38W19S	27-May-99	REG	CALCIUM	654000		
B38W24D	9-Aug-93	REG	CALCIUM	80700	=	J
B38W24D	18-May-94	REG	CALCIUM	81300	=	
B38W24D	17-May-95	REG	CALCIUM	69700	=	
B38W24D	9-May-96	REG	CALCIUM	98300	=	J
B38W24D	2-Jun-97	REG	CALCIUM	83600		
B38W24D	2-Jul-98	REG	CALCIUM	82900		
B38W24D	14-May-99	REG	CALCIUM	98800		
B38W24D	22-Jun-00	REG	CALCIUM	89800		
B38W24S	5-Aug-93	REG	CALCIUM	42600	=	J
B38W24S	25-May-94	REG	CALCIUM	54000	=	
B38W24S	17-May-95	REG	CALCIUM	57000	=	
B38W24S	9-May-96	REG	CALCIUM	61300	=	J
B38W24S	2-Jun-97	REG	CALCIUM	43900		
B38W24S	2-Jul-98	REG	CALCIUM	41000		
B38W24S	13-May-99	REG	CALCIUM	67100		
B38W24S	21-Jun-00	REG	CALCIUM	56700		
B38W25D	3-Aug-93	REG	CALCIUM	152000	=	
B38W25D	18-May-94	REG	CALCIUM	117000	=	
B38W25D	12-May-95	REG	CALCIUM	144000	=	
B38W25D	15-May-96	REG	CALCIUM	134000	=	J
B38W25D	15-May-97	REG	CALCIUM	109000		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W25D	1-Jul-98	REG	CALCIUM	109000		
B38W25D	26-May-99	REG	CALCIUM	109000		
B38W25D	7-Jul-00	REG	CALCIUM	99500		
B38W25S	3-Aug-93	REG	CALCIUM	255000	=	
B38W25S	24-May-94	REG	CALCIUM	189000	=	J
B38W25S	15-May-95	REG	CALCIUM	208000	=	
B38W25S	15-May-95	DUP	CALCIUM	199000	=	
B38W25S	15-May-96	REG	CALCIUM	162000	=	J
B38W25S	15-May-96	DUP	CALCIUM	183000	=	J
B38W25S	5-Jun-97	REG	CALCIUM	169000		
B38W25S	1-Jul-98	REG	CALCIUM	144000		
B38W25S	1-May-99	REG	CALCIUM	185000		
B38W25S	7-Jul-00	REG	CALCIUM	186000		
MISS01AA	31-Jul-93	REG	CALCIUM	616000	=	J
MISS01AA	23-May-94	REG	CALCIUM	564000	=	
MISS01AA	18-May-95	REG	CALCIUM	714000	=	
MISS01AA	9-May-96	REG	CALCIUM	555000	=	J
MISS01AA	23-May-97	REG	CALCIUM	616000		
MISS01AA	18-Jun-98	REG	CALCIUM	645000		
MISS01AA	12-May-99	REG	CALCIUM	645000		
MISS01AA	20-Jun-00	REG	CALCIUM	544000		
MISS01B	21-Jul-93	REG	CALCIUM	92200	=	
MISS01B	16-May-94	REG	CALCIUM	90800	=	
MISS01B	10-May-95	REG	CALCIUM	84500	=	
MISS01B	15-May-96	REG	CALCIUM	97100	=	J
MISS01B	18-Jun-98	REG	CALCIUM	91900		
MISS01B	25-May-99	REG	CALCIUM	96600		
MISS02A	20-Jul-93	REG	CALCIUM	164000	=	
MISS02A	12-May-94	REG	CALCIUM	79400	=	J
MISS02A	10-May-95	REG	CALCIUM	54500	=	
MISS02A	16-May-96	REG	CALCIUM	67600	=	
MISS02A	15-May-97	REG	CALCIUM	66700		J
MISS02A	15-May-97	DUP	CALCIUM	62400		J
MISS02A	11-Jun-98	DUP	CALCIUM	106000		
MISS02A	81-May-99	REG	CALCIUM	116000		
MISS02A	22-Jun-00	REG	CALCIUM	116000		
MISS02B	20-Jul-93	REG	CALCIUM	295000	=	
MISS02B	13-May-94	REG	CALCIUM	221000	=	J
MISS02B	9-May-95	REG	CALCIUM	248000	=	
MISS02B	14-May-96	REG	CALCIUM	275000	=	
MISS02B	19-May-97	REG	CALCIUM	272000		
MISS02B	10-Jun-98	REG	CALCIUM	304000		
MISS02B	18-May-99	DUP	CALCIUM	304000		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02B	23-Jun-00	REG	CALCIUM	240000		
MISS05A	27-May-94	REG	CALCIUM	582000	=	
MISS05A	12-May-95	REG	CALCIUM	683000	=	
MISS05A	10-May-96	REG	CALCIUM	603000	=	J
MISS05A	2-Jun-97	REG	CALCIUM	612000		
MISS05A	29-Jun-98	REG	CALCIUM	591000		
MISS05A	14-May-99	REG	CALCIUM	677000		
MISS05B	23-Jul-93	REG	CALCIUM	315000	=	
MISS05B	17-May-94	REG	CALCIUM	339000	=	
MISS05B	11-May-95	REG	CALCIUM	295000	=	
MISS05B	16-May-96	REG	CALCIUM	322000	=	
MISS05B	14-May-97	REG	CALCIUM	340000		
MISS05B	30-Jun-98	REG	CALCIUM	143000		
MISS05B	11-Jul-00	REG	CALCIUM	201000		
MISS06A	4-Aug-93	REG	CALCIUM	218000	=	J
MISS06A	24-May-94	REG	CALCIUM	249000	=	J
MISS06A	16-May-95	REG	CALCIUM	292000	=	
MISS06A	10-May-96	REG	CALCIUM	225000	=	J
MISS06A	3-Jun-97	REG	CALCIUM	273000		
MISS06A	1-Jul-98	REG	CALCIUM	198000		
MISS06A	17-May-99	DUP	CALCIUM	252000		
MISS06A	10-Jul-00	REG	CALCIUM	168000		
MISS07B	22-Jul-93	REG	CALCIUM	180000	=	
MISS07B	22-Jul-93	REG	CALCIUM	175000	=	
MISS07B	16-Jun-98	REG	CALCIUM	160000		
MISS07B	27-May-99	DUP	CALCIUM	250000		
MISS07B	12-Jul-00	REG	CALCIUM	138000		
B38W02D	27-Jul-93	REG	CHROMIUM	7.9	B	
B38W02D	17-May-96	REG	CHROMIUM	38.3	=	
B38W02D	4-Jun-97	REG	CHROMIUM	20.8		
B38W02D	30-Jun-98	REG	CHROMIUM	371		
B38W02D	20-May-99	REG	CHROMIUM	9.7		
B38W02D	13-Jul-00	REG	CHROMIUM	98.4		J
B38W02D	28-Jun-01	REG	CHROMIUM	48.9		
B38W14D	4-Jun-97	REG	CHROMIUM	21.2		
B38W14D	7-Jul-98	REG	CHROMIUM	3.9		
B38W14D	7-Jul-98	DUP	CHROMIUM	2.6		
B38W14D	17-May-99	REG	CHROMIUM	1		
B38W14D	2-Jul-01	REG	CHROMIUM	8.7		
B38W14S	20-May-95	REG	CHROMIUM	35.9	=	
B38W14S	17-May-96	REG	CHROMIUM	345	=	
B38W14S	17-May-96	DUP	CHROMIUM	296	=	
B38W14S	4-Jun-97	REG	CHROMIUM	354		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14S	7-Jul-98	REG	CHROMIUM	420		
B38W14S	17-May-99	REG	CHROMIUM	67.2		
B38W14S	5-Jul-00	REG	CHROMIUM	7.5		
B38W14S	2-Jul-01	REG	CHROMIUM	0.9		
B38W15D	2-Aug-93	REG	CHROMIUM	9.3	B	
B38W15D	3-Jun-97	REG	CHROMIUM	2.2		
B38W15D	6-Jul-98	REG	CHROMIUM	6.5		
B38W15D	27-Jun-01	REG	CHROMIUM	19.5		
B38W15S	3-Jun-97	REG	CHROMIUM	1.8		
B38W15S	6-Jul-98	REG	CHROMIUM	5.5		
B38W15S	27-Jun-01	REG	CHROMIUM	2.9		
B38W17A	28-Jul-93	REG	CHROMIUM	21000	=	
B38W17A	25-May-94	REG	CHROMIUM	122	=	
B38W17A	20-May-95	REG	CHROMIUM	56.6	=	
B38W17A	13-May-96	REG	CHROMIUM	632	=	
B38W17A	3-Jun-97	REG	CHROMIUM	1880		
B38W17A	2-Jul-98	REG	CHROMIUM	5350		
B38W17A	13-May-99	REG	CHROMIUM	66.3		
B38W17A	19-Jun-00	REG	CHROMIUM	1590		
B38W17A	14-Jun-01	REG	CHROMIUM	3.9		
B38W17B	3-Jun-97	REG	CHROMIUM	0.84		
B38W17B	2-Jul-98	REG	CHROMIUM	2.8		
B38W17B	13-May-99	REG	CHROMIUM	1.4		
B38W17B	19-Jun-00	REG	CHROMIUM	12.9		
B38W17B	14-Jun-01	REG	CHROMIUM	3.6		
B38W18D	21-Jul-93	REG	CHROMIUM	27.2	=	
B38W18D	13-May-94	REG	CHROMIUM	25.8	=	J
B38W18D	15-May-95	REG	CHROMIUM	29.9	=	
B38W18D	14-May-96	REG	CHROMIUM	30.8	=	J
B38W18D	9-May-97	REG	CHROMIUM	26.9		
B38W18D	8-Jun-98	REG	CHROMIUM	83.4		
B38W18D	20-May-99	REG	CHROMIUM	39.5		
B38W18D	6-Jul-00	REG	CHROMIUM	28		
B38W18D	20-Jun-01	REG	CHROMIUM	10.3		
B38W19D	16-May-94	REG	CHROMIUM	5.1	=	
B38W19D	16-May-97	REG	CHROMIUM	3.4		
B38W19D	12-Jul-00	REG	CHROMIUM	2.8		
B38W19D	13-Jun-01	REG	CHROMIUM	5		
B38W19S	29-Jun-98	REG	CHROMIUM	2.9		
B38W19S	14-May-99	REG	CHROMIUM	2.6		
B38W19S	13-Jun-01	REG	CHROMIUM	0.9		
B38W24D	9-Aug-93	REG	CHROMIUM	8.9	B	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24D	18-May-94	REG	CHROMIUM	6.2	=	
B38W24D	9-May-96	REG	CHROMIUM	6.2	=	
B38W24D	2-Jul-98	REG	CHROMIUM	17.9		
B38W24D	13-May-99	REG	CHROMIUM	6.4		
B38W24D	5-Jul-01	REG	CHROMIUM	5.4		
B38W24S	25-May-94	REG	CHROMIUM	4.9	=	
B38W24S	2-Jun-97	REG	CHROMIUM	4.5		
B38W24S	21-Jun-00	REG	CHROMIUM	5.6		
B38W24S	27-Jun-01	REG	CHROMIUM	0.9		
B38W25D	18-May-94	REG	CHROMIUM	8.8	=	
B38W25D	12-May-95	REG	CHROMIUM	36.5	=	J
B38W25D	15-May-97	REG	CHROMIUM	6.2		
B38W25D	1-Jul-98	REG	CHROMIUM	3.2		
B38W25D	7-Jul-00	REG	CHROMIUM	5.3		
B38W25D	10-Jul-01	DUP	CHROMIUM	5.4		
B38W25S	3-Aug-93	REG	CHROMIUM	210	=	
B38W25S	15-May-95	REG	CHROMIUM	14.6	=	
B38W25S	15-May-95	DUP	CHROMIUM	12.7	=	
B38W25S	15-May-96	REG	CHROMIUM	4.9	=	
B38W25S	5-Jun-97	REG	CHROMIUM	20.7		
B38W25S	1-Jul-98	REG	CHROMIUM	50.7		
B38W25S	17-May-99	REG	CHROMIUM	106		
B38W25S	7-Jul-00	REG	CHROMIUM	48.4		
B38W25S	10-Jul-01	REG	CHROMIUM	3.5		
MISS01AA	31-Jul-93	REG	CHROMIUM	54.9	=	
MISS01AA	23-May-94	REG	CHROMIUM	285	=	
MISS01AA	23-May-97	REG	CHROMIUM	2.1		
MISS01AA	18-Jun-98	REG	CHROMIUM	7.4		
MISS01AA	12-May-99	REG	CHROMIUM	1		
MISS01AA	20-Jun-00	REG	CHROMIUM	4.4		
MISS01AA	20-Jun-01	REG	CHROMIUM	0.9		
MISS01B	20-Jun-00	REG	CHROMIUM	1.7		J
MISS02A	20-Jul-93	REG	CHROMIUM	157	=	
MISS02A	12-May-94	REG	CHROMIUM	15.1	=	J
MISS02A	10-May-95	REG	CHROMIUM	94.5	=	
MISS02A	15-May-97	REG	CHROMIUM	24.3		
MISS02A	15-May-97	DUP	CHROMIUM	22.3		
MISS02A	11-Jun-98	DUP	CHROMIUM	26.8		
MISS02A	18-May-99	REG	CHROMIUM	94.1		
MISS02A	22-Jun-00	REG	CHROMIUM	69.2		
MISS02A	5-Jul-01	REG	CHROMIUM	19.7		
MISS02B	20-Jul-93	REG	CHROMIUM	5.1	=	
MISS02B	9-May-95	REG	CHROMIUM	5.3	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02B	19-May-97	REG	CHROMIUM	5.1		
MISS02B	10-Jun-98	REG	CHROMIUM	6.2		
MISS02B	18-May-99	REG	CHROMIUM	7.5		
MISS02B	23-Jun-00	REG	CHROMIUM	24.1		
MISS02B	5-Jul-01	REG	CHROMIUM	24.9		
MISS05B	11-May-95	REG	CHROMIUM	10.9	=	
MISS05B	14-May-97	REG	CHROMIUM	2.9		
MISS05B	30-Jun-98	REG	CHROMIUM	10.8		
MISS05B	11-Jul-00	REG	CHROMIUM	2.4		
MISS05B	18-Jun-01	REG	CHROMIUM	5.9		
MISS06A	10-Jul-00	REG	CHROMIUM	16.8		
B38W07B	16-Jun-98	REG	CHROMIUM	1.6		
B38W02D	4-Jun-97	REG	COBALT	1.1		
B38W02D	30-Jun-98	REG	COBALT	1.6		
B38W02D	13-Jul-00	REG	COBALT	1.4		J
B38W02D	28-Jun-01	REG	COBALT	42.1		
B38W14D	7-Jul-98	REG	COBALT	0.42		
B38W14D	2-Jul-01	REG	COBALT	13.5		
B38W14S	4-Aug-93	REG	COBALT	20.1	B	
B38W14S	4-Jun-97	REG	COBALT	0.97		
B38W14S	7-Jul-98	REG	COBALT	2.2		
B38W14S	17-May-99	REG	COBALT	1.5		
B38W14S	2-Jul-01	REG	COBALT	0.8		
B38W15D	3-Jun-97	REG	COBALT	2.5		
B38W15D	6-Jul-98	REG	COBALT	1.4		
B38W15D	27-Jun-01	DUP	COBALT	21.4		
B38W15S	3-Jun-97	REG	COBALT	1.4		
B38W15S	6-Jul-98	REG	COBALT	0.69		
B38W15S	2-Jul-01	REG	COBALT	0.8		
B38W17A	28-Jul-93	REG	COBALT	57	=	
B38W17A	25-May-94	REG	COBALT	5.8	=	
B38W17A	3-Jun-97	REG	COBALT	1.6		
B38W17A	2-Jul-98	REG	COBALT	8.1		
B38W17A	13-May-99	DUP	COBALT	1.2		
B38W17A	19-Jun-00	REG	COBALT	13		
B38W17A	14-Jun-01	REG	COBALT	1.6		
B38W18D	21-Jul-93	REG	COBALT	17.7	B	
B38W18D	13-May-94	REG	COBALT	19.1	=	J
B38W18D	15-May-95	REG	COBALT	18.5	=	
B38W18D	14-May-96	REG	COBALT	16.9	=	
B38W18D	9-May-97	REG	COBALT	11.5		
B38W18D	8-Jun-98	REG	COBALT	13.3		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W18D	20-May-99	REG	COBALT	15.7		
B38W18D	20-Jun-01	REG	COBALT	49.2		
B38W19D	12-Jul-00	REG	COBALT	0.5		J
B38W19D	13-Jun-01	REG	COBALT	14.2		
B38W24D	9-Aug-93	REG	COBALT	12	B	
B38W24D	2-Jul-98	REG	COBALT	0.74		
B38W24D	5-Jul-01	REG	COBALT	1.2		
B38W24S	21-Jun-00	REG	COBALT	0.72		J
B38W25S	3-Aug-93	REG	COBALT	14.6	B	
B38W25S	15-May-95	REG	COBALT	3.6	=	
B38W25S	5-Jun-97	REG	COBALT	1.5		
B38W25S	1-Jul-98	REG	COBALT	2.4		
B38W25S	17-May-99	REG	COBALT	3.2		
B38W25S	10-Jul-01	REG	COBALT	24		
MISS02A	15-May-97	REG	COBALT	1		
MISS02A	15-May-97	DUP	COBALT	0.98		
MISS02A	11-Jun-98	DUP	COBALT	1.1		
MISS02A	18-May-99	DUP	COBALT	2.2		
MISS02A	5-Jul-01	REG	COBALT	1		
MISS02B	13-May-94	REG	COBALT	7	=	J
MISS02B	9-May-95	REG	COBALT	5.4	=	
MISS02B	19-May-97	REG	COBALT	3.3		
MISS02B	10-Jun-98	REG	COBALT	2.8		
MISS02B	18-May-99	REG	COBALT	3		
MISS02B	5-Jul-01	REG	COBALT	11		
MISS05A	12-May-95	REG	COBALT	9.1	=	
MISS05A	2-Jun-97	REG	COBALT	1.4		
MISS05A	29-Jun-98	REG	COBALT	1.3		
MISS05A	14-May-99	REG	COBALT	14.1		
MISS05A	19-Jun-01	REG	COBALT	2.8		
MISS06A	24-May-94	REG	COBALT	4.2	=	
MISS06A	3-Jun-97	REG	COBALT	0.95		
MISS06A	1-Jul-98	REG	COBALT	0.64		
MISS06A	10-Jul-00	REG	COBALT	1.2		J
MISS06A	20-Jun-01	REG	COBALT	0.8		
B38W07B	16-Jun-98	REG	COBALT	4.4		
B38W07B	27-May-99	DUP	COBALT	5.3		
B38W07B	12-Jul-00	REG	COBALT	3.6		
B38W02D	19-May-94	REG	COPPER	3.8	=	
B38W02D	4-Jun-97	REG	COPPER	2.4		
B38W02D	30-Jun-98	REG	COPPER	8.7		
B38W02D	20-May-99	REG	COPPER	2.9		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W02D	28-Jun-01	REG	COPPER	4		
B38W14D	4-Aug-93	REG	COPPER	33.1	=	
B38W14D	20-May-95	REG	COPPER	5.7	=	
B38W14D	4-Jun-97	REG	COPPER	15.7		
B38W14D	7-Jul-98	REG	COPPER	13		
B38W14D	7-Jul-98	DUP	COPPER	11.8		
B38W14D	17-May-99	DUP	COPPER	3.6		
B38W14D	5-Jul-00	REG	COPPER	21.6		
B38W14D	2-Jul-01	REG	COPPER	19.4		
B38W14S	4-Aug-93	REG	COPPER	14.7	B	
B38W14S	20-May-95	REG	COPPER	4.1	=	
B38W14S	4-Jun-97	REG	COPPER	8.9		
B38W14S	7-Jul-98	REG	COPPER	22.3		
B38W14S	17-May-99	REG	COPPER	4.9		
B38W14S	5-Jul-00	REG	COPPER	2.5		
B38W14S	2-Jul-01	REG	COPPER	1.4		
B38W15D	2-Aug-93	REG	COPPER	33.7	=	
B38W15D	13-May-96	REG	COPPER	9.7	=	
B38W15D	3-Jun-97	REG	COPPER	2.6		
B38W15D	6-Jul-98	REG	COPPER	9.2		
B38W15D	26-Jun-00	REG	COPPER	1.3		
B38W15D	27-Jun-01	REG	COPPER	13.6		
B38W15S	19-May-95	REG	COPPER	9.3	=	
B38W15S	19-May-95	DUP	COPPER	6.4	=	
B38W15S	3-Jun-97	REG	COPPER	5.4		
B38W15S	6-Jul-98	REG	COPPER	21.8		
B38W15S	26-Jun-00	REG	COPPER	4.1		
B38W15S	27-Jun-01	REG	COPPER	18.9		
B38W17A	28-Jul-93	REG	COPPER	118	=	
B38W17A	25-May-94	REG	COPPER	7.6	=	
B38W17A	13-May-96	REG	COPPER	8.4	=	
B38W17A	3-Jun-97	REG	COPPER	10		
B38W17A	2-Jul-98	REG	COPPER	36.6		
B38W17A	13-May-99	REG	COPPER	2.9		
B38W17A	14-Jun-01	REG	COPPER	2		
B38W17B	2-Jul-98	REG	COPPER	2.1		
B38W17B	13-May-99	REG	COPPER	1.2		
B38W17B	14-Jun-01	REG	COPPER	0.7		
B38W18D	6-Jul-00	REG	COPPER	2.4		
B38W18D	20-Jun-01	REG	COPPER	0.78		
B38W19D	16-May-97	REG	COPPER	3.9		
B38W19D	17-Jun-98	REG	COPPER	1		
B38W19D	13-Jun-01	REG	COPPER	0.7		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19S	17-May-95	REG	COPPER	4.8	=	
B38W19S	29-Jun-98	REG	COPPER	2.8		
B38W19S	13-Jun-01	REG	COPPER	0.7		
B38W24D	9-Aug-93	REG	COPPER	6	B	
B38W24D	18-May-94	REG	COPPER	3.4	=	
B38W24D	2-Jun-97	REG	COPPER	1.3		
B38W24D	2-Jul-98	REG	COPPER	10.4		
B38W24D	13-May-99	REG	COPPER	3		
B38W24D	5-Jul-01	REG	COPPER	4.6		
B38W24S	5-Aug-93	REG	COPPER	8.8	B	
B38W24S	2-Jun-97	REG	COPPER	24.2		
B38W24S	2-Jul-98	REG	COPPER	2.8		
B38W24S	13-May-99	REG	COPPER	9.4		
B38W24S	27-Jun-01	REG	COPPER	1.3		
B38W25D	15-May-97	REG	COPPER	4.6		
B38W25D	1-Jul-98	REG	COPPER	1.3		
B38W25D	7-Jul-00	REG	COPPER	0.54		J
B38W25D	10-Jul-01	DUP	COPPER	2		
B38W25S	3-Aug-93	REG	COPPER	52.4	=	
B38W25S	5-Jun-97	REG	COPPER	1		
B38W25S	1-Jul-98	REG	COPPER	7.3		
B38W25S	17-May-99	REG	COPPER	2.8		
B38W25S	7-Jul-00	REG	COPPER	5.2		
B38W25S	10-Jul-01	REG	COPPER	1.7		
MISS01AA	31-Jul-93	REG	COPPER	31.1	=	
MISS01AA	23-May-94	REG	COPPER	11.7	=	
MISS01AA	23-May-97	REG	COPPER	3.9		
MISS01AA	20-Jun-01	REG	COPPER	0.7		
MISS02A	20-Jul-93	REG	COPPER	126	=	
MISS02A	12-May-94	REG	COPPER	103	=	
MISS02A	10-May-95	REG	COPPER	173	=	
MISS02A	16-May-96	REG	COPPER	169	=	
MISS02A	15-May-97	REG	COPPER	112		
MISS02A	15-May-97	DUP	COPPER	114		
MISS02A	11-Jun-98	DUP	COPPER	96.2		
MISS02A	18-May-99	REG	COPPER	366		
MISS02A	5-Jul-01	REG	COPPER	20.8		
MISS02B	13-May-94	REG	COPPER	166	=	J
MISS02B	9-May-95	REG	COPPER	6	=	
MISS02B	19-May-97	REG	COPPER	3.4		
MISS02B	10-Jun-98	REG	COPPER	1.1		
MISS02B	23-Jun-00	REG	COPPER	1.7		
MISS02B	5-Jul-01	REG	COPPER	2		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS05A	10-May-96	REG	COPPER	6	=	
MISS05A	2-Jun-97	REG	COPPER	3.7		
MISS05A	29-Jun-98	REG	COPPER	4.1		
MISS05A	14-May-99	REG	COPPER	1.7		
MISS05A	19-Jun-01	REG	COPPER	1.4		
MISS05B	11-May-95	REG	COPPER	4.9	=	
MISS05B	30-Jun-98	REG	COPPER	3.4		
MISS05B	18-Jun-01	REG	COPPER	0.7		
MISS06A	4-Aug-93	REG	COPPER	22.9	B	
MISS06A	24-May-94	REG	COPPER	21.8	=	
MISS06A	16-May-95	REG	COPPER	31.3	=	
MISS06A	10-May-96	REG	COPPER	27.2	=	
MISS06A	3-Jun-97	REG	COPPER	50.1		
MISS06A	1-Jul-98	REG	COPPER	44		
MISS06A	17-May-99	REG	COPPER	29.4		
MISS06A	20-Jun-01	REG	COPPER	17.6		
B38W07B	16-Jun-98	REG	COPPER	4.9		
B38W01S	28-Jul-93	REG	IRON	31000	=	
B38W01S	23-May-94	REG	IRON	27500	=	
B38W01S	21-May-95	REG	IRON	22100	=	
B38W01S	17-May-96	REG	IRON	24700	=	
B38W01S	4-Jun-97	REG	IRON	28100		J
B38W01S	7-Jul-98	REG	IRON	28900		J
B38W01S	11-Jul-01	DUP	IRON	23200		
B38W02D	19-May-94	REG	IRON	33.1	=	
B38W02D	20-May-95	REG	IRON	72.4	=	
B38W02D	17-May-96	REG	IRON	737	=	
B38W02D	4-Jun-97	REG	IRON	183		J
B38W02D	30-Jun-98	REG	IRON	580		J
B38W02D	20-May-99	REG	IRON	28.8		
B38W02D	13-Jul-00	REG	IRON	202		
B38W02D	28-Jun-01	REG	IRON	362		
B38W14D	4-Aug-93	REG	IRON	320	=	
B38W14D	20-May-95	REG	IRON	32.4	=	
B38W14D	7-Jul-98	REG	IRON	274		J
B38W14D	7-Jul-98	DUP	IRON	204		J
B38W14D	17-May-99	REG	IRON	64.2		J
B38W14D	2-Jul-01	REG	IRON	217		
B38W14S	4-Aug-93	REG	IRON	403	=	
B38W14S	20-May-95	REG	IRON	324	=	
B38W14S	17-May-96	REG	IRON	820	=	
B38W14S	17-May-96	DUP	IRON	743	=	
B38W14S	4-Jun-97	REG	IRON	1200		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14S	7-Jul-98	REG	IRON	2540		J
B38W14S	17-May-99	REG	IRON	528		J
B38W14S	5-Jul-00	REG	IRON	340		
B38W14S	2-Jul-01	REG	IRON	82.4		
B38W15D	2-Aug-93	REG	IRON	709	=	
B38W15D	13-May-96	REG	IRON	103	=	UJ
B38W15D	3-Jun-97	REG	IRON	160		J
B38W15D	6-Jul-98	REG	IRON	593		J
B38W15D	27-Jun-01	REG	IRON	301		
B38W15S	2-Aug-93	REG	IRON	537	=	
B38W15S	26-May-94	REG	IRON	400	=	
B38W15S	19-May-95	REG	IRON	1720	=	
B38W15S	19-May-95	DUP	IRON	1450	=	
B38W15S	13-May-96	REG	IRON	530	=	J
B38W15S	3-Jun-97	REG	IRON	675		J
B38W15S	6-Jul-98	REG	IRON	1010		J
B38W15S	26-Jun-00	REG	IRON	546		
B38W15S	27-Jun-01	REG	IRON	1210		
B38W17A	28-Jul-93	REG	IRON	116000	=	
B38W17A	25-May-94	REG	IRON	829	=	
B38W17A	20-May-95	REG	IRON	688	=	
B38W17A	13-May-96	REG	IRON	3280	=	J
B38W17A	3-Jun-97	REG	IRON	11700		J
B38W17A	2-Jul-98	REG	IRON	27900		J
B38W17A	13-May-99	REG	IRON	377		
B38W17A	19-Jun-00	REG	IRON	12500		
B38W17A	14-Jun-01	REG	IRON	189		
B38W17B	29-Jul-93	REG	IRON	6520	=	J
B38W17B	25-May-94	REG	IRON	10200	=	
B38W17B	20-May-95	REG	IRON	6570	=	
B38W17B	13-May-96	REG	IRON	11400	=	J
B38W17B	3-Jun-97	REG	IRON	9470		J
B38W17B	2-Jul-98	REG	IRON	6890		J
B38W17B	13-May-99	REG	IRON	8350		
B38W17B	19-Jun-00	REG	IRON	8490		
B38W17B	14-Jun-01	REG	IRON	8450		
B38W18D	21-Jul-93	REG	IRON	16000	=	J
B38W18D	13-May-94	REG	IRON	12900	=	J
B38W18D	15-May-95	REG	IRON	14400	=	
B38W18D	14-May-96	REG	IRON	14200	=	
B38W18D	9-May-97	REG	IRON	12100		
B38W18D	8-Jun-98	REG	IRON	13500		
B38W18D	20-May-99	REG	IRON	14800		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W18D	6-Jul-00	REG	IRON	11600		
B38W18D	20-Jun-01	REG	IRON	647		
B38W19D	23-Jul-93	REG	IRON	3030	=	J
B38W19D	16-May-94	REG	IRON	4090	=	
B38W19D	10-May-95	REG	IRON	2630	=	J
B38W19D	16-May-96	REG	IRON	3530	=	
B38W19D	16-May-97	REG	IRON	3260		J
B38W19D	17-Jun-98	REG	IRON	3110		J
B38W19D	17-Jun-98	REG	IRON	3160		
B38W19D	27-May-99	REG	IRON	3670		
B38W19D	12-Jul-00	REG	IRON	3110		
B38W19D	13-Jun-01	REG	IRON	3870		
B38W19S	27-May-94	REG	IRON	3240	=	
B38W19S	17-May-95	REG	IRON	1300	=	
B38W19S	10-May-96	REG	IRON	4590	=	J
B38W19S	29-Jun-98	REG	IRON	5980		J
B38W19S	14-May-99	REG	IRON	6600		
B38W19S	13-Jun-01	REG	IRON	2500		
B38W24D	9-Aug-93	REG	IRON	22900	=	J
B38W24D	18-May-94	REG	IRON	21800	=	
B38W24D	17-May-95	REG	IRON	17500	=	
B38W24D	9-May-96	REG	IRON	28600	=	J
B38W24D	2-Jun-97	REG	IRON	26600		J
B38W24D	2-Jul-98	REG	IRON	25600		J
B38W24D	13-May-99	REG	IRON	27000		
B38W24D	22-Jun-00	REG	IRON	37900		
B38W24D	5-Jul-01	REG	IRON	28600		
B38W24S	5-Aug-93	REG	IRON	34800	=	
B38W24S	25-May-94	REG	IRON	35900	=	
B38W24S	17-May-95	REG	IRON	46500	=	
B38W24S	9-May-96	REG	IRON	33400	=	J
B38W24S	2-Jun-97	REG	IRON	51100		J
B38W24S	2-Jul-98	REG	IRON	31700		J
B38W24S	13-May-99	DUP	IRON	36100		
B38W24S	21-Jun-00	REG	IRON	31900		
B38W24S	27-Jun-01	REG	IRON	24700		
B38W25D	3-Aug-93	REG	IRON	5380	=	
B38W25D	18-May-94	REG	IRON	5550	=	
B38W25D	12-May-95	REG	IRON	6760	=	
B38W25D	15-May-96	REG	IRON	6460	=	J
B38W25D	15-May-97	REG	IRON	5640		J
B38W25D	1-Jul-98	REG	IRON	4620		J
B38W25D	26-May-99	REG	IRON	4980		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W25D	7-Jul-00	REG	IRON	5270		
B38W25D	10-Jul-01	DUP	IRON	4770		
B38W25S	3-Aug-93	REG	IRON	19700	=	
B38W25S	24-May-94	REG	IRON	9080	=	J
B38W25S	15-May-95	REG	IRON	14600	=	
B38W25S	15-May-95	DUP	IRON	12000	=	
B38W25S	15-May-96	REG	IRON	9620	=	J
B38W25S	15-May-96	DUP	IRON	10200	=	J
B38W25S	5-Jun-97	REG	IRON	6260		J
B38W25S	1-Jul-98	REG	IRON	7490		J
B38W25S	17-May-99	REG	IRON	10400		J
B38W25S	7-Jul-00	REG	IRON	14000		
B38W25S	10-Jul-01	REG	IRON	30900		
MISS01AA	31-Jul-93	REG	IRON	9340	=	
MISS01AA	23-May-94	REG	IRON	2210	=	
MISS01AA	18-May-95	REG	IRON	360	=	
MISS01AA	9-May-96	REG	IRON	725	=	J
MISS01AA	23-May-97	REG	IRON	571		
MISS01AA	18-Jun-98	REG	IRON	512		
MISS01AA	12-May-99	REG	IRON	2790		
MISS01AA	20-Jun-00	REG	IRON	490		
MISS01AA	20-Jun-01	REG	IRON	731		
MISS01B	21-Jul-93	REG	IRON	1620	=	J
MISS01B	16-May-94	REG	IRON	7780	=	
MISS01B	10-May-95	REG	IRON	1030	=	J
MISS01B	15-May-96	REG	IRON	6260	=	J
MISS01B	18-Jun-98	REG	IRON	2080		
MISS01B	25-May-99	REG	IRON	1060		
MISS01B	20-Jun-00	REG	IRON	4970		
MISS01B	19-Jun-01	REG	IRON	3990		
MISS02A	20-Jul-93	REG	IRON	914	=	
MISS02A	12-May-94	REG	IRON	402	=	J
MISS02A	10-May-95	REG	IRON	892	=	J
MISS02A	16-May-96	REG	IRON	584	=	
MISS02A	15-May-97	REG	IRON	426		J
MISS02A	15-May-97	DUP	IRON	500		J
MISS02A	11-Jun-98	REG	IRON	1070		
MISS02A	11-Jun-98	DUP	IRON	1440		
MISS02A	18-May-99	REG	IRON	1010		
MISS02A	22-Jun-00	REG	IRON	5410		
MISS02A	5-Jul-01	REG	IRON	863		
MISS02B	20-Jul-93	REG	IRON	19300	=	
MISS02B	13-May-94	REG	IRON	6800	=	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02B	9-May-95	REG	IRON	8690	=	
MISS02B	14-May-96	REG	IRON	7880	=	
MISS02B	19-May-97	REG	IRON	8880		J
MISS02B	10-Jun-98	REG	IRON	8140		
MISS02B	18-May-99	REG	IRON	8620		
MISS02B	23-Jun-00	REG	IRON	15500		
MISS02B	5-Jul-01	REG	IRON	37000		
MISS05A	27-May-94	REG	IRON	9770	=	
MISS05A	12-May-95	REG	IRON	15800	=	
MISS05A	10-May-96	REG	IRON	6590	=	J
MISS05A	2-Jun-97	REG	IRON	31600		J
MISS05A	29-Jun-98	REG	IRON	15900		J
MISS05A	14-May-99	REG	IRON	2190		
MISS05A	19-Jun-01	REG	IRON	1530		
MISS05B	23-Jul-93	REG	IRON	2660	=	J
MISS05B	17-May-94	REG	IRON	2780	=	
MISS05B	11-May-95	REG	IRON	3180	=	J
MISS05B	16-May-96	REG	IRON	2910	=	
MISS05B	14-May-97	REG	IRON	2560		
MISS05B	30-Jun-98	REG	IRON	13800		J
MISS05B	18-Jun-01	REG	IRON	14900		
MISS06A	4-Aug-93	REG	IRON	225	=	
MISS06A	24-May-94	REG	IRON	455	=	J
MISS06A	16-May-95	REG	IRON	333	=	
MISS06A	10-May-96	REG	IRON	157	=	J
MISS06A	3-Jun-97	REG	IRON	759		J
MISS06A	1-Jul-98	REG	IRON	1320		J
MISS06A	17-May-99	REG	IRON	370		J
MISS06A	22-Jul-00	REG	IRON	1910		
MISS06A	20-Jun-01	REG	IRON	308		
B38W07B	16-Jun-98	REG	IRON	9160		
B38W07B	27-May-99	REG	IRON	5920		
B38W07B	12-Jul-00	REG	IRON	6390		
B38W02D	17-May-96	REG	LEAD	1.4	=	
B38W02D	4-Jun-97	REG	LEAD	2.8		
B38W02D	30-Jun-98	REG	LEAD	7.1		
B38W02D	28-Jun-01	REG	LEAD	2.6		
B38W14D	20-May-95	REG	LEAD	2.8	=	J
B38W14D	7-Jul-98	DUP	LEAD	1.7		
B38W14D	17-May-99	REG	LEAD	0.86		
B38W14D	2-Jul-01	REG	LEAD	2.6		
B38W14S	20-May-95	REG	LEAD	2.9	=	J
B38W14S	17-May-96	REG	LEAD	1.2	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14S	17-May-96	DUP	LEAD	1.8	=	
B38W14S	4-Jun-97	REG	LEAD	5.6		
B38W14S	7-Jul-98	REG	LEAD	23.9		
B38W14S	17-May-99	REG	LEAD	2.5		
B38W14S	2-Jul-01	REG	LEAD	2.6		
B38W15D	2-Aug-93	REG	LEAD	27.5	=	J
B38W15D	3-Jun-97	REG	LEAD	1.8		
B38W15D	6-Jul-98	REG	LEAD	3.3		
B38W15D	27-Jun-01	REG	LEAD	2.6		
B38W15S	2-Aug-93	REG	LEAD	2.3	B	J
B38W15S	26-May-94	REG	LEAD	3	=	J
B38W15S	19-May-95	REG	LEAD	2	=	
B38W15S	19-May-95	DUP	LEAD	2.4	=	
B38W15S	3-Jun-97	REG	LEAD	4		
B38W15S	6-Jul-98	REG	LEAD	5.3		
B38W15S	27-Jun-01	REG	LEAD	5		
B38W17A	28-Jul-93	REG	LEAD	36.6	=	J
B38W17A	20-May-95	REG	LEAD	2.8	=	J
B38W17A	13-May-96	REG	LEAD	1.1	=	J
B38W17A	3-Jun-97	REG	LEAD	2.3		
B38W17A	2-Jul-98	REG	LEAD	1.3		
B38W17A	14-Jun-01	REG	LEAD	2.6		
B38W18D	14-May-96	REG	LEAD	1	=	
B38W18D	8-Jun-98	REG	LEAD	0.45		
B38W18D	20-May-99	REG	LEAD	1.1		
B38W18D	6-Jul-00	REG	LEAD	1.9		J
B38W18D	20-Jun-01	REG	LEAD	2.6		
B38W19S	29-Jun-98	REG	LEAD	0.35		
B38W19S	13-Jun-01	REG	LEAD	2.6		
B38W24D	2-Jul-98	REG	LEAD	2.4		
B38W24D	13-May-99	REG	LEAD	1.2		
B38W24D	5-Jul-01	REG	LEAD	2.6		
B38W24S	17-May-95	REG	LEAD	1.8	=	
B38W24S	2-Jul-98	REG	LEAD	0.85		
B38W24S	27-Jun-01	REG	LEAD	2.6		
B38W25S	24-May-94	REG	LEAD	3.8	=	UJ
B38W25S	15-May-96	REG	LEAD	1.5	=	J
B38W25S	5-Jun-97	REG	LEAD	0.6		
B38W25S	1-Jul-98	REG	LEAD	1.3		
B38W25S	17-May-99	REG	LEAD	0.66		
B38W25S	10-Jul-01	REG	LEAD	2.6		
MISS01AA	31-Jul-93	REG	LEAD	4.1	=	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	18-May-95	REG	LEAD	2	=	
MISS01AA	18-Jun-98	REG	LEAD	9.8		
MISS01AA	12-May-99	REG	LEAD	1.6		
MISS01AA	20-Jun-01	REG	LEAD	2.6		
MISS02A	20-Jul-93	REG	LEAD	2.5	=	UJ
MISS02A	12-May-94	REG	LEAD	7.3	=	J
MISS02A	10-May-95	REG	LEAD	3.6	=	
MISS02A	16-May-96	REG	LEAD	8.1	=	
MISS02A	15-May-97	REG	LEAD	4.8		J
MISS02A	15-May-97	DUP	LEAD	4.7		J
MISS02A	11-Jun-98	REG	LEAD	3.9		
MISS02A	11-Jun-98	DUP	LEAD	4.9		
MISS02A	18-May-99	REG	LEAD	11		
MISS02A	22-Jun-00	REG	LEAD	13		
MISS02A	5-Jul-01	REG	LEAD	2.6		
MISS05A	29-Jun-98	REG	LEAD	11.9		
MISS05A	14-May-99	REG	LEAD	0.35		
MISS05A	19-Jun-01	REG	LEAD	2.6		
MISS05B	17-May-94	REG	LEAD	2.1	=	J
MISS05B	30-Jun-98	REG	LEAD	0.5		
MISS05B	18-Jun-01	REG	LEAD	2.6		
MISS06A	24-May-94	REG	LEAD	4.4	=	UJ
MISS06A	3-Jun-97	REG	LEAD	13.8		
MISS06A	1-Jul-98	REG	LEAD	17.8		
MISS06A	17-May-99	REG	LEAD	2.9		
MISS06A	10-Jul-00	REG	LEAD	9.6		
MISS06A	20-Jun-01	REG	LEAD	2.6		
B38W01S	28-Jul-93	REG	LITHIUM	2690	=	
B38W01S	23-May-94	REG	LITHIUM	2410	=	
B38W01S	17-May-96	REG	LITHIUM	1830	=	J
B38W01S	4-Jun-97	REG	LITHIUM	2370		
B38W01S	7-Jul-98	REG	LITHIUM	1840		J
B38W01S	11-Jul-01	DUP	LITHIUM	1580		
B38W02D	19-May-94	REG	LITHIUM	30.1	=	
B38W02D	4-Jun-97	REG	LITHIUM	14.8		
B38W02D	30-Jun-98	REG	LITHIUM	16.5		J
B38W02D	20-May-99	REG	LITHIUM	11.7		
B38W02D	28-Jun-01	REG	LITHIUM	14.3		
B38W14D	4-Aug-93	REG	LITHIUM	49.8	=	
B38W14D	4-Jun-97	REG	LITHIUM	44.5		
B38W14D	7-Jul-98	DUP	LITHIUM	48.4		J
B38W14D	7-Jul-98	REG	LITHIUM	47.2		J
B38W14D	17-May-99	REG	LITHIUM	34.3		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W14D	2-Jul-01	REG	LITHIUM	27.3		
B38W14S	4-Aug-93	REG	LITHIUM	126	=	
B38W14S	4-Jun-97	REG	LITHIUM	48		
B38W14S	7-Jul-98	REG	LITHIUM	45.5		J
B38W14S	17-May-99	REG	LITHIUM	38		
B38W14S	2-Jul-01	REG	LITHIUM	30.5		
B38W15D	2-Aug-93	REG	LITHIUM	1740	=	
B38W15D	26-May-94	REG	LITHIUM	2750	=	
B38W15D	13-May-96	REG	LITHIUM	2980	=	J
B38W15D	3-Jun-97	REG	LITHIUM	2980		
B38W15D	6-Jul-98	REG	LITHIUM	2060		
B38W15D	27-Jun-01	REG	LITHIUM	871		
B38W15S	2-Aug-93	REG	LITHIUM	1910	=	
B38W15S	2-Aug-93	REG	LITHIUM	1970	=	
B38W15S	26-May-94	REG	LITHIUM	1590	=	
B38W15S	13-May-96	REG	LITHIUM	1800	=	J
B38W15S	3-Jun-97	REG	LITHIUM	2590		
B38W15S	6-Jul-98	REG	LITHIUM	2590		
B38W15S	27-Jun-01	REG	LITHIUM	3150		
B38W17A	28-Jul-93	REG	LITHIUM	348	=	
B38W17A	25-May-94	REG	LITHIUM	347	=	
B38W17A	13-May-96	REG	LITHIUM	431	=	J
B38W17A	3-Jun-97	REG	LITHIUM	334		
B38W17A	2-Jul-98	REG	LITHIUM	307		J
B38W17A	13-May-99	DUP	LITHIUM	363		
B38W17A	14-Jun-01	REG	LITHIUM	298		
B38W17B	29-Jul-93	REG	LITHIUM	1650	=	J
B38W17B	25-May-94	REG	LITHIUM	1060	=	
B38W17B	13-May-96	REG	LITHIUM	920	=	J
B38W17B	3-Jun-97	REG	LITHIUM	1740		
B38W17B	2-Jul-98	REG	LITHIUM	1800		J
B38W17B	13-May-99	REG	LITHIUM	1460		J
B38W17B	14-Jun-01	REG	LITHIUM	1810		
B38W18D	21-Jul-93	REG	LITHIUM	3610	=	
B38W18D	13-May-94	REG	LITHIUM	3380	=	J
B38W18D	14-May-96	REG	LITHIUM	3000	=	J
B38W18D	9-May-97	REG	LITHIUM	3540		
B38W18D	8-Jun-98	REG	LITHIUM	3790		
B38W18D	20-May-99	REG	LITHIUM	2850		
B38W18D	20-Jun-01	REG	LITHIUM	1480		
B38W19D	23-Jul-93	REG	LITHIUM	6890	=	
B38W19D	16-May-94	REG	LITHIUM	4600	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19D	16-May-96	REG	LITHIUM	3800	=	J
B38W19D	16-May-97	REG	LITHIUM	5600		
B38W19D	17-Jun-98	REG	LITHIUM	6220		J
B38W19D	17-Jun-98	REG	LITHIUM	5920		
B38W19D	27-May-99	REG	LITHIUM	6350		J
B38W19D	13-Jun-01	REG	LITHIUM	5250		
B38W19S	27-May-94	REG	LITHIUM	1690	=	
B38W19S	10-May-96	REG	LITHIUM	1450	=	J
B38W19S	29-Jun-98	REG	LITHIUM	1700		J
B38W19S	14-May-99	REG	LITHIUM	1400		J
B38W19S	13-Jun-01	REG	LITHIUM	1480		
B38W24D	9-Aug-93	REG	LITHIUM	44.1	=	
B38W24D	18-May-94	REG	LITHIUM	37.5	=	
B38W24D	9-May-96	REG	LITHIUM	80.1	=	J
B38W24D	2-Jun-97	REG	LITHIUM	54.3		
B38W24D	2-Jul-98	REG	LITHIUM	46.1		J
B38W24D	13-May-99	REG	LITHIUM	50.4		
B38W24D	5-Jul-01	REG	LITHIUM	50.8		
B38W24S	9-May-96	REG	LITHIUM	56	=	J
B38W24S	2-Jun-97	REG	LITHIUM	27.5		
B38W24S	2-Jul-98	REG	LITHIUM	26.5		J
B38W24S	13-May-99	DUP	LITHIUM	32.4		
B38W24S	27-Jun-01	REG	LITHIUM	27.2		
B38W25D	3-Aug-93	REG	LITHIUM	1330	=	
B38W25D	18-May-94	REG	LITHIUM	1230	=	
B38W25D	15-May-96	REG	LITHIUM	1370	=	J
B38W25D	15-May-97	REG	LITHIUM	1600		
B38W25D	1-Jul-98	REG	LITHIUM	1430		J
B38W25D	26-May-99	REG	LITHIUM	1280		J
B38W25D	10-Jul-01	DUP	LITHIUM	981		
B38W25S	3-Aug-93	REG	LITHIUM	1360	=	
B38W25S	24-May-94	REG	LITHIUM	1130	=	J
B38W25S	15-May-96	DUP	LITHIUM	994	=	J
B38W25S	5-Jun-97	REG	LITHIUM	1190		
B38W25S	1-Jul-98	REG	LITHIUM	827		J
B38W25S	17-May-99	REG	LITHIUM	793		
B38W25S	10-Jul-01	REG	LITHIUM	610		
MISS01AA	31-Jul-93	REG	LITHIUM	442	=	
MISS01AA	23-May-94	REG	LITHIUM	240	=	
MISS01AA	9-May-96	REG	LITHIUM	224	=	J
MISS01AA	23-May-97	REG	LITHIUM	265		
MISS01AA	18-Jun-98	REG	LITHIUM	258		
MISS01AA	12-May-99	REG	LITHIUM	224		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	20-Jun-01	REG	LITHIUM	260		
MISS01B	21-Jul-93	REG	LITHIUM	114	=	
MISS01B	16-May-94	REG	LITHIUM	80.8	=	
MISS01B	15-May-96	REG	LITHIUM	128	=	J
MISS01B	18-Jun-98	REG	LITHIUM	105		
MISS01B	25-May-99	REG	LITHIUM	95.1		J
MISS01B	19-Jun-01	REG	LITHIUM	66.7		
MISS02A	20-Jul-93	REG	LITHIUM	6990	=	
MISS02A	12-May-94	REG	LITHIUM	4660	=	
MISS02A	16-May-96	REG	LITHIUM	4480	=	J
MISS02A	15-May-97	REG	LITHIUM	7090		
MISS02A	15-May-97	DUP	LITHIUM	6650		
MISS02A	11-Jun-98	DUP	LITHIUM	6110		
MISS02A	11-May-99	REG	LITHIUM	9300		
MISS02A	5-Jul-01	REG	LITHIUM	8150		
MISS02B	20-Jul-93	REG	LITHIUM	14100	=	
MISS02B	13-May-94	REG	LITHIUM	10200	=	J
MISS02B	14-May-96	REG	LITHIUM	11900	=	J
MISS02B	19-May-97	REG	LITHIUM	15200		
MISS02B	10-Jun-98	REG	LITHIUM	12800		
MISS02B	18-May-99	DUP	LITHIUM	12200		J
MISS02B	5-Jul-01	REG	LITHIUM	11900		
MISS05A	27-May-94	REG	LITHIUM	677	=	
MISS05A	10-May-96	REG	LITHIUM	664	=	J
MISS05A	2-Jun-97	REG	LITHIUM	854		
MISS05A	29-Jun-98	REG	LITHIUM	660		J
MISS05A	14-May-99	REG	LITHIUM	863		J
MISS05A	19-Jun-01	REG	LITHIUM	767		
MISS05B	23-Jul-93	REG	LITHIUM	2520	=	
MISS05B	17-May-94	REG	LITHIUM	2370	=	
MISS05B	16-May-96	REG	LITHIUM	2130	=	J
MISS05B	14-May-97	REG	LITHIUM	2710		
MISS05B	30-Jun-98	REG	LITHIUM	1920		J
MISS05B	18-Jun-01	REG	LITHIUM	3090		
MISS06A	4-Aug-93	REG	LITHIUM	7340	=	
MISS06A	24-May-94	REG	LITHIUM	2140	=	J
MISS06A	10-May-96	REG	LITHIUM	1680	=	J
MISS06A	3-Jun-97	REG	LITHIUM	2780		
MISS06A	1-Jul-98	REG	LITHIUM	2130		J
MISS06A	17-May-99	REG	LITHIUM	2130		
MISS06A	20-Jun-01	REG	LITHIUM	1460		
B38W07B	16-Jun-98	REG	LITHIUM	5480		
B38W07B	27-May-99	REG	LITHIUM	6870		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W01S	28-Jul-93	REG	MAGNESIUM	36900	=	
B38W01S	23-May-94	REG	MAGNESIUM	35400	=	
B38W01S	21-May-95	REG	MAGNESIUM	27600	=	
B38W01S	17-May-96	REG	MAGNESIUM	32800	=	
B38W01S	4-Jun-97	REG	MAGNESIUM	30300		
B38W01S	7-Jul-98	REG	MAGNESIUM	25600		J
B38W02D	27-Jul-93	REG	MAGNESIUM	3830	B	
B38W02D	19-May-94	REG	MAGNESIUM	3480	=	
B38W02D	20-May-95	REG	MAGNESIUM	3020	=	
B38W02D	17-May-96	REG	MAGNESIUM	3710	=	
B38W02D	4-Jun-97	REG	MAGNESIUM	3840		
B38W02D	20-May-99	REG	MAGNESIUM	4020		
B38W02D	13-Jul-00	REG	MAGNESIUM	3740		
B38W07B	16-Jun-98	REG	MAGNESIUM	57500		
B38W07B	27-May-99	DUP	MAGNESIUM	88300		
B38W14D	4-Aug-93	REG	MAGNESIUM	25100	=	J
B38W14D	20-May-95	REG	MAGNESIUM	19500	=	
B38W14D	17-May-96	REG	MAGNESIUM	27800	=	
B38W14D	4-Jun-97	REG	MAGNESIUM	27700		
B38W14D	7-Jul-98	DUP	MAGNESIUM	28700		J
B38W14D	17-May-99	REG	MAGNESIUM	30000		
B38W14D	5-Jul-00	REG	MAGNESIUM	25300		
B38W14S	4-Aug-93	REG	MAGNESIUM	12100	=	J
B38W14S	20-May-95	REG	MAGNESIUM	20000	=	
B38W14S	17-May-96	REG	MAGNESIUM	28900	=	
B38W14S	17-May-96	DUP	MAGNESIUM	26300	=	
B38W14S	4-Jun-97	REG	MAGNESIUM	25300		
B38W14S	7-Jul-98	REG	MAGNESIUM	25000		J
B38W14S	17-May-99	REG	MAGNESIUM	27400		
B38W14S	5-Jul-00	REG	MAGNESIUM	26600		
B38W15D	2-Aug-93	REG	MAGNESIUM	18100	=	
B38W15D	26-May-94	REG	MAGNESIUM	35500	=	
B38W15D	19-May-95	REG	MAGNESIUM	22700	=	J
B38W15D	13-May-96	REG	MAGNESIUM	37500	=	
B38W15D	3-Jun-97	REG	MAGNESIUM	26500		
B38W15D	6-Jul-98	REG	MAGNESIUM	17100		J
B38W15D	26-Jun-00	REG	MAGNESIUM	39400		
B38W15S	2-Aug-93	REG	MAGNESIUM	25200	=	
B38W15S	26-May-94	REG	MAGNESIUM	19300	=	
B38W15S	19-May-95	REG	MAGNESIUM	27700	=	J
B38W15S	19-May-95	DUP	MAGNESIUM	25300	=	J
B38W15S	13-May-96	REG	MAGNESIUM	17800	=	
B38W15S	3-Jun-97	REG	MAGNESIUM	19000		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W15S	6-Jul-98	REG	MAGNESIUM	18100		J
B38W15S	26-Jun-00	REG	MAGNESIUM	25300		
B38W17A	28-Jul-93	REG	MAGNESIUM	13300	=	
B38W17A	25-May-94	REG	MAGNESIUM	7340	=	
B38W17A	20-May-95	REG	MAGNESIUM	5610	=	
B38W17A	13-May-96	REG	MAGNESIUM	9720	=	
B38W17A	3-Jun-97	REG	MAGNESIUM	5620		
B38W17A	2-Jul-98	REG	MAGNESIUM	6280		J
B38W17A	13-May-99	DUP	MAGNESIUM	9300		
B38W17A	19-Jun-00	REG	MAGNESIUM	5930		
B38W17B	29-Jul-93	REG	MAGNESIUM	25400	=	J
B38W17B	25-May-94	REG	MAGNESIUM	26600	=	
B38W17B	20-May-95	REG	MAGNESIUM	22800	=	
B38W17B	13-May-96	REG	MAGNESIUM	23500	=	
B38W17B	3-Jun-97	REG	MAGNESIUM	24900		
B38W17B	13-May-99	REG	MAGNESIUM	25200		
B38W18D	21-Jul-93	REG	MAGNESIUM	13600	=	
B38W18D	13-May-94	REG	MAGNESIUM	14400	=	J
B38W18D	15-May-95	REG	MAGNESIUM	14100	=	
B38W18D	14-May-96	REG	MAGNESIUM	14300	=	
B38W18D	9-May-97	REG	MAGNESIUM	14000		
B38W18D	8-Jun-98	REG	MAGNESIUM	14400		
B38W18D	20-May-99	REG	MAGNESIUM	14500		
B38W18D	6-Jul-00	REG	MAGNESIUM	12400		
B38W19D	23-Jul-93	REG	MAGNESIUM	37200	=	
B38W19D	16-May-94	REG	MAGNESIUM	52600	=	
B38W19D	10-May-95	REG	MAGNESIUM	31200	=	
B38W19D	16-May-96	REG	MAGNESIUM	43900	=	
B38W19D	16-May-97	REG	MAGNESIUM	36600		J
B38W19D	17-Jun-98	REG	MAGNESIUM	38900		
B38W19D	27-May-99	REG	MAGNESIUM	42000		
B38W19D	12-Jul-00	REG	MAGNESIUM	31100		
B38W19S	27-May-94	REG	MAGNESIUM	76200	=	
B38W19S	17-May-95	REG	MAGNESIUM	69000	=	
B38W19S	10-May-96	REG	MAGNESIUM	62600	=	
B38W19S	29-Jun-98	REG	MAGNESIUM	43300		J
B38W19S	14-May-99	REG	MAGNESIUM	46100		
B38W24D	9-Aug-93	REG	MAGNESIUM	9710	=	J
B38W24D	18-May-94	REG	MAGNESIUM	9810	=	
B38W24D	17-May-95	REG	MAGNESIUM	8290	=	
B38W24D	9-May-96	REG	MAGNESIUM	11600	=	
B38W24D	2-Jun-97	REG	MAGNESIUM	10100		
B38W24D	2-Jul-98	REG	MAGNESIUM	9790		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24D	24-May-99	REG	MAGNESIUM	11400		
B38W24D	22-Jun-00	REG	MAGNESIUM	10700		
B38W24S	5-Aug-93	REG	MAGNESIUM	6330	=	J
B38W24S	25-May-94	REG	MAGNESIUM	7930	=	
B38W24S	17-May-95	REG	MAGNESIUM	8430	=	
B38W24S	9-May-96	REG	MAGNESIUM	8550	=	
B38W24S	2-Jun-97	REG	MAGNESIUM	6280		
B38W24S	2-Jul-98	REG	MAGNESIUM	5810		J
B38W24S	13-May-99	REG	MAGNESIUM	4910		
B38W24S	21-Jun-00	REG	MAGNESIUM	7830		
B38W25D	3-Aug-93	REG	MAGNESIUM	6810	=	
B38W25D	18-May-94	REG	MAGNESIUM	5680	=	
B38W25D	12-May-95	REG	MAGNESIUM	6940	=	
B38W25D	15-May-96	REG	MAGNESIUM	6470	=	
B38W25D	15-May-97	REG	MAGNESIUM	5670		J
B38W25D	1-Jul-98	REG	MAGNESIUM	5520		J
B38W25D	26-May-99	REG	MAGNESIUM	5290		
B38W25D	7-Jul-00	REG	MAGNESIUM	4920		
B38W25S	3-Aug-93	REG	MAGNESIUM	7480	=	
B38W25S	24-May-94	REG	MAGNESIUM	7290	=	J
B38W25S	15-May-95	REG	MAGNESIUM	9110	=	
B38W25S	15-May-95	DUP	MAGNESIUM	7630	=	
B38W25S	15-May-96	REG	MAGNESIUM	7550	=	
B38W25S	15-May-96	DUP	MAGNESIUM	7980	=	
B38W25S	5-Jun-97	REG	MAGNESIUM	7470		
B38W25S	1-Jul-98	REG	MAGNESIUM	7810		J
B38W25S	17-May-99	REG	MAGNESIUM	6150		
B38W25S	7-Jul-00	REG	MAGNESIUM	7520		
MISS01AA	31-Jul-93	REG	MAGNESIUM	23800	=	
MISS01AA	23-May-94	REG	MAGNESIUM	22200	=	
MISS01AA	18-May-95	REG	MAGNESIUM	22000	=	
MISS01AA	9-May-96	REG	MAGNESIUM	24100	=	
MISS01AA	23-May-97	REG	MAGNESIUM	32100		
MISS01AA	18-Jun-98	REG	MAGNESIUM	33800		
MISS01AA	12-May-99	REG	MAGNESIUM	31700		
MISS01AA	20-Jun-00	REG	MAGNESIUM	23700		
MISS01B	21-Jul-93	REG	MAGNESIUM	18700	=	
MISS01B	16-May-94	REG	MAGNESIUM	18400	=	
MISS01B	10-May-95	REG	MAGNESIUM	17600	=	
MISS01B	15-May-96	REG	MAGNESIUM	19200	=	
MISS01B	18-Jun-98	REG	MAGNESIUM	18900		
MISS01B	25-May-99	REG	MAGNESIUM	18800		
MISS01B	20-Jun-00	REG	MAGNESIUM	17200		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	20-Jul-93	REG	MAGNESIUM	16100	=	
MISS02A	12-May-94	REG	MAGNESIUM	7980	=	
MISS02A	10-May-95	REG	MAGNESIUM	3410	=	
MISS02A	16-May-96	REG	MAGNESIUM	5980	=	
MISS02A	15-May-97	REG	MAGNESIUM	7560		J
MISS02A	15-May-97	DUP	MAGNESIUM	7030		J
MISS02A	11-Jun-98	DUP	MAGNESIUM	11800		
MISS02A	18-May-99	REG	MAGNESIUM	5700		
MISS02A	22-Jun-00	REG	MAGNESIUM	7780		
MISS02B	20-Jul-93	REG	MAGNESIUM	42300	=	
MISS02B	13-May-94	REG	MAGNESIUM	30100	=	J
MISS02B	9-May-95	REG	MAGNESIUM	33600	=	
MISS02B	14-May-96	REG	MAGNESIUM	36100	=	
MISS02B	19-May-97	REG	MAGNESIUM	32500		J
MISS02B	10-Jun-98	REG	MAGNESIUM	34600		
MISS02B	18-May-99	DUP	MAGNESIUM	40500		
MISS02B	23-Jun-00	REG	MAGNESIUM	34200		
MISS05A	27-May-94	REG	MAGNESIUM	48200	=	
MISS05A	12-May-95	REG	MAGNESIUM	79200	=	
MISS05A	10-May-96	REG	MAGNESIUM	42700	=	
MISS05A	2-Jun-97	REG	MAGNESIUM	43300		
MISS05A	29-Jun-98	REG	MAGNESIUM	33100		J
MISS05A	14-May-99	REG	MAGNESIUM	47700		
MISS05B	23-Jul-93	REG	MAGNESIUM	58200	=	
MISS05B	17-May-94	REG	MAGNESIUM	64400	=	
MISS05B	11-May-95	REG	MAGNESIUM	52200	=	J
MISS05B	16-May-96	REG	MAGNESIUM	47400	=	
MISS05B	14-May-97	REG	MAGNESIUM	60300		
MISS05B	30-Jun-98	REG	MAGNESIUM	19000		J
MISS05B	11-Jul-00	REG	MAGNESIUM	23900		
MISS06A	4-Aug-93	REG	MAGNESIUM	14800	=	J
MISS06A	24-May-94	REG	MAGNESIUM	9830	=	J
MISS06A	16-May-95	REG	MAGNESIUM	19200	=	
MISS06A	10-May-96	REG	MAGNESIUM	8630	=	
MISS06A	3-Jun-97	REG	MAGNESIUM	13600		
MISS06A	1-Jul-98	REG	MAGNESIUM	9670		J
MISS06A	17-May-99	DUP	MAGNESIUM	12400		
MISS06A	10-Jul-00	REG	MAGNESIUM	9330		
MISS07B	12-Jul-00	REG	MAGNESIUM	50000		
B38W01S	28-Jul-93	REG	MANGANESE	2880	=	J
B38W01S	23-May-94	REG	MANGANESE	2910	=	
B38W01S	21-May-95	REG	MANGANESE	2340	=	
B38W01S	17-May-96	REG	MANGANESE	2810	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W01S	4-Jun-97	REG	MANGANESE	2780		
B38W01S	7-Jul-98	REG	MANGANESE	2270		
B38W01S	11-Jul-01	DUP	MANGANESE	2570		
B38W02D	27-Jul-93	REG	MANGANESE	2220	=	J
B38W02D	19-May-94	REG	MANGANESE	2000	=	
B38W02D	20-May-95	REG	MANGANESE	1240	=	
B38W02D	17-May-96	REG	MANGANESE	1350	=	
B38W02D	4-Jun-97	REG	MANGANESE	2480		
B38W02D	30-Jun-98	REG	MANGANESE	3700		
B38W02D	20-May-99	REG	MANGANESE	1130		
B38W02D	13-Jul-00	REG	MANGANESE	2300		
B38W02D	28-Jun-01	REG	MANGANESE	931		
B38W14D	4-Aug-93	REG	MANGANESE	31.7	=	
B38W14D	20-May-95	REG	MANGANESE	5.3	=	
B38W14D	17-May-96	REG	MANGANESE	5.3	=	
B38W14D	4-Jun-97	REG	MANGANESE	33.5		
B38W14D	7-Jul-98	REG	MANGANESE	14.2		
B38W14D	7-Jul-98	DUP	MANGANESE	13.3		
B38W14D	17-May-99	REG	MANGANESE	6.1		J
B38W14D	5-Jul-00	REG	MANGANESE	11.5		
B38W14D	2-Jul-01	REG	MANGANESE	7.3		
B38W14S	4-Aug-93	REG	MANGANESE	505	=	
B38W14S	20-May-95	REG	MANGANESE	7.9	=	
B38W14S	17-May-96	REG	MANGANESE	22.6	=	
B38W14S	17-May-96	DUP	MANGANESE	20.3	=	
B38W14S	4-Jun-97	REG	MANGANESE	15.7		
B38W14S	7-Jul-98	REG	MANGANESE	126		J
B38W14S	17-May-99	REG	MANGANESE	32.1		
B38W14S	5-Jul-00	REG	MANGANESE	76.3		
B38W14S	2-Jul-01	REG	MANGANESE	50.8		
B38W15D	2-Aug-93	REG	MANGANESE	474	=	J
B38W15D	26-May-94	REG	MANGANESE	944	=	
B38W15D	19-May-95	REG	MANGANESE	638	=	J
B38W15D	13-May-96	REG	MANGANESE	1080	=	J
B38W15D	3-Jun-97	REG	MANGANESE	809		
B38W15D	6-Jul-98	REG	MANGANESE	514		
B38W15D	26-Jun-00	REG	MANGANESE	1060		
B38W15D	27-Jun-01	DUP	MANGANESE	137		
B38W15S	2-Aug-93	REG	MANGANESE	1850	=	J
B38W15S	26-May-94	REG	MANGANESE	1370	=	
B38W15S	19-May-95	REG	MANGANESE	2170	=	J
B38W15S	19-May-95	DUP	MANGANESE	1970	=	J
B38W15S	13-May-96	REG	MANGANESE	1400	=	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W15S	3-Jun-97	REG	MANGANESE	1540		
B38W15S	6-Jul-98	REG	MANGANESE	1550		
B38W15S	26-Jun-00	REG	MANGANESE	2050		
B38W15S	27-Jun-01	REG	MANGANESE	2300		
B38W17A	28-Jul-93	REG	MANGANESE	1030	=	J
B38W17A	25-May-94	REG	MANGANESE	57.7	=	
B38W17A	20-May-95	REG	MANGANESE	55.9	=	
B38W17A	13-May-96	REG	MANGANESE	38.4	=	J
B38W17A	3-Jun-97	REG	MANGANESE	59.9		
B38W17A	2-Jul-98	REG	MANGANESE	137		
B38W17A	13-May-99	DUP	MANGANESE	42.7		
B38W17A	19-Jun-00	REG	MANGANESE	2070		
B38W17A	14-Jun-01	REG	MANGANESE	253		
B38W17B	29-Jul-93	REG	MANGANESE	3940	=	J
B38W17B	25-May-94	REG	MANGANESE	4650	=	
B38W17B	20-May-95	REG	MANGANESE	4020	=	
B38W17B	13-May-96	REG	MANGANESE	4710	=	J
B38W17B	3-Jun-97	REG	MANGANESE	4860		
B38W17B	2-Jul-98	REG	MANGANESE	3940		
B38W17B	13-May-99	REG	MANGANESE	4920		
B38W17B	19-Jun-00	REG	MANGANESE	3970		
B38W17B	14-Jun-01	REG	MANGANESE	4320		
B38W18D	21-Jul-93	REG	MANGANESE	4010	=	J
B38W18D	13-May-94	REG	MANGANESE	3800	=	J
B38W18D	15-May-95	REG	MANGANESE	4010	=	
B38W18D	14-May-96	REG	MANGANESE	3950	=	
B38W18D	9-May-97	REG	MANGANESE	2980		
B38W18D	8-Jun-98	REG	MANGANESE	3670		
B38W18D	20-May-99	REG	MANGANESE	4590		
B38W18D	6-Jul-00	REG	MANGANESE	3510		
B38W18D	20-Jun-01	REG	MANGANESE	180		
B38W19D	23-Jul-93	REG	MANGANESE	2450	=	J
B38W19D	16-May-94	REG	MANGANESE	3090	=	
B38W19D	10-May-95	REG	MANGANESE	2030	=	
B38W19D	16-May-96	REG	MANGANESE	2570	=	
B38W19D	16-May-97	REG	MANGANESE	2400		
B38W19D	17-Jun-98	REG	MANGANESE	2530		
B38W19D	27-May-99	REG	MANGANESE	2820		
B38W19D	12-Jul-00	REG	MANGANESE	2240		
B38W19D	13-Jun-01	REG	MANGANESE	2190		
B38W19S	27-May-94	REG	MANGANESE	860	=	
B38W19S	17-May-95	REG	MANGANESE	301	=	
B38W19S	10-May-96	REG	MANGANESE	744	=	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19S	29-Jun-98	REG	MANGANESE	682		
B38W19S	29-May-99	REG	MANGANESE	841		
B38W19S	13-Jun-01	REG	MANGANESE	933		
B38W24D	9-Aug-93	REG	MANGANESE	5620	=	
B38W24D	18-May-94	REG	MANGANESE	4730	=	J
B38W24D	17-May-95	REG	MANGANESE	3980	=	
B38W24D	9-May-96	REG	MANGANESE	6190	=	J
B38W24D	2-Jun-97	REG	MANGANESE	5600		
B38W24D	2-Jul-98	REG	MANGANESE	4720		
B38W24D	13-May-99	REG	MANGANESE	5860		
B38W24D	22-Jun-00	REG	MANGANESE	5350		
B38W24D	5-Jul-01	REG	MANGANESE	5870		
B38W24S	5-Aug-93	REG	MANGANESE	4720	=	
B38W24S	25-May-94	REG	MANGANESE	4610	=	
B38W24S	17-May-95	REG	MANGANESE	5420	=	
B38W24S	9-May-96	REG	MANGANESE	4430	=	J
B38W24S	2-Jun-97	REG	MANGANESE	3190		
B38W24S	2-Jul-98	REG	MANGANESE	2910		
B38W24S	13-May-99	DUP	MANGANESE	5040		
B38W24S	21-Jun-00	REG	MANGANESE	3830		
B38W24S	27-Jun-01	REG	MANGANESE	3010		
B38W25D	3-Aug-93	REG	MANGANESE	1620	=	J
B38W25D	18-May-94	REG	MANGANESE	1380	=	J
B38W25D	12-May-95	REG	MANGANESE	1740	=	J
B38W25D	15-May-96	REG	MANGANESE	1610	=	J
B38W25D	15-May-97	REG	MANGANESE	1380		
B38W25D	1-Jul-98	REG	MANGANESE	1400		
B38W25D	26-May-99	REG	MANGANESE	1390		
B38W25D	7-Jul-00	REG	MANGANESE	1250		
B38W25D	10-Jul-01	DUP	MANGANESE	1280		
B38W25S	3-Aug-93	REG	MANGANESE	1730	=	J
B38W25S	24-May-94	REG	MANGANESE	1250	=	J
B38W25S	15-May-95	REG	MANGANESE	1540	=	
B38W25S	15-May-95	DUP	MANGANESE	1410	=	
B38W25S	15-May-96	REG	MANGANESE	1330	=	J
B38W25S	15-May-96	DUP	MANGANESE	1480	=	J
B38W25S	5-Jun-97	REG	MANGANESE	1450		
B38W25S	1-Jul-98	REG	MANGANESE	2390		
B38W25S	17-May-99	REG	MANGANESE	2670		J
B38W25S	7-Jul-00	REG	MANGANESE	7120		
B38W25S	10-Jul-01	REG	MANGANESE	7380		
MISS01AA	31-Jul-93	REG	MANGANESE	309	=	J
MISS01AA	23-May-94	REG	MANGANESE	156	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	18-May-95	REG	MANGANESE	8.6	=	
MISS01AA	9-May-96	REG	MANGANESE	119	=	J
MISS01AA	23-May-97	REG	MANGANESE	116		
MISS01AA	18-Jun-98	REG	MANGANESE	117		
MISS01AA	12-May-99	REG	MANGANESE	118		
MISS01AA	20-Jun-00	REG	MANGANESE	94.9		
MISS01AA	20-Jun-01	REG	MANGANESE	117		
MISS01B	21-Jul-93	REG	MANGANESE	236	=	J
MISS01B	16-May-94	REG	MANGANESE	356	=	
MISS01B	10-May-95	REG	MANGANESE	271	=	
MISS01B	15-May-96	REG	MANGANESE	390	=	J
MISS01B	18-Jun-98	REG	MANGANESE	375		
MISS01B	25-May-99	REG	MANGANESE	359		
MISS01B	20-Jun-00	REG	MANGANESE	291		
MISS01B	19-Jun-01	REG	MANGANESE	320		
MISS02A	20-Jul-93	REG	MANGANESE	96.8	=	
MISS02A	12-May-94	REG	MANGANESE	21.9	=	J
MISS02A	10-May-95	REG	MANGANESE	50.6	=	
MISS02A	16-May-96	REG	MANGANESE	20.9	=	
MISS02A	15-May-97	DUP	MANGANESE	19.4		
MISS02A	11-Jun-98	DUP	MANGANESE	49.7		
MISS02A	18-May-99	REG	MANGANESE	71		
MISS02A	22-Jun-00	REG	MANGANESE	268		
MISS02A	5-Jul-01	REG	MANGANESE	109		
MISS02B	20-Jul-93	REG	MANGANESE	4500	=	
MISS02B	13-May-94	REG	MANGANESE	4190	=	J
MISS02B	9-May-95	REG	MANGANESE	4210	=	
MISS02B	14-May-96	REG	MANGANESE	5470	=	
MISS02B	19-May-97	REG	MANGANESE	4630		
MISS02B	10-Jun-98	REG	MANGANESE	5120		
MISS02B	18-May-99	DUP	MANGANESE	5650		
MISS02B	23-Jun-00	REG	MANGANESE	3820		
MISS02B	5-Jul-01	REG	MANGANESE	965		
MISS05A	27-May-94	REG	MANGANESE	728	=	
MISS05A	12-May-95	REG	MANGANESE	1330	=	J
MISS05A	10-May-96	REG	MANGANESE	646	=	J
MISS05A	2-Jun-97	REG	MANGANESE	584		
MISS05A	29-Jun-98	REG	MANGANESE	330		
MISS05A	14-May-99	REG	MANGANESE	688		
MISS05A	19-Jun-01	REG	MANGANESE	722		
MISS05B	23-Jul-93	REG	MANGANESE	2220	=	J
MISS05B	17-May-94	REG	MANGANESE	2530	=	
MISS05B	11-May-95	REG	MANGANESE	2180	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS05B	16-May-96	REG	MANGANESE	1920	=	
MISS05B	14-May-97	REG	MANGANESE	2450		
MISS05B	30-Jun-98	REG	MANGANESE	771		
MISS05B	11-Jul-00	REG	MANGANESE	951		
MISS05B	18-Jun-01	REG	MANGANESE	2250		
MISS06A	4-Aug-93	REG	MANGANESE	826	=	
MISS06A	24-May-94	REG	MANGANESE	49.7	=	J
MISS06A	16-May-95	REG	MANGANESE	1540	=	
MISS06A	10-May-96	REG	MANGANESE	95	=	J
MISS06A	3-Jun-97	REG	MANGANESE	374		
MISS06A	1-Jul-98	REG	MANGANESE	267		
MISS06A	17-May-99	REG	MANGANESE	58.6		J
MISS06A	10-Jul-00	REG	MANGANESE	228		
MISS06A	20-Jun-01	REG	MANGANESE	13.6		
MISS07B	12-Jul-00	REG	MANGANESE	2030		
MISS02A	11-Jun-98	DUP	MERCURY	0.52		J
MISS02A	22-Jun-00	REG	MERCURY	0.45		
MISS02A	5-Jul-01	REG	MERCURY	0.1		
B38W14D	5-Jul-00	REG	MERCURY	0.11		J
B38W14D	2-Jul-01	REG	MERCURY	0.1		
B38W24S	21-Jun-00	REG	MERCURY	0.12		J
B38W24S	27-Jun-01	REG	MERCURY	0.1		
B38W02D	20-May-95	REG	MOLYBDENU	9.7	=	
B38W02D	4-Jun-97	REG	MOLYBDENU	2.5		
B38W02D	30-Jun-98	REG	MOLYBDENU	23.6		
B38W14D	20-May-95	REG	MOLYBDENU	16.6	=	
B38W14S	20-May-95	REG	MOLYBDENU	18.1	=	
B38W14S	4-Jun-97	REG	MOLYBDENU	20.5		
B38W14S	7-Jul-98	REG	MOLYBDENU	29.7		
B38W14S	17-May-99	REG	MOLYBDENU	9.4		
B38W17A	28-Jul-93	REG	MOLYBDENU	281	=	
B38W17A	20-May-95	REG	MOLYBDENU	18.9	=	
B38W17A	3-Jun-97	REG	MOLYBDENU	18.7		
B38W17A	2-Jul-98	REG	MOLYBDENU	79.1		
B38W17A	13-May-99	REG	MOLYBDENU	2.6		
B38W18D	8-Jun-98	REG	MOLYBDENU	9.7		
B38W19S	17-May-95	REG	MOLYBDENU	20.4	=	
B38W19S	10-May-96	REG	MOLYBDENU	10.1	=	
B38W24D	2-Jul-98	REG	MOLYBDENU	3.9		
B38W25S	24-May-94	REG	MOLYBDENU	6.4	=	
B38W25S	1-Jul-98	REG	MOLYBDENU	7.6		
B38W25S	17-May-99	REG	MOLYBDENU	16.6		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	23-May-94	REG	MOLYBDENU	49.2	=	J
MISS01AA	18-May-95	REG	MOLYBDENU	10	=	
MISS01AA	23-May-97	REG	MOLYBDENU	1.8		
MISS01AA	18-Jun-98	REG	MOLYBDENU	3		
MISS02A	12-May-94	REG	MOLYBDENU	5.9	=	J
MISS02A	15-May-97	REG	MOLYBDENU	3.5		
MISS02A	15-May-97	DUP	MOLYBDENU	3.5		
MISS02A	11-Jun-98	REG	MOLYBDENU	3.4		
MISS02A	11-Jun-98	DUP	MOLYBDENU	3.8		
MISS02A	11-Jun-99	REG	MOLYBDENU	31.1		
MISS05A	2-Jun-97	REG	MOLYBDENU	2.5		
MISS05A	29-Jun-98	REG	MOLYBDENU	3.3		
MISS05A	14-May-99	REG	MOLYBDENU	1.9		
B38W01S	28-Jul-93	REG	NICKEL	14.8	B	
B38W01S	4-Jun-97	REG	NICKEL	3.6		
B38W01S	7-Jul-98	REG	NICKEL	2.7		
B38W01S	11-Jul-01	REG	NICKEL	4.9		
B38W02D	27-Jul-93	REG	NICKEL	14.8	B	
B38W02D	19-May-94	REG	NICKEL	10.1	=	
B38W02D	17-May-96	REG	NICKEL	40.8	=	
B38W02D	4-Jun-97	REG	NICKEL	17.6		
B38W02D	30-Jun-98	REG	NICKEL	41.6		
B38W02D	20-May-99	REG	NICKEL	5.7		
B38W02D	13-Jul-00	REG	NICKEL	32.7		
B38W02D	28-Jun-01	REG	NICKEL	20.2		
B38W14D	4-Jun-97	REG	NICKEL	18.5		
B38W14D	7-Jul-98	REG	NICKEL	10.2		
B38W14D	7-Jul-98	DUP	NICKEL	9.1		
B38W14D	17-May-99	REG	NICKEL	3.3		
B38W14D	5-Jul-00	REG	NICKEL	12.1		
B38W14D	2-Jul-01	REG	NICKEL	21.6		
B38W14S	4-Aug-93	REG	NICKEL	31.2	B	
B38W14S	17-May-96	REG	NICKEL	17	=	
B38W14S	17-May-96	DUP	NICKEL	17	=	
B38W14S	4-Jun-97	REG	NICKEL	19.7		
B38W14S	7-Jul-98	REG	NICKEL	31.3		
B38W14S	17-May-99	REG	NICKEL	23.5		
B38W14S	5-Jul-00	REG	NICKEL	9.6		
B38W14S	2-Jul-01	REG	NICKEL	4.8		
B38W15D	26-May-94	REG	NICKEL	30.9	=	
B38W15D	3-Jun-97	REG	NICKEL	6.8		
B38W15D	6-Jul-98	REG	NICKEL	8.2		
B38W15D	26-Jun-00	REG	NICKEL	9.7		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W15D	27-Jun-01	REG	NICKEL	12		
B38W15S	3-Jun-97	REG	NICKEL	3.8		
B38W15S	6-Jul-98	REG	NICKEL	5.2		
B38W15S	26-Jun-00	REG	NICKEL	4.8		
B38W15S	27-Jun-01	REG	NICKEL	6.2		
B38W17A	28-Jul-93	REG	NICKEL	824	=	
B38W17A	25-May-94	REG	NICKEL	153	=	
B38W17A	20-May-95	REG	NICKEL	167	=	
B38W17A	13-May-96	REG	NICKEL	143	=	
B38W17A	3-Jun-97	REG	NICKEL	148		
B38W17A	2-Jul-98	REG	NICKEL	201		
B38W17A	13-May-99	DUP	NICKEL	120		
B38W17A	19-Jun-00	REG	NICKEL	114		
B38W17A	14-Jun-01	REG	NICKEL	56.3		
B38W17B	3-Jun-97	REG	NICKEL	1.2		
B38W17B	2-Jul-98	REG	NICKEL	2.4		
B38W17B	13-May-99	REG	NICKEL	1.6		
B38W17B	19-Jun-00	REG	NICKEL	7		
B38W17B	14-Jun-01	REG	NICKEL	4.9		
B38W18D	21-Jul-93	REG	NICKEL	37.6	B	
B38W18D	13-May-94	REG	NICKEL	39.5	=	J
B38W18D	15-May-95	REG	NICKEL	26.3	=	
B38W18D	14-May-96	REG	NICKEL	28.4	=	
B38W18D	9-May-97	REG	NICKEL	17.3		
B38W18D	8-Jun-98	REG	NICKEL	55.5		
B38W18D	20-May-99	REG	NICKEL	24.9		
B38W18D	6-Jul-00	REG	NICKEL	22.7		
B38W18D	20-Jun-01	REG	NICKEL	36.6		
B38W19D	16-May-97	REG	NICKEL	3.9		
B38W19D	17-Jun-98	REG	NICKEL	1.9		
B38W19D	27-May-99	REG	NICKEL	1.7		
B38W19S	29-Jun-98	REG	NICKEL	4.7		
B38W19S	14-May-99	REG	NICKEL	4.2		
B38W19D	12-Jul-00	REG	NICKEL	2.2		J
B38W19S	13-Jun-01	REG	NICKEL	3.5		
B38W24D	18-May-94	REG	NICKEL	12.5	=	
B38W24D	2-Jun-97	REG	NICKEL	1.2		
B38W24D	2-Jul-98	REG	NICKEL	14.7		
B38W24D	13-May-99	REG	NICKEL	4.4		
B38W24D	5-Jul-01	REG	NICKEL	4		
B38W24S	2-Jun-97	REG	NICKEL	5.4		
B38W24S	2-Jul-98	REG	NICKEL	0.85		
B38W24S	21-Jun-00	REG	NICKEL	8		
B38W24S	27-Jun-01	REG	NICKEL	1.2		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W25D	12-May-95	REG	NICKEL	27.7	=	
B38W25D	15-May-97	REG	NICKEL	5.3		
B38W25D	1-Jul-98	REG	NICKEL	2.7		
B38W25D	26-May-99	REG	NICKEL	2.7		
B38W25D	7-Jul-00	REG	NICKEL	3.6		
B38W25D	10-Jul-01	DUP	NICKEL	3.3		
B38W25S	3-Aug-93	REG	NICKEL	134	=	
B38W25S	15-May-95	REG	NICKEL	22.5	=	
B38W25S	15-May-95	DUP	NICKEL	30	=	
B38W25S	5-Jun-97	REG	NICKEL	5.8		
B38W25S	1-Jul-98	REG	NICKEL	35.1		
B38W25S	17-May-99	DUP	NICKEL	78.1		
B38W25S	7-Jul-00	REG	NICKEL	32.4		
B38W25S	10-Jul-01	REG	NICKEL	14.2		
MISS01AA	31-Jul-93	REG	NICKEL	66.5	=	
MISS01AA	23-May-94	REG	NICKEL	243	=	
MISS01AA	23-May-97	REG	NICKEL	4.1		
MISS01AA	18-Jun-98	REG	NICKEL	9.9		
MISS01AA	12-May-99	REG	NICKEL	3.6		
MISS01AA	20-Jun-00	REG	NICKEL	4		
MISS01AA	20-Jun-01	REG	NICKEL	1.9		
MISS01B	20-Jun-00	REG	NICKEL	1.9		J
MISS01B	19-Jun-01	REG	NICKEL	4.1		
MISS02A	12-May-94	REG	NICKEL	27.1	=	
MISS02A	10-May-95	REG	NICKEL	11.4	=	
MISS02A	15-May-97	REG	NICKEL	12.2		
MISS02A	15-May-97	DUP	NICKEL	13.5		
MISS02A	11-Jun-98	REG	NICKEL	9.7		
MISS02A	11-Jun-98	DUP	NICKEL	10.4		
MISS02A	18-May-99	REG	NICKEL	31.1		
MISS02A	22-Jun-00	REG	NICKEL	20		
MISS02A	5-Jul-01	REG	NICKEL	4.3		
MISS02B	20-Jul-93	REG	NICKEL	22.6	=	
MISS02B	13-May-94	REG	NICKEL	181	=	J
MISS02B	19-May-97	REG	NICKEL	9.2		
MISS02B	10-Jun-98	REG	NICKEL	9.2		
MISS02B	18-May-99	REG	NICKEL	9.6		
MISS02B	23-Jun-00	REG	NICKEL	20.9		
MISS02B	5-Jul-01	REG	NICKEL	7.6		
MISS05A	10-May-96	REG	NICKEL	10.9	=	
MISS05A	2-Jun-97	REG	NICKEL	6.1		
MISS05A	29-Jun-98	REG	NICKEL	5		
MISS05A	14-May-99	REG	NICKEL	22.8		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS05A	19-Jun-01	REG	NICKEL	5.1		
MISS05B	23-Jul-93	REG	NICKEL	17.7	B	
MISS05B	14-May-97	REG	NICKEL	4.1		
MISS05B	30-Jun-98	REG	NICKEL	10.8		
MISS05B	18-Jun-01	REG	NICKEL	6.8		
MISS06A	10-May-96	REG	NICKEL	17.3	=	
MISS06A	3-Jun-97	REG	NICKEL	10.6		
MISS06A	1-Jul-98	REG	NICKEL	8.1		
MISS06A	17-May-99	DUP	NICKEL	7.9		
MISS06A	10-Jul-00	REG	NICKEL	21.1		
MISS06A	20-Jun-01	REG	NICKEL	6.5		
MISS07B	12-Jul-00	REG	NICKEL	6.8		
MISS07B	11-Jun-01	REG	NICKEL	8.8		
B38W01S	28-Jul-93	REG	POTASSIUM	59500	=	
B38W01S	23-May-94	REG	POTASSIUM	54100	=	
B38W01S	21-May-95	REG	POTASSIUM	44600	=	
B38W01S	17-May-96	REG	POTASSIUM	49300	=	
B38W01S	4-Jun-97	REG	POTASSIUM	49500		
B38W01S	7-Jul-98	REG	POTASSIUM	43700		
B38W02D	19-May-94	REG	POTASSIUM	1210	=	
B38W02D	17-May-96	REG	POTASSIUM	449	=	
B38W02D	4-Jun-97	REG	POTASSIUM	819		
B38W02D	30-Jun-98	REG	POTASSIUM	941		
B38W02D	20-May-99	REG	POTASSIUM	777		
B38W02D	13-Jul-00	REG	POTASSIUM	847		
B38W14D	4-Aug-93	REG	POTASSIUM	7440	=	
B38W14D	20-May-95	REG	POTASSIUM	3750	=	
B38W14D	17-May-96	REG	POTASSIUM	4380	=	
B38W14D	4-Jun-97	REG	POTASSIUM	5300		
B38W14D	7-Jul-98	REG	POTASSIUM	6020		
B38W14D	7-Jul-98	DUP	POTASSIUM	6110		
B38W14D	17-May-99	REG	POTASSIUM	4140		
B38W14D	5-Jul-00	REG	POTASSIUM	6240		
B38W14S	4-Aug-93	REG	POTASSIUM	5700	=	
B38W14S	20-May-95	REG	POTASSIUM	2850	=	
B38W14S	17-May-96	REG	POTASSIUM	3720	=	
B38W14S	17-May-96	DUP	POTASSIUM	3790	=	
B38W14S	4-Jun-97	REG	POTASSIUM	5080		
B38W14S	7-Jul-98	REG	POTASSIUM	4930		
B38W14S	17-May-99	REG	POTASSIUM	4810		
B38W14S	5-Jul-00	REG	POTASSIUM	4420		
B38W15D	2-Aug-93	REG	POTASSIUM	41200	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W15D	26-May-94	REG	POTASSIUM	58800	=	
B38W15D	19-May-95	REG	POTASSIUM	43300	=	J
B38W15D	13-May-96	REG	POTASSIUM	65000	=	J
B38W15D	3-Jun-97	REG	POTASSIUM	50500		
B38W15D	6-Jul-98	REG	POTASSIUM	44200		
B38W15D	26-Jun-00	REG	POTASSIUM	72700		
B38W15S	2-Aug-93	REG	POTASSIUM	146000	=	
B38W15S	26-May-94	REG	POTASSIUM	138000	=	
B38W15S	19-May-95	REG	POTASSIUM	168000	=	J
B38W15S	19-May-95	DUP	POTASSIUM	154000	=	J
B38W15S	13-May-96	REG	POTASSIUM	136000	=	J
B38W15S	3-Jun-97	REG	POTASSIUM	136000		
B38W15S	6-Jul-98	REG	POTASSIUM	120000		
B38W15S	26-Jun-00	REG	POTASSIUM	164000		
B38W17A	28-Jul-93	REG	POTASSIUM	26600	=	
B38W17A	25-May-94	REG	POTASSIUM	20300	=	
B38W17A	20-May-95	REG	POTASSIUM	13900	=	
B38W17A	13-May-96	REG	POTASSIUM	31000	=	J
B38W17A	3-Jun-97	REG	POTASSIUM	19200		
B38W17A	2-Jul-98	REG	POTASSIUM	20800		
B38W17A	13-May-99	DUP	POTASSIUM	25000		
B38W17A	19-Jun-00	REG	POTASSIUM	18900		
B38W17B	29-Jul-93	REG	POTASSIUM	78400	=	J
B38W17B	25-May-94	REG	POTASSIUM	83300	=	
B38W17B	20-May-95	REG	POTASSIUM	73200	=	
B38W17B	13-May-96	REG	POTASSIUM	88500	=	J
B38W17B	3-Jun-97	REG	POTASSIUM	91100		
B38W17B	2-Jul-98	REG	POTASSIUM	88000		
B38W17B	13-May-99	REG	POTASSIUM	98900		
B38W17B	19-Jun-00	REG	POTASSIUM	93300		
B38W18D	21-Jul-93	REG	POTASSIUM	6910	=	
B38W18D	13-May-94	REG	POTASSIUM	6240	=	J
B38W18D	15-May-95	REG	POTASSIUM	6370	=	
B38W18D	14-May-96	REG	POTASSIUM	6830	=	
B38W18D	9-May-97	REG	POTASSIUM	7530		
B38W18D	8-Jun-98	REG	POTASSIUM	8870		
B38W18D	20-May-99	DUP	POTASSIUM	7370		
B38W18D	6-Jul-00	REG	POTASSIUM	6320		
B38W19D	23-Jul-93	REG	POTASSIUM	381000	=	
B38W19D	16-May-94	REG	POTASSIUM	485000	=	
B38W19D	10-May-95	REG	POTASSIUM	329000	=	
B38W19D	16-May-96	REG	POTASSIUM	435000	=	
B38W19D	16-May-97	REG	POTASSIUM	397000		J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19D	17-Jun-98	REG	POTASSIUM	415000		J
B38W19D	27-May-99	REG	POTASSIUM	408000		
B38W19D	12-Jul-00	REG	POTASSIUM	291000		
B38W19S	27-May-94	REG	POTASSIUM	43500	=	
B38W19S	17-May-95	REG	POTASSIUM	40400	=	
B38W19S	10-May-96	REG	POTASSIUM	33500	=	J
B38W19S	29-Jun-98	REG	POTASSIUM	31800		
B38W19S	14-May-99	REG	POTASSIUM	35500		
B38W24D	9-Aug-93	REG	POTASSIUM	13000	=	
B38W24D	18-May-94	REG	POTASSIUM	9900	=	
B38W24D	17-May-95	REG	POTASSIUM	7530	=	
B38W24D	9-May-96	REG	POTASSIUM	12700	=	J
B38W24D	2-Jun-97	REG	POTASSIUM	12800		
B38W24D	2-Jul-98	REG	POTASSIUM	12200		
B38W24D	13-May-99	REG	POTASSIUM	12800		
B38W24D	22-Jun-00	REG	POTASSIUM	11600		
B38W24S	5-Aug-93	REG	POTASSIUM	8060	=	
B38W24S	25-May-94	REG	POTASSIUM	6600	=	
B38W24S	17-May-95	REG	POTASSIUM	7050	=	
B38W24S	9-May-96	REG	POTASSIUM	8790	=	J
B38W24S	2-Jun-97	REG	POTASSIUM	6030		
B38W24S	2-Jul-98	REG	POTASSIUM	6450		
B38W24S	13-May-99	DUP	POTASSIUM	7710		
B38W24S	21-Jun-00	REG	POTASSIUM	6990		
B38W25D	3-Aug-93	REG	POTASSIUM	92300	=	
B38W25D	18-May-94	REG	POTASSIUM	62800	=	
B38W25D	12-May-95	REG	POTASSIUM	73900	=	J
B38W25D	15-May-96	REG	POTASSIUM	77800	=	J
B38W25D	15-May-97	REG	POTASSIUM	61700		J
B38W25D	1-Jul-98	REG	POTASSIUM	56900		
B38W25D	26-May-99	DUP	POTASSIUM	56200		
B38W25D	7-Jul-00	REG	POTASSIUM	48300		
B38W25S	3-Aug-93	REG	POTASSIUM	167000	=	
B38W25S	24-May-94	REG	POTASSIUM	89600	=	J
B38W25S	15-May-95	REG	POTASSIUM	88400	=	
B38W25S	15-May-95	DUP	POTASSIUM	88800	=	
B38W25S	15-May-96	REG	POTASSIUM	72800	=	J
B38W25S	15-May-96	DUP	POTASSIUM	77900	=	J
B38W25S	5-Jun-97	REG	POTASSIUM	71400		
B38W25S	1-Jul-98	REG	POTASSIUM	45900		
B38W25S	17-May-99	REG	POTASSIUM	74400		
B38W25S	7-Jul-00	REG	POTASSIUM	59900		
MISS01AA	31-Jul-93	REG	POTASSIUM	2340	B	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS01AA	18-May-95	REG	POTASSIUM	1550	=	
MISS01AA	9-May-96	REG	POTASSIUM	1460	=	J
MISS01AA	23-May-97	REG	POTASSIUM	1900		
MISS01AA	18-Jun-98	REG	POTASSIUM	2100		
MISS01AA	12-May-99	REG	POTASSIUM	1590		
MISS01AA	20-Jun-00	REG	POTASSIUM	1270		
MISS01B	21-Jul-93	REG	POTASSIUM	6350	=	
MISS01B	16-May-94	REG	POTASSIUM	5710	=	
MISS01B	10-May-95	REG	POTASSIUM	6950	=	
MISS01B	15-May-96	REG	POTASSIUM	15300	=	J
MISS01B	18-Jun-98	REG	POTASSIUM	13900		
MISS01B	25-May-99	REG	POTASSIUM	11900		
MISS01B	20-Jun-00	REG	POTASSIUM	9000		
MISS02A	20-Jul-93	REG	POTASSIUM	9390	=	
MISS02A	12-May-94	REG	POTASSIUM	2850	=	
MISS02A	10-May-95	REG	POTASSIUM	4340	=	
MISS02A	16-May-96	REG	POTASSIUM	3190	=	
MISS02A	15-May-97	REG	POTASSIUM	5120		J
MISS02A	15-May-97	DUP	POTASSIUM	4940		J
MISS02A	11-Jun-98	REG	POTASSIUM	4790		J
MISS02A	11-Jun-98	DUP	POTASSIUM	5260		J
MISS02A	18-May-99	REG	POTASSIUM	12500		
MISS02A	22-Jun-00	REG	POTASSIUM	9350		J
MISS02B	20-Jul-93	REG	POTASSIUM	55100	=	
MISS02B	13-May-94	REG	POTASSIUM	32000	=	J
MISS02B	9-May-95	REG	POTASSIUM	40300	=	
MISS02B	14-May-96	REG	POTASSIUM	38000	=	
MISS02B	19-May-97	REG	POTASSIUM	40100		J
MISS02B	10-Jun-98	REG	POTASSIUM	46200		J
MISS02B	18-May-99	REG	POTASSIUM	70700		
MISS02B	23-Jun-00	REG	POTASSIUM	84400		
MISS05A	27-May-94	REG	POTASSIUM	57800	=	
MISS05A	12-May-95	REG	POTASSIUM	84600	=	J
MISS05A	10-May-96	REG	POTASSIUM	53000	=	J
MISS05A	2-Jun-97	REG	POTASSIUM	64100		
MISS05A	29-Jun-98	REG	POTASSIUM	45000		
MISS05A	14-May-99	REG	POTASSIUM	58300		
MISS05B	23-Jul-93	REG	POTASSIUM	224000	=	
MISS05B	17-May-94	REG	POTASSIUM	230000	=	
MISS05B	11-May-95	REG	POTASSIUM	231000	=	
MISS05B	16-May-96	REG	POTASSIUM	234000	=	
MISS05B	14-May-97	REG	POTASSIUM	224000		
MISS05B	30-Jun-98	REG	POTASSIUM	162000		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS05B	11-Jul-00	REG	POTASSIUM	167000		
MISS06A	4-Aug-93	REG	POTASSIUM	75400	=	
MISS06A	24-May-94	REG	POTASSIUM	12100	=	J
MISS06A	16-May-95	REG	POTASSIUM	97000	=	
MISS06A	10-May-96	REG	POTASSIUM	12300	=	J
MISS06A	3-Jun-97	REG	POTASSIUM	22900		
MISS06A	1-Jul-98	REG	POTASSIUM	15000		
MISS06A	17-May-99	REG	POTASSIUM	15800		
MISS06A	10-Jul-00	REG	POTASSIUM	12600		
MISS07B	12-Jul-00	REG	POTASSIUM	29200		
B38W02D	30-Jun-98	REG	SILVER	0.78		
B38W02D	28-Jun-01	REG	SILVER	1		
B38W07B	16-Jun-98	REG	SILVER	1.1		J
B38W07B	27-May-99	DUP	SILVER	3		
B38W19D	16-May-94	REG	SILVER	6	=	
B38W19D	17-Jun-98	REG	SILVER	4.3		
B38W19D	13-Jun-01	REG	SILVER	1		
B38W19S	14-May-99	REG	SILVER	1.5		
B38W24D	18-May-94	REG	SILVER	4.8	=	
B38W24D	2-Jul-98	REG	SILVER	0.56		
B38W24D	5-Jul-01	REG	SILVER	1		
MISS01AA	18-Jun-98	REG	SILVER	1.3		J
MISS01AA	20-Jun-01	REG	SILVER	1		
MISS01B	16-May-94	REG	SILVER	6.4	=	
MISS01B	25-May-99	REG	SILVER	1.4		
MISS01B	19-Jun-01	REG	SILVER	1		
MISS02A	11-Jun-98	REG	SILVER	3.5		J
MISS02A	11-Jun-98	DUP	SILVER	0.96		J
MISS02A	18-May-99	REG	SILVER	1.4		
MISS02A	5-Jul-01	REG	SILVER	1		
MISS02B	10-Jun-98	REG	SILVER	1.2		J
MISS02B	18-May-99	REG	SILVER	1.4		
MISS02B	5-Jul-01	REG	SILVER	1		
MISS05A	27-May-94	REG	SILVER	5.6	=	
MISS05A	14-May-99	REG	SILVER	1.5		
MISS05A	19-Jun-01	REG	SILVER	1		
B38W01S	28-Jul-93	REG	SODIUM	91100	=	
B38W01S	23-May-94	REG	SODIUM	80300	=	
B38W01S	21-May-95	REG	SODIUM	53700	=	
B38W01S	17-May-96	REG	SODIUM	59900	=	
B38W01S	4-Jun-97	REG	SODIUM	52200		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W01S	7-Jul-98	REG	SODIUM	39500		J
B38W02D	27-Jul-93	REG	SODIUM	7820	=	
B38W02D	19-May-94	REG	SODIUM	7060	=	
B38W02D	20-May-95	REG	SODIUM	6050	=	
B38W02D	17-May-96	REG	SODIUM	7210	=	
B38W02D	4-Jun-97	REG	SODIUM	8410		
B38W02D	30-Jun-98	REG	SODIUM	8710		J
B38W02D	20-May-99	REG	SODIUM	8350		
B38W02D	13-Jul-00	REG	SODIUM	9050		
B38W14D	4-Aug-93	REG	SODIUM	29400	=	
B38W14D	20-May-95	REG	SODIUM	22100	=	
B38W14D	17-May-96	REG	SODIUM	31100	=	
B38W14D	4-Jun-97	REG	SODIUM	34800		
B38W14D	7-Jul-98	REG	SODIUM	34500		J
B38W14D	7-Jul-98	DUP	SODIUM	35400		J
B38W14D	17-May-99	REG	SODIUM	38800		
B38W14D	5-Jul-00	REG	SODIUM	34800		
B38W14S	4-Aug-93	REG	SODIUM	11500	=	
B38W14S	20-May-95	REG	SODIUM	13500	=	
B38W14S	17-May-96	REG	SODIUM	19500	=	
B38W14S	17-May-96	DUP	SODIUM	17700	=	
B38W14S	4-Jun-97	REG	SODIUM	21900		
B38W14S	7-Jul-98	REG	SODIUM	19900		J
B38W14S	17-May-99	REG	SODIUM	22800		
B38W14S	5-Jul-00	REG	SODIUM	23300		
B38W15D	2-Aug-93	REG	SODIUM	229000	=	
B38W15D	26-May-94	REG	SODIUM	340000	=	
B38W15D	19-May-95	REG	SODIUM	245000	=	
B38W15D	13-May-96	REG	SODIUM	361000	=	J
B38W15D	3-Jun-97	REG	SODIUM	251000		
B38W15D	6-Jul-98	REG	SODIUM	181000		J
B38W15D	26-Jun-00	REG	SODIUM	204000		
B38W15S	2-Aug-93	REG	SODIUM	223000	=	
B38W15S	26-May-94	REG	SODIUM	205000	=	
B38W15S	19-May-95	REG	SODIUM	269000	=	
B38W15S	19-May-95	DUP	SODIUM	248000	=	
B38W15S	13-May-96	REG	SODIUM	207000	=	J
B38W15S	3-Jun-97	REG	SODIUM	207000		
B38W15S	6-Jul-98	REG	SODIUM	187000		J
B38W15S	26-Jun-00	REG	SODIUM	175000		
B38W17A	28-Jul-93	REG	SODIUM	47000	=	
B38W17A	25-May-94	REG	SODIUM	37500	=	
B38W17A	20-May-95	REG	SODIUM	28000	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W17A	13-May-96	REG	SODIUM	58100	=	J
B38W17A	3-Jun-97	REG	SODIUM	33300		
B38W17A	2-Jul-98	REG	SODIUM	32300		J
B38W17A	13-May-99	REG	SODIUM	50800		
B38W17A	19-Jun-00	REG	SODIUM	38100		
B38W17B	29-Jul-93	REG	SODIUM	207000	=	J
B38W17B	25-May-94	REG	SODIUM	208000	=	
B38W17B	20-May-95	REG	SODIUM	232000	=	
B38W17B	13-May-96	REG	SODIUM	194000	=	J
B38W17B	3-Jun-97	REG	SODIUM	218000		
B38W17B	2-Jul-98	REG	SODIUM	172000		J
B38W17B	13-May-99	REG	SODIUM	197000		
B38W17B	19-Jun-00	REG	SODIUM	211000		
B38W18D	21-Jul-93	REG	SODIUM	28300	=	
B38W18D	13-May-94	REG	SODIUM	32800	=	J
B38W18D	15-May-95	REG	SODIUM	27000	=	
B38W18D	14-May-96	REG	SODIUM	29700	=	
B38W18D	9-May-97	REG	SODIUM	29100		
B38W18D	8-Jun-98	REG	SODIUM	34800		
B38W18D	20-May-99	REG	SODIUM	34300		
B38W18D	6-Jul-00	REG	SODIUM	36600		
B38W19D	23-Jul-93	REG	SODIUM	469000	=	
B38W19D	16-May-94	REG	SODIUM	499000	=	
B38W19D	10-May-95	REG	SODIUM	306000	=	
B38W19D	16-May-96	REG	SODIUM	391000	=	
B38W19D	16-May-97	REG	SODIUM	327000		
B38W19D	17-Jun-98	REG	SODIUM	367000		
B38W19D	27-May-99	REG	SODIUM	383000		
B38W19D	12-Jul-00	REG	SODIUM	206000		J
B38W19S	27-May-94	REG	SODIUM	25900	=	
B38W19S	17-May-95	REG	SODIUM	23700	=	J
B38W19S	10-May-96	REG	SODIUM	22700	=	J
B38W19S	29-Jun-98	REG	SODIUM	21300		J
B38W19S	14-May-99	REG	SODIUM	21700		
B38W24D	9-Aug-93	REG	SODIUM	59800	=	J
B38W24D	18-May-94	REG	SODIUM	46600	=	
B38W24D	17-May-95	REG	SODIUM	39700	=	J
B38W24D	9-May-96	REG	SODIUM	54500	=	J
B38W24D	2-Jun-97	REG	SODIUM	41300		
B38W24D	2-Jul-98	REG	SODIUM	33800		J
B38W24D	13-May-99	REG	SODIUM	40000		
B38W24D	22-Jun-00	REG	SODIUM	34700		
B38W24S	5-Aug-93	REG	SODIUM	21700	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W24S	25-May-94	REG	SODIUM	19800	=	
B38W24S	17-May-95	REG	SODIUM	18800	=	J
B38W24S	9-May-96	REG	SODIUM	15700	=	J
B38W24S	2-Jun-97	REG	SODIUM	12500		
B38W24S	2-Jul-98	REG	SODIUM	12000		J
B38W24S	13-May-99	DUP	SODIUM	15600		
B38W24S	21-Jun-00	REG	SODIUM	13900		
B38W25D	3-Aug-93	REG	SODIUM	54500	=	
B38W25D	18-May-94	REG	SODIUM	40200	=	
B38W25D	12-May-95	REG	SODIUM	43700	=	J
B38W25D	15-May-96	REG	SODIUM	37600	=	J
B38W25D	15-May-97	REG	SODIUM	30900		
B38W25D	1-Jul-98	REG	SODIUM	28900		J
B38W25D	26-May-99	REG	SODIUM	27700		
B38W25D	7-Jul-00	REG	SODIUM	28600		
B38W25S	3-Aug-93	REG	SODIUM	83800	=	
B38W25S	24-May-94	REG	SODIUM	42200	=	J
B38W25S	15-May-95	REG	SODIUM	37200	=	
B38W25S	15-May-95	DUP	SODIUM	37000	=	
B38W25S	15-May-96	REG	SODIUM	28300	=	J
B38W25S	15-May-96	DUP	SODIUM	31400	=	J
B38W25S	5-Jun-97	REG	SODIUM	31800		
B38W25S	1-Jul-98	REG	SODIUM	21600		J
B38W25S	17-May-99	REG	SODIUM	29900		
B38W25S	7-Jul-00	REG	SODIUM	30100		
MISS01AA	31-Jul-93	REG	SODIUM	7400	=	
MISS01AA	23-May-94	REG	SODIUM	4810	=	
MISS01AA	18-May-95	REG	SODIUM	5990	=	J
MISS01AA	9-May-96	REG	SODIUM	3870	=	J
MISS01AA	23-May-97	REG	SODIUM	5260		
MISS01AA	18-Jun-98	REG	SODIUM	5300		
MISS01AA	12-May-99	REG	SODIUM	5140		
MISS01AA	20-Jun-00	REG	SODIUM	4850		
MISS01B	21-Jul-93	REG	SODIUM	53200	=	
MISS01B	16-May-94	REG	SODIUM	48100	=	
MISS01B	10-May-95	REG	SODIUM	48100	=	
MISS01B	15-May-96	REG	SODIUM	56900	=	J
MISS01B	18-Jun-98	REG	SODIUM	49000		
MISS01B	25-May-99	REG	SODIUM	51500		
MISS01B	20-Jun-00	REG	SODIUM	50000		
MISS02A	20-Jul-93	REG	SODIUM	870000	=	
MISS02A	12-May-94	REG	SODIUM	878000	=	
MISS02A	10-May-95	REG	SODIUM	986000	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	16-May-96	REG	SODIUM	800000	=	
MISS02A	15-May-97	REG	SODIUM	709000		
MISS02A	15-May-97	DUP	SODIUM	679000		
MISS02A	11-Jun-98	DUP	SODIUM	555000		
MISS02A	22-Jun-00	REG	SODIUM	666000		
MISS02B	20-Jul-93	REG	SODIUM	1310000	=	
MISS02B	13-May-94	REG	SODIUM	801000	=	J
MISS02B	9-May-95	REG	SODIUM	932000	=	J
MISS02B	14-May-96	REG	SODIUM	981000	=	
MISS02B	19-May-97	REG	SODIUM	959000		
MISS02B	10-Jun-98	REG	SODIUM	973000		
MISS02B	18-May-99	REG	SODIUM	1000000		
MISS02B	23-Jun-00	REG	SODIUM	342000		
MISS05A	27-May-94	REG	SODIUM	17300	=	
MISS05A	12-May-95	REG	SODIUM	24200	=	J
MISS05A	10-May-96	REG	SODIUM	14000	=	J
MISS05A	2-Jun-97	REG	SODIUM	20100		
MISS05A	29-Jun-98	REG	SODIUM	13800		J
MISS05A	14-May-99	REG	SODIUM	18000		
MISS05B	23-Jul-93	REG	SODIUM	321000	=	
MISS05B	17-May-94	REG	SODIUM	382000	=	
MISS05B	11-May-95	REG	SODIUM	303000	=	
MISS05B	16-May-96	REG	SODIUM	272000	=	
MISS05B	14-May-97	REG	SODIUM	297000		
MISS05B	30-Jun-98	REG	SODIUM	107000		J
MISS05B	11-Jul-00	REG	SODIUM	94800		
MISS06A	4-Aug-93	REG	SODIUM	57300	=	
MISS06A	24-May-94	REG	SODIUM	15100	=	J
MISS06A	16-May-95	REG	SODIUM	62600	=	
MISS06A	10-May-96	REG	SODIUM	10500	=	J
MISS06A	3-Jun-97	REG	SODIUM	19400		
MISS06A	1-Jul-98	REG	SODIUM	15800		J
MISS06A	17-May-99	DUP	SODIUM	21300		
MISS06A	10-Jul-00	REG	SODIUM	17100		
MISS07B	27-May-99	REG	SODIUM	1290000		
MISS07B	12-Jul-00	REG	SODIUM	338000		
B38W02D	13-Jul-00	REG	THALLIUM	5.5		J
B38W02D	28-Jun-01	REG	THALLIUM	3.9		
B38W15S	26-Jun-00	REG	THALLIUM	6.2		J
B38W15S	27-Jun-01	REG	THALLIUM	3.9		
B38W18D	6-Jul-00	REG	THALLIUM	7.8		J
B38W18D	20-Jun-01	REG	THALLIUM	3.9		
B38W25S	7-Jul-00	REG	THALLIUM	17.4		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W25S	10-Jul-01	REG	THALLIUM	3.9		
MISS02B	23-Jun-00	REG	THALLIUM	7.8		J
MISS02B	5-Jul-01	REG	THALLIUM	3.9		
B38W02D	4-Jun-97	REG	VANADIUM	1.2		
B38W02D	30-Jun-98	REG	VANADIUM	2.7		
B38W02D	20-May-99	REG	VANADIUM	1		
B38W02D	13-Jul-00	REG	VANADIUM	1.8		J
B38W02D	28-Jun-01	REG	VANADIUM	1.5		
B38W14D	17-May-96	REG	VANADIUM	4.7	=	
B38W14D	7-Jul-98	REG	VANADIUM	1.1		
B38W14D	7-Jul-98	DUP	VANADIUM	0.8		
B38W14D	17-May99	REG	VANADIUM	1.1		
B38W14D	2-Jul-01	REG	VANADIUM	0.92		
B38W14S	17-May-96	REG	VANADIUM	7.4	=	
B38W14S	17-May-96	DUP	VANADIUM	7.2	=	
B38W14S	4-Jun-97	REG	VANADIUM	6.2		
B38W14S	7-Jul-98	REG	VANADIUM	9.8		
B38W14S	17-May-99	REG	VANADIUM	2.9		
B38W14S	2-Jul-01	REG	VANADIUM	2.4		
B38W15D	26-May-94	REG	VANADIUM	11.9	=	
B38W15D	13-May-96	REG	VANADIUM	12.3	=	
B38W15D	3-Jun-97	REG	VANADIUM	4.2		
B38W15D	6-Jul-98	REG	VANADIUM	4.2		
B38W15D	27-Jun-01	DUP	VANADIUM	2.6		
B38W15S	2-Aug-93	REG	VANADIUM	13.3	B	
B38W15S	3-Jun-97	REG	VANADIUM	2.1		
B38W15S	6-Jul-98	REG	VANADIUM	2.2		
B38W15S	27-Jun-01	REG	VANADIUM	2.4		
B38W17A	25-May-94	REG	VANADIUM	9.9	=	
B38W17A	13-May-96	REG	VANADIUM	8.4	=	
B38W17A	3-Jun-97	REG	VANADIUM	7.2		
B38W17A	2-Jul-98	REG	VANADIUM	28.2		
B38W17A	19-Jun-00	REG	VANADIUM	11.8		
B38W17A	14-Jun-01	REG	VANADIUM	0.7		
B38W17B	25-May-94	REG	VANADIUM	20.8	=	
B38W17B	20-May-95	REG	VANADIUM	7.6	=	
B38W17B	13-May-96	REG	VANADIUM	20.6	=	
B38W17B	3-Jun-97	REG	VANADIUM	2		
B38W17B	2-Jul-98	REG	VANADIUM	1		
B38W17B	13-May-99	REG	VANADIUM	2.1		
B38W17B	19-Jun-00	REG	VANADIUM	1		J
B38W17B	14-Jun-01	REG	VANADIUM	2		
B38W19D	16-May-94	REG	VANADIUM	4.2	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19D	16-May-96	REG	VANADIUM	8.1	=	
B38W19D	16-May-97	REG	VANADIUM	5.2		
B38W19D	17-Jun-98	REG	VANADIUM	4.2		
B38W19D	27-May-99	REG	VANADIUM	8.2		
B38W19D	12-Jul-00	REG	VANADIUM	4.5		
B38W19D	13-Jun-01	REG	VANADIUM	4		
B38W19S	27-May-94	REG	VANADIUM	56.6	=	
B38W19S	17-May-95	REG	VANADIUM	6.7	=	
B38W19S	10-May-96	REG	VANADIUM	41.9	=	
B38W19S	29-Jun-98	REG	VANADIUM	1.1		
B38W19S	14-May-99	REG	VANADIUM	2		
B38W19S	13-Jun-01	REG	VANADIUM	0.7		
B38W24D	2-Jun-97	REG	VANADIUM	1.2		
B38W24D	2-Jul-98	REG	VANADIUM	0.8		
B38W24D	13-May-99	REG	VANADIUM	0.8		
B38W24D	5-Jul-01	REG	VANADIUM	0.7		
B38W24S	2-Jun-97	REG	VANADIUM	2.8		
B38W24S	2-Jul-98	REG	VANADIUM	1.1		
B38W24S	13-May-99	REG	VANADIUM	0.89		
B38W24S	27-Jun-01	REG	VANADIUM	0.7		
B38W25S	3-Aug-93	REG	VANADIUM	16.7	B	J
B38W25S	24-May-94	REG	VANADIUM	15	=	
B38W25S	15-May-96	REG	VANADIUM	9.3	=	
B38W25S	15-May-96	DUP	VANADIUM	13.1	=	
B38W25S	5-Jun-97	REG	VANADIUM	1.3		
B38W25S	1-Jul-98	REG	VANADIUM	1.8		
B38W25S	17-May-99	REG	VANADIUM	1.7		
B38W25S	10-Jul-01	REG	VANADIUM	0.7		
MISS01AA	31-Jul-93	REG	VANADIUM	46.1	B	J
MISS01AA	23-May-94	REG	VANADIUM	42.1	=	
MISS01AA	9-May-96	REG	VANADIUM	37.9	=	
MISS01AA	23-May-97	REG	VANADIUM	0.5		
MISS01AA	18-Jun-98	REG	VANADIUM	4.6		
MISS01AA	12-May-99	REG	VANADIUM	2.8		
MISS01AA	20-Jun-01	REG	VANADIUM	0.81		
MISS01B	16-May-94	REG	VANADIUM	7.4	=	
MISS01B	15-May-96	REG	VANADIUM	13.6	=	
MISS01B	18-Jun-98	REG	VANADIUM	2.5		
MISS01B	25-May-99	REG	VANADIUM	3.4		
MISS01B	20-Jun-00	REG	VANADIUM	2.9		J
MISS01B	19-Jun-01	REG	VANADIUM	3.4		
MISS02A	10-May-95	REG	VANADIUM	10.1	=	
MISS02A	16-May-96	REG	VANADIUM	6.3	=	

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	15-May-97	REG	VANADIUM	4.7		
MISS02A	15-May-97	DUP	VANADIUM	4.8		
MISS02A	11-Jun-98	REG	VANADIUM	2		
MISS02A	11-Jun-98	DUP	VANADIUM	2.4		
MISS02A	18-May-99	DUP	VANADIUM	9.7		
MISS02A	22-Jun-00	REG	VANADIUM	2.7		J
MISS02A	5-Jul-01	REG	VANADIUM	1.3		
MISS02B	9-May-95	REG	VANADIUM	6.8	=	
MISS02B	19-May-97	REG	VANADIUM	3.4		
MISS02B	10-Jun-98	REG	VANADIUM	3.4		
MISS02B	18-May-99	DUP	VANADIUM	3.9		
MISS02B	23-Jun-00	REG	VANADIUM	4.7		
MISS02B	5-Jul-01	REG	VANADIUM	2.8		
MISS05A	27-May-94	REG	VANADIUM	50.5	=	
MISS05A	10-May-96	REG	VANADIUM	41.9	=	
MISS05A	2-Jun-97	REG	VANADIUM	16.9		
MISS05A	29-Jun-98	REG	VANADIUM	11.3		
MISS05A	14-May-99	REG	VANADIUM	1.6		
MISS05A	19-Jun-01	REG	VANADIUM	0.7		
MISS05B	17-May-94	REG	VANADIUM	27.7	=	
MISS05B	16-May-96	REG	VANADIUM	6	=	
MISS05B	14-May-97	REG	VANADIUM	3.8		
MISS05B	30-Jun-98	REG	VANADIUM	0.96		
MISS05B	11-Jul-00	REG	VANADIUM	2.1		J
MISS05B	18-Jun-01	REG	VANADIUM	4.7		
MISS06A	4-Aug-93	REG	VANADIUM	21.9	B	J
MISS06A	24-May-94	REG	VANADIUM	23.6	=	
MISS06A	10-May-96	REG	VANADIUM	17.6	=	
MISS06A	3-Jun-97	REG	VANADIUM	1.2		
MISS06A	1-Jul-98	REG	VANADIUM	1.2		
MISS06A	17-May-99	REG	VANADIUM	1.2		
MISS06A	10-Jul-00	REG	VANADIUM	2.1		J
MISS06A	20-Jun-01	REG	VANADIUM	1.6		
MISS07B	27-May-99	DUP	VANADIUM	19.6		
MISS07B	12-Jul-00	REG	VANADIUM	13.9		
MISS07B	11-Jun-01	REG	VANADIUM	12.9		
B38W01S	23-May-94	REG	ZINC	129	=	J
B38W01S	7-Jul-98	REG	ZINC	13.5		
B38W01S	11-Jul-01	DUP	ZINC	1.6		
B38W02D	27-Jul-93	REG	ZINC	15.2	B	
B38W02D	17-May-96	REG	ZINC	3.2	=	
B38W02D	30-Jun-98	REG	ZINC	7.4		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W02D	28-Jun-01	REG	ZINC	7.4		
B38W14D	4-Aug-93	REG	ZINC	23.7	=	
B38W14D	17-May-96	REG	ZINC	4.2	=	
B38W14D	7-Jul-98	REG	ZINC	21.1		
B38W14D	7-Jul-98	DUP	ZINC	17.9		
B38W14D	5-Jul-00	REG	ZINC	24.7		
B38W14D	2-Jul-01	REG	ZINC	43.3		
B38W14S	4-Aug-93	REG	ZINC	47.1	=	
B38W14S	20-May-95	REG	ZINC	40.1	=	
B38W14S	17-May-96	REG	ZINC	6.5	=	
B38W14S	17-May-96	DUP	ZINC	5.3	=	
B38W14S	7-Jul-98	REG	ZINC	40.3		
B38W14S	13-May-99	REG	ZINC	6.9		
B38W14S	2-Jul-01	REG	ZINC	2.8		
B38W15D	2-Aug-93	REG	ZINC	57.5	=	UJ
B38W15D	26-May-94	REG	ZINC	67.2	=	
B38W15D	6-Jul-98	REG	ZINC	11.2		
B38W15D	27-Jun-01	REG	ZINC	22.5		
B38W15S	2-Aug-93	REG	ZINC	48.6	=	UJ
B38W15S	2-Aug-93	REG	ZINC	36.4	=	UJ
B38W15S	6-Jul-98	REG	ZINC	13.9		
B38W15S	27-Jun-01	REG	ZINC	9.3		
B38W17A	28-Jul-93	REG	ZINC	147	=	
B38W17A	25-May-94	REG	ZINC	34.3	=	
B38W17A	2-Jul-98	REG	ZINC	22		
B38W17A	13-May-99	REG	ZINC	4.9		
B38W17A	19-Jun-00	REG	ZINC	25.8		
B38W17A	14-Jun-01	REG	ZINC	12.1		
B38W17B	25-May-94	REG	ZINC	42.8	=	
B38W17B	2-Jul-98	REG	ZINC	3.2		
B38W17B	13-May-99	REG	ZINC	1.6		
B38W17B	14-Jun-01	REG	ZINC	6.3		
B38W18D	21-Jul-93	REG	ZINC	138	=	
B38W18D	13-May-94	REG	ZINC	226	=	J
B38W18D	15-May-95	REG	ZINC	152	=	J
B38W18D	14-May-96	REG	ZINC	102	=	
B38W18D	9-May-97	REG	ZINC	76.8		
B38W18D	8-Jun-98	REG	ZINC	79.7		
B38W18D	20-May-99	DUP	ZINC	81.5		
B38W18D	6-Jul-00	REG	ZINC	91.2		
B38W18D	20-Jun-01	REG	ZINC	112		
B38W19D	16-May-96	REG	ZINC	4.6	=	
B38W19D	16-May-97	REG	ZINC	3.1		

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
B38W19D	17-Jun-98	REG	ZINC	2.9		
B38W19D	27-May-99	REG	ZINC	2.1		
B38W19D	13-Jun-01	REG	ZINC	6.9		
B38W19S	17-May-95	REG	ZINC	6	=	UJ
B38W19S	29-Jun-98	REG	ZINC	6.2		
B38W19S	14-May-99	REG	ZINC	1.7		
B38W19S	13-Jun-01	REG	ZINC	2.5		
B38W24D	9-Aug-93	REG	ZINC	38.1	=	J
B38W24D	17-May-95	REG	ZINC	17.2	=	UJ
B38W24D	2-Jul-98	REG	ZINC	15.4		
B38W24D	13-May-99	REG	ZINC	5.9		
B38W24D	5-Jul-01	REG	ZINC	11.9		
B38W24S	17-May-95	REG	ZINC	7.6	=	UJ
B38W24S	2-Jul-98	REG	ZINC	12.3		
B38W24S	13-May-99	REG	ZINC	30.4		
B38W24S	27-Jun-01	REG	ZINC	6.1		
B38W25D	3-Aug-93	REG	ZINC	28.5	=	UJ
B38W25D	15-May-97	REG	ZINC	2.8		
B38W25D	1-Jul-98	REG	ZINC	4.6		
B38W25D	26-May-99	REG	ZINC	4.5		
B38W25D	10-Jul-01	DUP	ZINC	2.8		
B38W25S	3-Aug-93	REG	ZINC	231	=	J
B38W25S	15-May-95	REG	ZINC	12.4	=	UJ
B38W25S	15-May-95	DUP	ZINC	13.1	=	UJ
B38W25S	15-May-96	REG	ZINC	38.2	=	
B38W25S	15-May-96	DUP	ZINC	31.6	=	J
B38W25S	1-Jul-98	REG	ZINC	198		
B38W25S	17-May-99	REG	ZINC	29.7		
B38W25S	7-Jul-00	REG	ZINC	530		
B38W25S	10-Jul-01	REG	ZINC	35.9		
MISS01AA	31-Jul-93	REG	ZINC	142	=	J
MISS01AA	23-May-94	REG	ZINC	88.8	=	J
MISS01AA	18-May-95	REG	ZINC	7.6	=	UJ
MISS01AA	23-May-97	REG	ZINC	4.8		
MISS01AA	18-Jun-98	REG	ZINC	2.8		UJ
MISS01AA	20-Jun-01	REG	ZINC	16.6		
MISS01B	21-Jul-93	REG	ZINC	13.8	B	
MISS01B	10-May-95	REG	ZINC	34.6	=	
MISS01B	18-Jun-98	REG	ZINC	2.2		UJ
MISS01B	25-May-99	REG	ZINC	2.9		
MISS01B	19-Jun-01	REG	ZINC	6.9		
MISS02A	20-Jul-93	REG	ZINC	17.3	=	
MISS02A	12-May-94	REG	ZINC	50	=	J

TABLE A-3
Historical Results for Detected Selected Metals in Groundwater at MISS

Maywood Interim Storage Site - 2001

Station	Date	Sample Type	Analyte	Result(ug/l)	Lab Q	Rev Q
MISS02A	10-May-95	REG	ZINC	19.3	=	
MISS02A	16-May-96	REG	ZINC	4.5	=	
MISS02A	15-May-97	REG	ZINC	8		
MISS02A	15-May-97	DUP	ZINC	10.5		
MISS02A	11-Jun-98	REG	ZINC	17.7		J
MISS02A	11-Jun-98	DUP	ZINC	11		J
MISS02A	18-May-99	REG	ZINC	36		
MISS02A	22-Jun-00	REG	ZINC	18.8		
MISS02B	13-May-94	REG	ZINC	148	=	J
MISS02B	9-May-95	REG	ZINC	22	=	
MISS02B	14-May-96	REG	ZINC	1.8	=	
MISS02B	19-May-97	REG	ZINC	70.8		
MISS02B	10-Jun-98	REG	ZINC	2.1		J
MISS02B	23-Jun-00	REG	ZINC	109		
MISS02B	5-Jul-01	REG	ZINC	5.4		
MISS05A	27-May-94	REG	ZINC	34.6	=	
MISS05A	12-May-95	REG	ZINC	34.4	=	
MISS05A	10-May-96	REG	ZINC	72.1	=	
MISS05A	29-Jun-98	REG	ZINC	27.4		
MISS05A	14-May-99	REG	ZINC	74.5		
MISS05A	19-Jun-01	REG	ZINC	24.1		
MISS05B	11-May-95	REG	ZINC	98	=	J
MISS05B	16-May-96	REG	ZINC	7.8	=	
MISS05B	30-Jun-98	REG	ZINC	39.3		
MISS05B	18-Jun-01	REG	ZINC	5.3		
MISS06A	4-Aug-93	REG	ZINC	1260	=	
MISS06A	24-May-94	REG	ZINC	1120	=	
MISS06A	16-May-95	REG	ZINC	865	=	
MISS06A	10-May-96	REG	ZINC	968	=	
MISS06A	3-Jun-97	REG	ZINC	1060		
MISS06A	1-Jul-98	REG	ZINC	802		
MISS06A	17-May-99	DUP	ZINC	934		
MISS06A	10-Jul-00	REG	ZINC	495		
MISS07B	27-May-99	DUP	ZINC	4.8		

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
B38W14D	4-Aug-93	1,1,1-Trichloroethane	8.00			5
B38W14D	20-May-95	1,1,1-Trichloroethane	6.00			5
B38W14D	4-Jun-97	1,1,1-Trichloroethane	4.00	J	J	5
B38W14D	07-Jul-98	1,1,1-Trichloroethane	3.00	J	J	10
B38W14D	20-May-99	1,1,1-Trichloroethane	3.00	J	J	10
B38W14D	16-Nov-00	1,1,1-Trichloroethane	2.00			1
B38W14D	2-Jul-01	1,1,1-Trichloroethane	2.00			1
B38W14S	20-May-95	1,1,1-Trichloroethane	7.00			5
B38W14S	4-Jun-97	1,1,1-Trichloroethane	4.00	J	J	5
B38W14S	07-Jul-98	1,1,1-Trichloroethane	4.00	J	J	5
B38W14S	17-May-99	1,1,1-Trichloroethane	2.00	J	J	5
B38W14S	16-Nov-00	1,1,1-Trichloroethane	1.00		U	1
B38W14S	2-Jul-01	1,1,1-Trichloroethane	2.00			1
B38W15D	2-Aug-93	1,1,1-Trichloroethane	10.00			5
B38W15D	26-May-94	1,1,1-Trichloroethane	5.00			5
B38W15D	19-May-95	1,1,1-Trichloroethane	7.00			5
B38W15D	13-May-96	1,1,1-Trichloroethane	3.00			2
B38W15D	3-Jun-97	1,1,1-Trichloroethane	3.00	J	J	5
B38W15D	06-Jul-98	1,1,1-Trichloroethane	5.00			5
B38W15D	9-Nov-00	1,1,1-Trichloroethane	0.60		I	1
B38W15D	27-Jun-01	1,1,1-Trichloroethane	0.50	J		1
B38W15S	2-Aug-93	1,1,1-Trichloroethane	2.00		J	5
B38W15S	26-May-94	1,1,1-Trichloroethane	2.00		J	5
B38W15S	13-May-96	1,1,1-Trichloroethane	1.00	J	J	2
B38W15S	9-Nov-00	1,1,1-Trichloroethane	1.00		U	1
MISS07B	13-Oct-92	1,1,1-Trichloroethane	1.00		J	5
MISS07B	12-Aug-93	1,1,1-Trichloroethane	2.00	J	J	5
MISS07B	18-May-94	1,1,1-Trichloroethane	2.00		J	5
MISS07B	18-May-94	1,1,1-Trichloroethane	2.00		J	5
MISS07B	6-Nov-00	1,1,1-Trichloroethane	0.20		J	1
B38W14D	4-Aug-93	1,1-Dichloroethane	3.00		J	5
B38W14D	20-May-95	1,1-Dichloroethane	4.00		J	5
B38W14D	4-Jun-97	1,1-Dichloroethane	3.00	J	J	5
B38W14D	17-May-99	1,1-Dichloroethane	2.00	J	J	5
B38W14D	16-Nov-00	1,1-Dichloroethane	1.00			1
B38W14D	2-Jul-01	1,1-Dichloroethane	1.00			1
B38W14S	20-May-95	1,1-Dichloroethane	2.00		J	5
B38W14S	4-Jun-97	1,1-Dichloroethane	2.00	J	J	5
B38W14S	07-Jul-98	1,1-Dichloroethane	1.00	J	J	5
B38W14S	8-Nov-00	1,1-Dichloroethane	0.20		J	1
B38W14S	2-Jul-01	1,1-Dichloroethane	0.70	J		1
B38W15D	2-Aug-93	1,1-Dichloroethane	6.00			5
B38W15D	26-May-94	1,1-Dichloroethane	4.00		J	5
B38W15D	19-May-95	1,1-Dichloroethane	6.00			5

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
B38W15D	13-May-96	1,1-Dichloroethane	3.00			2
B38W15D	3-Jun-97	1,1-Dichloroethane	4.00	J	J	5
B38W15D	06-Jul-98	1,1-Dichloroethane	6.00			5
B38W15D	9-Nov-00	1,1-Dichloroethane	2.00			1
B38W15D	27-Jun-01	1,1-Dichloroethane	1.00			1
B38W15S	2-Aug-93	1,1-Dichloroethane	4.00		J	5
B38W15S	26-May-94	1,1-Dichloroethane	6.00			5
B38W15S	19-May-95	1,1-Dichloroethane	4.00		J	5
B38W15S	13-May-96	1,1-Dichloroethane	5.00			2
B38W15S	3-Jun-97	1,1-Dichloroethane	4.00	J	J	5
B38W15S	06-Jul-98	1,1-Dichloroethane	4.00	J	J	5
B38W15S	9-Nov-00	1,1-Dichloroethane	1.00		U	1
B38W15S	27-Jun-01	1,1-Dichloroethane	1.00			1
B38W14D	4-Aug-93	1,1-Dichloroethene	6.00			5
B38W14D	20-May-95	1,1-Dichloroethene	7.00			5
B38W14D	4-Jun-97	1,1-Dichloroethene	5.00			1
B38W14D	07-Jul-98	1,1-Dichloroethene	3.00	J	J	10
B38W14D	07-May-99	1,1-Dichloroethene	3.00	J	J	5
B38W14D	16-Nov-00	1,1-Dichloroethene	4.00			1
B38W14D	2-Jul-01	1,1-Dichloroethene	3.00			1
B38W14S	20-May-95	1,1-Dichloroethene	7.00			5
B38W14S	17-May-96	1,1-Dichloroethene	6.00	J	J	10
B38W14S	4-Jun-97	1,1-Dichloroethene	5.00			1
B38W14S	07-Jul-98	1,1-Dichloroethene	5.00	J	J	5
B38W14S	17-May-99	1,1-Dichloroethene	2.00	J	J	5
B38W14S	16-Nov-00	1,1-Dichloroethene	1.00		U	1
B38W14S	2-Jul-01	1,1-Dichloroethene	4.00			1
B38W15D	2-Aug-93	1,1-Dichloroethene	8.00			5
B38W15D	26-May-94	1,1-Dichloroethene	7.00			5
B38W15D	19-May-95	1,1-Dichloroethene	9.00			5
B38W15D	13-May-96	1,1-Dichloroethene	5.00			2
B38W15D	3-Jun-97	1,1-Dichloroethene	7.00	J		1
B38W15D	06-Jul-98	1,1-Dichloroethene	6.00			5
B38W15D	9-Nov-00	1,1-Dichloroethene	2.00			1
B38W15D	27-Jun-01	1,1-Dichloroethene	0.50	J		1
B38W15S	13-May-96	1,1-Dichloroethene	0.30	J	J	2
B38W15S	9-Nov-00	1,1-Dichloroethene	1.00		U	1
MISS01B	16-May-94	1,1-Dichloroethene	1.00		J	5
MISS01B	21-Dec-00	1,1-Dichloroethene	0.20		J	1
MISS01B	19-Jun-01	1,1-Dichloroethene	0.20	J		1
MISS07B	13-Oct-92	1,1-Dichloroethene	2.00		J	5
MISS07B	18-May-94	1,1-Dichloroethene	3.00		J	5
MISS07B	11-May-95	1,1-Dichloroethene	2.00		J	5
MISS07B	16-May-96	1,1-Dichloroethene	2.00	J	J	2

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
MISS07B	16-May-97	1,1-Dichloroethene	2.00			1
MISS07B	6-Nov-00	1,1-Dichloroethene	0.70		J	1
MISS07B	11-Jun-01	1,1-Dichloroethene	0.40	J		1
B38W07B	16-Jun-98	1,2-Dichloroethene (Total)	6.00			5
B38W07B	6-Nov-00	1,2-Dichloroethene (Total)	6.00			1
B38W14D	4-Aug-93	1,2-Dichloroethene (Total)	56.00			5
B38W14D	20-May-95	1,2-Dichloroethene (Total)	93.00			5
B38W14D	17-May-96	1,2-Dichloroethene (Total)	83.00			50
B38W14D	4-Jun-97	1,2-Dichloroethene (Total)	78.00			5
B38W14D	07-Jul-98	1,2-Dichloroethene (Total)	71.00			10
B38W14D	17-May-99	1,2-Dichloroethene (Total)	77.00			5
B38W14D	16-Nov-00	1,2-Dichloroethene (Total)	50.00	D		1
B38W14D	2-Jul-01	1,2-Dichloroethene (Total)	37.00			1
B38W14S	4-Aug-93	1,2-Dichloroethene (Total)	10.00			5
B38W14S	20-May-95	1,2-Dichloroethene (Total)	53.00			5
B38W14S	17-May-96	1,2-Dichloroethene (Total)	29.00			10
B38W14S	17-May-96	1,2-Dichloroethene (Total)	0.90	J	J	1
B38W14S	4-Jun-97	1,2-Dichloroethene (Total)	43.00			5
B38W14S	07-Jul-98	1,2-Dichloroethene (Total)	44.00			5
B38W14S	17-May-99	1,2-Dichloroethene (Total)	43.00			5
B38W14S	16-Nov-00	1,2-Dichloroethene (Total)	10.00			1
B38W14S	2-Jul-01	1,2-Dichloroethene (Total)	25.00			1
B38W15D	2-Aug-93	1,2-Dichloroethene (Total)	150.00			5
B38W15D	26-May-94	1,2-Dichloroethene (Total)	120.00			5
B38W15D	19-May-95	1,2-Dichloroethene (Total)	160.00			5
B38W15D	13-May-96	1,2-Dichloroethene (Total)	110.00			2
B38W15D	3-Jun-97	1,2-Dichloroethene (Total)	120.00	J		5
B38W15D	06-Jul-98	1,2-Dichloroethene (Total)	140.00			5
B38W15D	9-Nov-00	1,2-Dichloroethene (Total)	55.00			1
B38W15D	27-Jun-01	1,2-Dichloroethene (Total)	25.00			1
B38W15S	2-Aug-93	1,2-Dichloroethene (Total)	42.00			5
B38W15S	26-May-94	1,2-Dichloroethene (Total)	94.00			5
B38W15S	19-May-95	1,2-Dichloroethene (Total)	6.00			5
B38W15S	19-May-95	1,2-Dichloroethene (Total)	10.00			5
B38W15S	13-May-96	1,2-Dichloroethene (Total)	55.00			2
B38W15S	3-Jun-97	1,2-Dichloroethene (Total)	13.00			5
B38W15S	06-Jul-98	1,2-Dichloroethene (Total)	15.00			5
B38W15S	9-Nov-00	1,2-Dichloroethene (Total)	1.00		U	1
B38W15S	27-Jun-01	1,2-Dichloroethene (Total)	3.00			1
B38W17B	29-Jul-93	1,2-Dichloroethene (Total)	3.00		J	5
B38W17B	25-May-94	1,2-Dichloroethene (Total)	1.00		J	5
B38W17B	20-May-95	1,2-Dichloroethene (Total)	2.00	J	J	5
B38W17B	14-Jun-01	1,2-Dichloroethene (Total)	0.30	J		1
B38W19D	11-Aug-93	1,2-Dichloroethene (Total)	2.00		J	5

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
B38W19D	16-May-96	1,2-Dichloroethene (Total)	0.30	J	J	1
B38W19D	7-Nov-00	1,2-Dichloroethene (Total)	0.50		J	1
B38W24D	9-May-96	1,2-Dichloroethene (Total)	0.70	J	J	1
B38W24D	15-Nov-00	1,2-Dichloroethene (Total)	0.30		J	1
B38W24D	5-Jul-01	1,2-Dichloroethene (Total)	0.50	J		1
B38W24S	9-May-96	1,2-Dichloroethene (Total)	0.20	J	J	1
MISS01B	15-Oct-92	1,2-Dichloroethene (Total)	1.00		J	5
MISS01B	21-Jul-93	1,2-Dichloroethene (Total)	5.00		J	5
MISS01B	16-May-94	1,2-Dichloroethene (Total)	31.00			5
MISS01B	10-May-95	1,2-Dichloroethene (Total)	3.00		J	5
MISS01B	15-May-96	1,2-Dichloroethene (Total)	22.00			5
MISS01B	18-JUN-98	1,2-Dichloroethene (Total)	11.00			5
MISS01B	25-May-99	1,2-Dichloroethene (Total)	2.00	J	J	5
MISS01B	21-Dec-00	1,2-Dichloroethene (Total)	1.00		J	1
MISS01B	19-Jun-01	1,2-Dichloroethene (Total)	2.00			1
MISS05B	6-Nov-00	1,2-Dichloroethene (Total)	0.80		J	1
MISS05B	18-Jun-01	1,2-Dichloroethene (Total)	0.10	J		1
MISS07B	13-Oct-92	1,2-Dichloroethene (Total)	10.00			5
MISS07B	14-Oct-92	1,2-Dichloroethene (Total)	11.00	J	J	5
MISS07B	15-Oct-92	1,2-Dichloroethene (Total)	9.00			5
MISS07B	16-Oct-92	1,2-Dichloroethene (Total)	10.00			5
MISS07B	17-Oct-92	1,2-Dichloroethene (Total)	8.00			5
MISS07B	18-Oct-92	1,2-Dichloroethene (Total)	7.00			2
MISS07B	19-Oct-92	1,2-Dichloroethene (Total)	7.00			5
MISS07B	20-Oct-92	1,2-Dichloroethene (Total)	6.00			5
MISS07B	21-Oct-92	1,2-Dichloroethene (Total)	6.00			5
MISS07B	22-Oct-92	1,2-Dichloroethene (Total)	6.00			1
MISS07B	11-Jun-01	1,2-Dichloroethene (Total)	5.00			1
B38W14D	23-Oct-92	1,2-Dichloropropane	1.00		J	5
B38W14D	24-Oct-92	1,2-Dichloropropane	1.00		J	5
B38W14D	25-Oct-92	1,2-Dichloropropane	0.40		J	1
B38W14D	2-Jul-01	1,2-Dichloropropane	0.30	J		1
B38W15D	26-Oct-92	1,2-Dichloropropane	2.00		J	5
B38W15D	27-Oct-92	1,2-Dichloropropane	1.00		J	5
B38W15D	28-Oct-92	1,2-Dichloropropane	0.80	J	J	2
B38W15D	29-Oct-92	1,2-Dichloropropane	2.00	J	J	5
B38W15D	30-Oct-92	1,2-Dichloropropane	0.30		J	1
B38W15D	27-Jun-01	1,2-Dichloropropane	0.20	J		1
B38W15S	31-Oct-92	1,2-Dichloropropane	2.00		J	5
B38W15S	1-Nov-92	1,2-Dichloropropane	0.90	J	J	2
MISS02A	2-Nov-92	2-Butanone	23.00			10
MISS02A	3-Nov-92	2-Butanone	4.00		J	5
B38W15D	4-Nov-92	Benzene	0.70	J	J	2
B38W15D	5-Nov-92	Benzene	0.70		J	1

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
[b] USACE dat	27-Jun-01	Benzene	0.30	J		1
B38W15S	6-Nov-92	Benzene	1.00		J	5
B38W15S	7-Nov-92	Benzene	0.50	J	J	2
B38W15S	8-Nov-92	Benzene	0.20		J	1
B38W19D	9-Nov-92	Benzene	5.00			5
B38W19D	10-Nov-92	Benzene	1.00		J	5
B38W19D	11-Nov-92	Benzene	5.00			1
B38W19D	12-Nov-92	Benzene	1.00			1
B38W24D	13-Nov-92	Benzene	2.00		J	5
B38W24D	14-Nov-92	Benzene	0.40	J	J	1
B38W24D	15-Nov-92	Benzene	0.20		J	1
B38W24D	5-Jul-01	Benzene	0.10	J		1
MISS02B	16-Nov-92	Benzene	3.00		J	5
MISS02B	17-Nov-92	Benzene	7.00			5
MISS02B	18-Nov-92	Benzene	2.00		J	5
MISS02B	19-Nov-92	Benzene	1.00		J	5
MISS02B	20-Nov-92	Benzene	1.00			1
MISS02B	21-Nov-92	Benzene	0.60		J	1
MISS02B	5-Jul-01	Benzene	0.30	J		1
MISS05B	22-Nov-92	Benzene	200.00			5
MISS05B	23-Nov-92	Benzene	83.00	J		5
MISS05B	24-Nov-92	Benzene	170.00			5
MISS05B	25-Nov-92	Benzene	89.00	J		5
MISS05B	26-Nov-92	Benzene	97.00			2
MISS05B	27-Nov-92	Benzene	62.00			5
MISS05B	28-Nov-92	Benzene	15.00			5
MISS05B	29-Nov-92	Benzene	3500.00	D		1
B38W24D	2-Jul-98	Benzene, 1,2-Dichloro-3-Methyl	9.00	NJ	NJ	0
B38W17B	2-Jul-98	Benzene, 1,2-Dichloro-3-Methyl	4.00	NJ	NJ	0
MISS05B	30-JUN-98	Benzene, 1,2-Dichloro-3-Methyl	10.00	NJ	NJ	0
MISS01AA	16-Oct-92	Bis(2-Ethylhexyl)Phthalate	11.00		JB	10
B38W02D	17-May-96	C4-Alkenylbenzene	1.00	NJ	J	0
B38W19D	16-May-96	Chlorobenzene	0.60	J	J	1
B38W19D	7-Nov-00	Chlorobenzene	0.40		J	1
B38W19D	13-Jun-01	Chlorobenzene	0.30	J		1
B38W25S	15-May-96	Chlorobenzene	0.40	J	J	1
B38W25S	27-Nov-00	Chlorobenzene	0.10		J	1
MISS02B	14-May-96	Chlorobenzene	0.10	J	J	1
MISS02B	5-Jul-01	Chlorobenzene	0.10	J		1
MISS05B	16-May-96	Chlorobenzene	0.60	J	J	2
MISS05B	6-Nov-00	Chlorobenzene	8.00			1
MISS05B	18-Jun-01	Chlorobenzene	1.00			1
MISS07B	6-Nov-00	Chlorobenzene	0.20		J	1

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
B38W14D	4-Aug-93	Chloroform	7.00			5
B38W14D	17-May-96	Chloroform	6.00	J	J	50
B38W14D	4-Jun-97	Chloroform	6.00			5
B38W14D	17-May-99	Chloroform	2.00	J	J	5
B38W14D	16-Nov-00	Chloroform	2.00			1
B38W14D	2-Jul-01	Chloroform	2.00			1
B38W14S	20-May-95	Chloroform	3.00		J	5
B38W14S	17-May-96	Chloroform	3.00	J	J	10
B38W14S	4-Jun-97	Chloroform	3.00	J	J	5
B38W14S	16-Nov-00	Chloroform	6.00			1
B38W14S	2-Jul-01	Chloroform	2.00			1
B38W15D	13-May-96	Chloroform	0.30	J	J	2
B38W15D	9-Nov-00	Chloroform	0.20		J	1
B38W15D	27-Jun-01	Chloroform	0.10	J		1
MISS01B	15-Oct-92	Chloroform	15.00			5
MISS01B	21-Jul-93	Chloroform	4.00		J	5
MISS01B	16-May-94	Chloroform	2.00		J	5
MISS01B	15-May-96	Chloroform	0.90	J	J	5
MISS01B	21-Dec-00	Chloroform	0.20		J	1
MISS01B	19-Jun-01	Chloroform	0.20	J		1
MISS06A	10-May-96	Chloroform	0.20	J	J	1
MISS06A	21-Dec-00	Chloroform	0.30		J	1
MISS06A	20-Jun-01	Chloroform	0.40	UB		1
B38W17B	29-Jul-93	Chlorotoluene	20.00	NJ	J	0
B38W17B	3-Jun-97	Chlorotoluene	10.00	NJ	J	
MISS05B	12-Aug-93	Chlorotoluene	30.00	NJ	J	0
MISS05B	12-Aug-93	Chlorotoluene	20.00	NJ	J	0
B38W25S	15-May-95	Dichloromethane	1.00		J	5
B38W24D	9-Aug-93	Dichlorotoluene	30.00	NJ	J	0
MISS05B	12-Aug-93	Dichlorotoluene	5.00	NJ	J	0
B38W24D	9-May-96	Ethylbenzene	0.10	J	J	1
B38W24D	5-Jul-01	Ethylbenzene	0.20	J		1
B38W19D	13-Oct-92	N-Nitrosodiphenylamine	3.00		J	10
MISS02B	15-Oct-92	Phenol	1.00	J	J	10
B38W02D	30-Jun-98	Propane, 2-Methoxy-2-Methyl-	30.00	NJ	NJ	0
B38W15D	06-Jul-98	Propane, 2-Methoxy-2-Methyl-	20.00	NJ	NJ	0
B38W15S	06-Jul-98	Propane, 2-Methoxy-2-Methyl-	6.00	NJ	NJ	0
B38W25S	01-Jul-98	Silanol, Trimethyl-	10.00	J	NJ	0
B38W18D	08-Jun-98	Sulfur Dioxide	6.00	NJ	NJ	0
B38W01S	07-Jul-98	Tetrachloroethene	6.00			5
B38W07B	16-Jun-98	Tetrachloroethene	48.00			5
B38W14D	17-May-96	Tetrachloroethene	1100.00			50
B38W14D	07-Jul-98	Tetrachloroethene	840.00		D	25
B38W14D	17-May-99	Tetrachloroethene	630.00		D	5

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
B38W14D	16-Nov-00	Tetrachloroethene	300.00	D		1
B38W14D	2-Jul-01	Tetrachloroethene	170.00	J		1
B38W14S	4-Aug-93	Tetrachloroethene	23.00			5
B38W14S	17-May-96	Tetrachloroethene	360.00			10
B38W14S	17-May-96	Tetrachloroethene	34.00			1
B38W14S	07-Jul-98	Tetrachloroethene	300.00	E		12
B38W14S	17-May-99	Tetrachloroethene	290.00		D	5
B38W14S	16-Nov-00	Tetrachloroethene	6.00			1
B38W14S	2-Jul-01	Tetrachloroethene	120.00	J		1
B38W15S	13-May-96	Tetrachloroethene	0.30	J	J	2
B38W15D	9-Nov-00	Tetrachloroethene	120.00			1
B38W15D	27-Jun-01	Tetrachloroethene	46.00	J		1
MISS01B	15-Oct-92	Tetrachloroethene	15.00			5
MISS01B	21-Jul-93	Tetrachloroethene	33.00			5
MISS01B	16-May-94	Tetrachloroethene	140.00			5
MISS01B	10-May-95	Tetrachloroethene	20.00			5
MISS01B	15-May-96	Tetrachloroethene	120.00			5
MISS01B	18-Jun-98	Tetrachloroethene	69.00			5
MISS01B	18-May-99	Tetrachloroethene	15.00			5
MISS01B	21-Nov-00	Tetrachloroethene	12.00			1
MISS01B	19-Jun-01	Tetrachloroethene	21.00			1
MISS06A	4-Aug-93	Tetrachloroethene	14.00			5
MISS07B	13-Oct-92	Tetrachloroethene	43.00			5
MISS07B	12-Aug-93	Tetrachloroethene	61.00	J		5
MISS07B	18-May-94	Tetrachloroethene	94.00			5
MISS07B	18-May-94	Tetrachloroethene	88.00			5
MISS07B	11-May-95	Tetrachloroethene	45.00			5
MISS07B	16-May-96	Tetrachloroethene	61.00			2
[b] USACE qua	16-May-97	Tetrachloroethene	57.00			1
[c] Federal SDV	16-Jun-98	Tetrachloroethene	48.00			1
MISS07B	27-May-99	Tetrachloroethene	24.00			5
MISS07B	6-Nov-00	Tetrachloroethene	9.00			1
MISS07B	11-Jun-01	Tetrachloroethene	5.00			1
B38W01S	17-May-96	Toluene	0.20	J	J	1
B38W01S	8-Nov-00	Toluene	3.00			1
B38W01S	11-Jul-01	Toluene	0.20	J		1
B38W19D	16-May-96	Toluene	0.10	J	J	1
B38W19D	7-Nov-00	Toluene	0.40		J	1
B38W24D	9-May-96	Toluene	0.10	J	J	1
B38W24D	13-May-99	Toluene	2.00	J	J	5
B38W24D	15-Nov-00	Toluene	0.70		J	1
MISS02A	11-JUN-98	Toluene	2.00	J	J	5
MISS02A	21-Nov-00	Toluene	0.60		J	1

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
MISS05B	14-Oct-92	Toluene	2.00		J	5
MISS05B	17-May-94	Toluene	1.00		J	5
MISS05B	6-Nov-00	Toluene	6.00			1
B38W01S	07-Jul-98	Trichloroethene	2.00	J	J	5
B38W07B	16-Jun-98	Trichloroethene	2.00	J	J	5
B38W07B	6-Nov-00	Trichloroethene	2.00			1
B38W07B	11-Jun-01	Trichloroethene	0.80	J		1
B38W14D	17-May-96	Trichloroethene	240.00			50
B38W14D	4-Jun-97	Trichloroethene	200.00	J		1
B38W14D	07-Jul-98	Trichloroethene	210.00			10
B38W14D	17-May-99	Trichloroethene	160.00			5
B38W14D	16-Nov-00	Trichloroethene	82.00	D		1
B38W14D	2-Jul-01	Trichloroethene	60.00	J		1
B38W14S	4-Aug-93	Trichloroethene	6.00			5
B38W14S	20-May-95	Trichloroethene	140.00			5
B38W14S	17-May-96	Trichloroethene	77.00			10
B38W14S	17-May-96	Trichloroethene	4.00			1
B38W14S	4-Jun-97	Trichloroethene	91.00	J		1
B38W14S	7-Jul-98	Trichloroethene	79.00			5
B38W14S	17-May-99	Trichloroethene	67.00			5
B38W14S	8-Nov-00	Trichloroethene	5.00			1
B38W14S	2-Jul-01	Trichloroethene	38.00			1
B38W15D	26-May-94	Trichloroethene	170.00			5
B38W15D	3-Jun-97	Trichloroethene	170.00	J		1
B38W15D	9-Nov-00	Trichloroethene	30.00			1
B38W15D	27-Jun-01	Trichloroethene	20.00			1
B38W15S	2-Aug-93	Trichloroethene	1.00		J	5
B38W15S	26-May-94	Trichloroethene	2.00		J	5
B38W15S	13-May-96	Trichloroethene	1.00	J	J	2
MISS01B	21-Jul-93	Trichloroethene	2.00		J	5
MISS01B	16-May-94	Trichloroethene	9.00			5
MISS01B	10-May-95	Trichloroethene	2.00		J	5
MISS01B	15-May-96	Trichloroethene	9.00			5
MISS01B	18-Jun-98	Trichloroethene	5.00	J	J	5
MISS01B	21-Dec-00	Trichloroethene	1.00			1
MISS01B	19-Jun-01	Trichloroethene	1.00			1
MISS02A	11-Jun-98	Trichloroethene	1.00	J	J	5
MISS06A	4-Aug-93	Trichloroethene	1.00		J	5
MISS07B	13-Oct-92	Trichloroethene	2.00		J	5
MISS07B	12-Aug-93	Trichloroethene	4.00	J	J	5
MISS07B	18-May-94	Trichloroethene	3.00		J	5
MISS07B	18-May-94	Trichloroethene	3.00		J	5
MISS07B	11-May-95	Trichloroethene	3.00		J	5
MISS07B	16-May-96	Trichloroethene	3.00			2

TABLE A-4
Historical Results for Detected VOCs in Groundwater at MISS

Maywood Interim Storage Site - 2001

STATION	DATE	ANALYTE	RESULT (ug/L)	QUALIFIER BNI	QUALIFIER Lab	DETECTION LIMIT (ug/L)
MISS07B	16-May-97	Trichloroethene	2.00			1
MISS07B	16-Jun-98	Trichloroethene	2.00	J		1
MISS07B	27-May-99	Trichloroethene	2.00	J	J	5
MISS07B	6-Nov-00	Trichloroethene	2.00			1
MISS07B	11-Jun-01	Trichloroethene	0.80	J		1
B38W14S	4-Aug-93	Vinyl Chloride	6.00		J	10
B38W15D	2-Aug-93	Vinyl Chloride	4.00		J	10
B38W15D	26-May-94	Vinyl Chloride	3.00		J	10
B38W15D	13-May-96	Vinyl Chloride	1.00	J	J	4
B38W15D	3-Jun-97	Vinyl Chloride	1.00	J	J	2
B38W15D	9-Nov-00	Vinyl Chloride	0.60		J	2
B38W15S	2-Aug-93	Vinyl Chloride	40.00			10
B38W15S	26-May-94	Vinyl Chloride	95.00			10
B38W15S	19-May-95	Vinyl Chloride	4.00		J	10
B38W15S	19-May-95	Vinyl Chloride	5.00		J	10
B38W15S	13-May-96	Vinyl Chloride	54.00			4
B38W15S	3-Jun-97	Vinyl Chloride	9.00			2
B38W15S	06-Jul-98	Vinyl Chloride	12.00			2
B38W17B	25-May-94	Vinyl Chloride	2.00		J	10
B38W17B	20-May-95	Vinyl Chloride	2.00	J	J	10
B38W17B	14-Jun-01	Vinyl Chloride	0.30	J		2
MISS07B	18-May-94	Vinyl Chloride	2.00		J	10
MISS07B	18-May-94	Vinyl Chloride	2.00		J	10
MISS07B	16-May-96	Vinyl Chloride	0.80	J	J	4
MISS07B	16-May-97	Vinyl Chloride	0.80	J	J	2
MISS07B	6-Nov-00	Vinyl Chloride	1.00		J	2
B38W19D	16-May-96	Xylenes (Total)	0.10	J	J	1
B38W24D	9-May-96	Xylenes (Total)	0.50	J	J	1
MISS05B	16-May-96	Xylenes (Total)	0.40	J	J	2
MISS05B	11-Jun-01	Xylenes (Total)	1.00	J		1

APPENDIX B

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 1 of 6**

Measured by: M. Hanashy
G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration: ________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-1AA	1102	15.10	Top of Riser	Protective CSG	X
Permit #		15.10	Elevation:	Riser CSG X	
		15.10	62.7	Ground	
	Average	15.10	Cap is missing	Other	
MISS-1B	1104	15.25	Top of Riser	Protective CSG	X
Permit #		15.25	Elevation:	Riser CSG X	
		15.25	61.98	Ground	
	Average	15.25		Other	
MISS-2A	1330	7.49	Top of Riser	Protective CSG	X
Permit #		7.49	Elevation:	Riser CSG X	
		7.49	61.47	Ground	
	Average	7.49		Other	
MISS-2B	1328	10.33	Top of Riser	Protective CSG	X
Permit #		10.33	Elevation:	Riser CSG X	
		10.33	61.64	Ground	
	Average	10.33		Other	
MISS-3A	1007	6.32	Top of Riser	Protective CSG	X
Permit #		6.32	Elevation:	Riser CSG X	
		6.32	58.52	Ground	
	Average	6.32		Other	
MISS-3B	1006	8.62	Top of Riser	Protective CSG	
Permit #		8.62	Elevation:	Riser CSG X	
		8.62	57.66	Ground	
	Average	8.62	Prot cas.damaged	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 2 of 6**

Measured by: M. Hanashy

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-4A	958	6.65	Top of Riser	Protective CSG	X
Permit #		6.65	Elevation:	Riser CSG X	
		6.65	57.17	Ground	
	Average	6.65		Other	
MISS-4B	1000	9.67	Top of Riser	Protective CSG	X
Permit #		9.67	Elevation:	Riser CSG X	
		9.67	56.42	Ground	
	Average	9.67		Other	
MISS-5A	936	11.24	Top of Riser	Protective CSG	X
Permit #		11.24	Elevation:	Riser CSG X	
		11.24	58.65	Ground	
	Average	11.24		Other	
MISS-5B	935	14.46	Top of Riser	Protective CSG	X
Permit #		14.46	Elevation:	Riser CSG X	
		14.46	59.76	Ground	
	Average	14.46		Other	
MISS-6A	1057	9.50	Top of Riser	Protective CSG	
Permit #		9.50	Elevation:	Riser CSG X	
		9.50	58.26	Ground	
	Average	9.50	Prot.Cas.damaged	Other	
MISS-7A	9.52	7.12	Top of Riser	Protective CSG	X
Permit #		7.12	Elevation:	Riser CSG X	
		7.12	55.6	Ground	
	Average	7.12		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 3 of 6**

Measured by: M. Hanashy

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-7B	950	9.90	Top of Riser	Protective CSG	X
Permit #		9.90	Elevation:	Riser CSG X	
		9.90	55.77	Ground	
	Average	9.90		Other	
B38W01S	910	5.55	Top of Riser	Protective CSG	X
Permit #	1	5.55	Elevation:	Riser CSG X	
		5.55	60.72	Ground	
	Average	5.55		Other	
B38W02D	918	14.75	Top of Riser	Protective CSG	X
Permit #		14.75	Elevation:	Riser CSG X	
		14.75	67.7	Ground	
	Average	14.75	Needs Lock	Other	
B38W03B	1012	8.72	Top of Riser	Protective CSG	X
Permit #		8.72	Elevation:	Riser CSG X	
		8.72	58.27	Ground	
	Average	8.72		Other	
B38W04B	1010	9.25	Top of Riser	Protective CSG	
Permit #		9.25	Elevation:	Riser CSG X	
		9.25	65.85	Ground	
	Average	9.25	Cas. cover rusted	Other	
B38W05B		inaccessible	Top of Riser	Protective CSG	X
Permit #			Elevation:	Riser CSG X	
			71.05	Ground	
	Average			Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 4 of 6**

Measured by: M. Hanashy

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W06B	1015	9.52	Top of Riser	Protective CSG	X
Permit #		9.52	Elevation:	Riser CSG X	
		9.52	54.41	Ground	
	Average	9.52		Other	
B38W07B	930	7.65	Top of Riser	Protective CSG	X
Permit #		7.65	Elevation:	Riser CSG X	
		7.65	54.63	Ground	
	Average	7.65		Other	
B38W12A	847	5.15	Top of Riser	Protective CSG	X
Permit #		5.15	Elevation:	Riser CSG X	
		5.15	50.1	Ground	
	Average	5.15		Other	
B38W12B	845	4.75	Top of Riser	Protective CSG	X
Permit #		4.75	Elevation:	Riser CSG X	
		4.75	49.78	Ground	
	Average	4.75		Other	
B38W14S	1020	4.38	Top of Riser	Protective CSG	X
Permit #		4.38	Elevation:	Riser CSG X	
		4.38	43.89	Ground	
	Average	4.38		Other	
B38W14D	1030	4.40	Top of Riser	Protective CSG	X
Permit #		4.40	Elevation:	Riser CSG X	
		4.40	43.79	Ground	
	Average	4.40		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 5 of 6**

Measured by: M. Hanashy

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water (0.01 ft)**	**Remarks**	**Measurement Reference Point**	**X**
B38W15S	1350	4.85	Top of Riser	Protective CSG	X
Permit #		4.85	Elevation:	Riser CSG X	
		4.85	45.7	Ground	
	Average	4.85		Other	
B38W15D	1355	3.89	Top of Riser	Protective CSG	X
Permit #		3.89	Elevation:	Riser CSG X	
		3.89	45.89	Ground	
	Average	3.89		Other	
B38W17A	900	7.93	Top of Riser	Protective CSG	X
Permit #		7.93	Elevation:	Riser CSG X	
		7.93	53.24	Ground	
	Average	7.93		Other	
B38W17B	901	7.87	Top of Riser	Protective CSG	X
Permit #		7.87	Elevation:	Riser CSG X	
		7.87	53.28	Ground	
	Average	7.87		Other	
B38W18D	1340	3.14	Top of Casing	Protective CSG	X
Permit #		3.14	Elevation:	Riser CSG X	
		3.14	57.85	Ground	
	Average	3.14		Other	
B38W19S	940	14.67	Top of Riser	Protective CSG	X
Permit #		14.67	Elevation:	Riser CSG X	
		14.67	59.91	Ground	
	Average	14.67		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 2/7/2001 **Site:MISS** **Page 6 of 6**

Measured by: M. Hanashy

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W19D	942	14.90	Top of Riser	Protective CSG	X
Permit #		14.90	Elevation:	Riser CSG X	
		14.90	59.98	Ground	
	Average	14.90		Other	
B38W24S	955	7.99	Top of Riser	Protective CSG	X
Permit #		7.99	Elevation:	Riser CSG X	
		7.99	55.04	Ground	
	Average	7.99		Other	
B38W24D	955	7.62	Top of Casing	Protective CSG	X
Permit #		7.62	Elevation:	Riser CSG X	
		7.62	54.91	Ground	
	Average	7.62		Other	
B38W25S	1050	5.94	Top of Riser	Protective CSG	X
Permit #		5.94	Elevation:	Riser CSG X	
		5.94	57.44	Ground	
	Average	5.94		Other	
B38W25D	1052	6.24	Top of Riser	Protective CSG	
Permit #		6.24	Elevation:	Riser CSG X	
		6.24	58.24	Ground	
	Average	6.24	Prot.Cas damaged	Other	
				Protective CSG	
Permit #				Riser CSG X	
				Ground	
	Average			Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 4/30/2001 **Site:MISS** **Page 1 of 6**

Measured by: J. Dekoskie
R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other ______________
☐ Calibration of electric sounder
Date of last calibration: ________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-1AA	1220	14.81	Top of Riser	Protective CSG	X
Permit #		14.82	Elevation:	Riser CSG X	
		14.82	62.7	Ground	
	Average	14.82	Cap is missing	Other	
MISS-1B	1222	15.58	Top of Riser	Protective CSG	X
Permit #		15.58	Elevation:	Riser CSG X	
		15.58	61.98	Ground	
	Average	15.58		Other	
MISS-2A	1226	8.07	Top of Riser	Protective CSG	X
Permit #		8.07	Elevation:	Riser CSG X	
		8.07	61.47	Ground	
	Average	8.07		Other	
MISS-2B	1228	10.86	Top of Riser	Protective CSG	X
Permit #		10.87	Elevation:	Riser CSG X	
		10.87	61.64	Ground	
	Average	10.87		Other	
MISS-3A	1320	7.23	Top of Riser	Protective CSG	X
Permit #		7.23	Elevation:	Riser CSG X	
		7.23	58.52	Ground	
	Average	7.23		Other	
MISS-3B	1323	6.21	Top of Riser	Protective CSG	
Permit #		6.21	Elevation:	Riser CSG X	
		6.21	57.66	Ground	
	Average	6.21	Prot cas.damaged	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
Rev:

WATER LEVEL RECORD SHEET

Date: 4/30/2001 **Site:MISS** **Page 2 of 6**

Measured by: J. Dekoskie

R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-4A	1327	8.10	Top of Riser	Protective CSG	X
Permit #		8.11	Elevation:	Riser CSG X	
		8.11	57.17	Ground	
	Average	8.11		Other	
MISS-4B	1328	10.31	Top of Riser	Protective CSG	X
Permit #		10.31	Elevation:	Riser CSG X	
		10.31	56.42	Ground	
	Average	10.31		Other	
MISS-5A	1435	11.23	Top of Riser	Protective CSG	X
Permit #		11.22	Elevation:	Riser CSG X	
		11.22	58.65	Ground	
	Average	11.22		Other	
MISS-5B	1436	14.74	Top of Riser	Protective CSG	X
Permit #		14.74	Elevation:	Riser CSG X	
		14.74	59.76	Ground	
	Average	14.74		Other	
MISS-6A	1210	10.36	Top of Riser	Protective CSG	
Permit #		10.36	Elevation:	Riser CSG X	
		10.35	58.26	Ground	
	Average	10.36		Other	
MISS-7A	1445	8.73	Top of Riser	Protective CSG	X
Permit #		8.73	Elevation:	Riser CSG X	
		8.73	55.6	Ground	
	Average	8.73	PVC Riser Loose	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-7B	1447	10.30	Top of Riser	Protective CSG	X
Permit #		10.30	Elevation:	Riser CSG X	
		10.30	55.77	Ground	
	Average	10.30		Other	
B38W01S	1115	5.87	Top of Riser	Protective CSG	X
Permit #	1	5.86	Elevation:	Riser CSG X	
		5.86	60.72	Ground	
	Average	5.86	Needs cap & lock	Other	
B38W02D	1125	15.91	Top of Riser	Protective CSG	X
Permit #		15.92	Elevation:	Riser CSG X	
		15.92	67.7	Ground	
	Average	15.92	Needs Lock	Other	
B38W03B	1315	9.25	Top of Riser	Protective CSG	X
Permit #		9.26	Elevation:	Riser CSG X	
		9.26	58.27	Ground	
	Average	9.26		Other	
B38W04B	1303	9.27	Top of Riser	Protective CSG	
Permit #		9.28	Elevation:	Riser CSG X	
		9.28	65.85	Ground	
	Average	9.28	Cas. cover rusted	Other	
B38W05B	1505	9.66	Top of Riser	Protective CSG	X
Permit #		9.66	Elevation:	Riser CSG X	
		9.66	71.05	Ground	
	Average	9.66		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W06B	14.56	9.93	Top of Riser	Protective CSG	X
Permit #		9.94	Elevation:	Riser CSG X	
		9.94	54.41	Ground	
	Average	9.94		Other	
B38W07B	1435	8.49	Top of Riser	Protective CSG	X
Permit #		8.49	Elevation:	Riser CSG X	
		8.49	54.63	Ground	
	Average	8.49		Other	
B38W12A	1500	5.51	Top of Riser	Protective CSG	X
Permit #		5.50	Elevation:	Riser CSG X	
		5.51	50.1	Ground	
	Average	5.51		Other	
B38W12B	1502	4.90	Top of Riser	Protective CSG	X
Permit #		4.90	Elevation:	Riser CSG X	
		4.90	49.78	Ground	
	Average	4.90		Other	
B38W14S	1000	4.54	Top of Riser	Protective CSG	X
Permit #		4.54	Elevation:	Riser CSG X	
		4.54	43.89	Ground	
	Average	4.54	Needs lock	Other	
B38W14D	1005	2.59	Top of Riser	Protective CSG	X
Permit #		2.59	Elevation:	Riser CSG X	
		2.59	43.79	Ground	
	Average	2.59	Needs plug & lock	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water (0.01 ft)**	**Remarks**	**Measurement Reference Point**	**X**
B38W15S	1105	5.38	Top of Riser	Protective CSG	X
Permit #		5.39	Elevation:	Riser CSG X	
		5.39	45.7	Ground	
	Average	5.39		Other	
B38W15D	1100	4.35	Top of Riser	Protective CSG	X
Permit #		4.36	Elevation:	Riser CSG X	
		4.36	45.89	Ground	
	Average	4.36		Other	
B38W17A	1050	8.18	Top of Riser	Protective CSG	X
Permit #		8.17	Elevation:	Riser CSG X	
		8.18	53.24	Ground	
	Average	8.18		Other	
B38W17B	1055	8.30	Top of Riser	Protective CSG	X
Permit #		8.31	Elevation:	Riser CSG X	
		8.31	53.28	Ground	
	Average	8.31		Other	
B38W18D	1249	3.62	Top of Casing	Protective CSG	X
Permit #		3.62	Elevation:	Riser CSG X	
		3.62	57.85	Ground	
	Average	3.62	Needs plug & lock	Other	
B38W19S	1439	14.83	Top of Riser	Protective CSG	X
Permit #		14.83	Elevation:	Riser CSG X	
		14.83	59.91	Ground	
	Average	14.83		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

R. Gendreau

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W19D	1440	15.09	Top of Riser	Protective CSG	X
Permit #		15.09	Elevation:	Riser CSG X	
		15.09	59.98	Ground	
	Average	15.09		Other	
B38W24S	1430	8.43	Top of Riser	Protective CSG	X
Permit #		8.43	Elevation:	Riser CSG X	
		8.43	55.04	Ground	
	Average	8.43	Needs new plug	Other	
B38W24D	1430	8.22	Top of Casing	Protective CSG	X
Permit #		8.22	Elevation:	Riser CSG X	
		8.22	54.91	Ground	
	Average	8.22	Needs new plug	Other	
B38W25S	1235	6.10	Top of Riser	Protective CSG	X
Permit #		6.10	Elevation:	Riser CSG X	
		6.10	57.44	Ground	
	Average	6.10		Other	
B38W25D	1237	6.61	Top of Riser	Protective CSG	
Permit #		6.60	Elevation:	Riser CSG X	
		6.60	58.24	Ground	
	Average	6.60		Other	
				Protective CSG	
Permit #				Riser CSG X	
				Ground	
	Average			Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie
G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration: _______________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-1AA	1308	17.94	Top of Riser	Protective CSG	X
Permit #		17.94	Elevation:	Riser CSG X	
		17.94	62.7	Ground	
	Average	17.94	Cap is missing	Other	
MISS-1B	1307	16.80	Top of Riser	Protective CSG	X
Permit #		16.80	Elevation:	Riser CSG X	
		16.80	61.98	Ground	
	Average	16.80		Other	
MISS-2A	1300	11.00	Top of Riser	Protective CSG	X
Permit #		11.00	Elevation:	Riser CSG X	
		11.00	61.47	Ground	
	Average	11.00		Other	
MISS-2B	1258	12.52	Top of Riser	Protective CSG	X
Permit #		12.52	Elevation:	Riser CSG X	
		12.52	61.64	Ground	
	Average	12.52		Other	
MISS-3A	11.28	10.06	Top of Riser	Protective CSG	X
Permit #		10.06	Elevation:	Riser CSG X	
		10.06	58.52	Ground	
	Average	10.06		Other	
MISS-3B	1129	11.05	Top of Riser	Protective CSG	
Permit #		11.05	Elevation:	Riser CSG X	
		11.05	57.66	Ground	
	Average	11.05	Prot cas.damaged	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-4A	1124	10.90	Top of Riser	Protective CSG	X
Permit #		10.90	Elevation:	Riser CSG X	
		10.90	57.17	Ground	
	Average	10.90		Other	
MISS-4B	1125	12.10	Top of Riser	Protective CSG	X
Permit #		12.10	Elevation:	Riser CSG X	
		12.10	56.42	Ground	
	Average	12.10		Other	
MISS-5A	928	14.39	Top of Riser	Protective CSG	X
Permit #		14.39	Elevation:	Riser CSG X	
		14.39	58.65	Ground	
	Average	14.39		Other	
MISS-5B	927	16.60	Top of Riser	Protective CSG	X
Permit #		16.60	Elevation:	Riser CSG X	
		16.60	59.76	Ground	
	Average	16.60		Other	
MISS-6A	1155	13.02	Top of Riser	Protective CSG	
Permit #		13.02	Elevation:	Riser CSG X	
		13.02	58.26	Ground	
	Average	13.02		Other	
MISS-7A	958	9.23	Top of Riser	Protective CSG	X
Permit #		9.23	Elevation:	Riser CSG X	
		9.23	55.6	Ground	
	Average	9.23	PVC Riser Loose	Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-7B	959	11.72	Top of Riser	Protective CSG	X
Permit #		11.72	Elevation:	Riser CSG X	
		11.72	55.77	Ground	
	Average	11.72		Other	
B38W01S	1435	7.60	Top of Riser	Protective CSG	X
Permit #	1	7.60	Elevation:	Riser CSG X	
		7.60	60.72	Ground	
	Average	7.60	Needs cap & lock	Other	
B38W02D	1442	20.35	Top of Riser	Protective CSG	X
Permit #		20.35	Elevation:	Riser CSG X	
		20.35	67.7	Ground	
	Average	20.35	Needs Lock	Other	
B38W03B	931	11.21	Top of Riser	Protective CSG	X
Permit #		11.21	Elevation:	Riser CSG X	
		11.21	58.27	Ground	
	Average	11.21		Other	
B38W04B	1015	11.21	Top of Riser	Protective CSG	
Permit #		11.21	Elevation:	Riser CSG X	
		11.21	65.85	Ground	
	Average	11.21	Cas. cover rusted	Other	
B38W05B	1139	14.33	Top of Riser	Protective CSG	X
Permit #		14.33	Elevation:	Riser CSG X	
		14.33	71.05	Ground	
	Average	14.33		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water** (0.01 ft)	**Remarks**	**Measurement Reference Point**	**X**
B38W06B	940	11.47	Top of Riser	Protective CSG	X
Permit #		11.47	Elevation:	Riser CSG X	
		11.47	54.41	Ground	
	Average	11.47		Other	
B38W07B	923	10.91	Top of Riser	Protective CSG	X
Permit #		10.91	Elevation:	Riser CSG X	
		10.91	54.63	Ground	
	Average	10.91		Other	
B38W12A	1226	7.68	Top of Riser	Protective CSG	X
Permit #		7.68	Elevation:	Riser CSG X	
		7.68	50.1	Ground	
	Average	7.68		Other	
B38W12B	1228	7.07	Top of Riser	Protective CSG	X
Permit #		7.07	Elevation:	Riser CSG X	
		7.07	49.78	Ground	
	Average	7.07		Other	
B38W14S	1428	5.38	Top of Riser	Protective CSG	X
Permit #		5.38	Elevation:	Riser CSG X	
		5.38	43.89	Ground	
	Average	5.38	Needs lock	Other	
B38W14D	1429	4.03	Top of Riser	Protective CSG	X
Permit #		4.03	Elevation:	Riser CSG X	
		4.03	43.79	Ground	
	Average	4.03	Needs plug & lock	Other	

X - if well head and pad are in good condition
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Measured by: J. Dekoskie

G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W15S	1359	6.60	Top of Riser	Protective CSG	X
Permit #		6.60	Elevation:	Riser CSG X	
		6.60	45.7	Ground	
	Average	6.60		Other	
B38W15D	1402	5.70	Top of Riser	Protective CSG	X
Permit #		5.70	Elevation:	Riser CSG X	
		5.70	45.89	Ground	
	Average	5.70		Other	
B38W17A	1404	10.25	Top of Riser	Protective CSG	X
Permit #		10.25	Elevation:	Riser CSG X	
		10.25	53.24	Ground	
	Average	10.25		Other	
B38W17B	1407	10.22	Top of Riser	Protective CSG	X
Permit #		10.22	Elevation:	Riser CSG X	
		10.22	53.28	Ground	
	Average	10.22		Other	
B38W18D	1430	4.94	Top of Casing	Protective CSG	X
Permit #		4.94	Elevation:	Riser CSG X	
		4.94	57.85	Ground	
	Average	4.94	Needs plug & lock	Other	
B38W19S	953	16.58	Top of Riser	Protective CSG	X
Permit #		16.58	Elevation:	Riser CSG X	
		16.58	59.91	Ground	
	Average	16.58		Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie

G. Markt

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W19D	954	16.74	Top of Riser	Protective CSG	X
Permit #		16.74	Elevation:	Riser CSG X	
		16.74	59.98	Ground	
	Average	16.74		Other	
B38W24S	1119	10.37	Top of Riser	Protective CSG	X
Permit #		10.37	Elevation:	Riser CSG X	
		10.37	55.04	Ground	
	Average	10.37	Needs new plug	Other	
B38W24D	1120	10.35	Top of Casing	Protective CSG	X
Permit #		10.35	Elevation:	Riser CSG X	
		10.35	54.91	Ground	
	Average	10.35	Needs new plug	Other	
B38W25S	1150	8.35	Top of Riser	Protective CSG	X
Permit #		8.35	Elevation:	Riser CSG X	
		8.35	57.44	Ground	
	Average	8.35		Other	
B38W25D	1157	8.60	Top of Riser	Protective CSG	
Permit #		8.60	Elevation:	Riser CSG X	
		8.60	58.24	Ground	
	Average	8.60		Other	
				Protective CSG	
Permit #				Riser CSG X	
				Ground	
	Average			Other	

X - if well head and pad are in good condition
FUSRAP IG: SW-MWD-410-0
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Measured by: J. Dekoskie
G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other ______________
☐ Calibration of electric sounder
Date of last calibration: ________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-1AA		18.78	Top of Riser	Protective CSG	
Permit #		18.78	Elevation:	Riser CSG X	
		18.78	62.7	Ground	
	Average	18.78		Other	
MISS-1B		17.57	Top of Riser	Protective CSG	
Permit #		17.57	Elevation:	Riser CSG X	
		17.57	61.98	Ground	
	Average	17.57		Other	
MISS-2A		12.04	Top of Riser	Protective CSG	
Permit #		12.04	Elevation:	Riser CSG X	
		12.04	61.47	Ground	
	Average	12.04		Other	
MISS-2B		13.36	Top of Riser	Protective CSG	
Permit #		13.36	Elevation:	Riser CSG X	
		13.36	61.64	Ground	
	Average	13.36		Other	
MISS-3A		11.91	Top of Riser	Protective CSG	
Permit #		11.91	Elevation:	Riser CSG X	
		11.91	58.52	Ground	
	Average	11.91		Other	
MISS-3B		13.24	Top of Riser	Protective CSG	
Permit #		13.24	Elevation:	Riser CSG X	
		13.24	57.66	Ground	
	Average	13.24		Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0
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Measured by: J. Dekoskie

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
MISS-4A		11.81	Top of Riser	Protective CSG	
Permit #		11.81	Elevation:	Riser CSG X	
		11.81	57.17	Ground	
	Average	11.81		Other	
MISS-4B		12.96	Top of Riser	Protective CSG	
Permit #		12.96	Elevation:	Riser CSG X	
		12.96	56.42	Ground	
	Average	12.96	Oter cas. bent	Other	
MISS-5A		15.47	Top of Riser	Protective CSG	
Permit #		15.47	Elevation:	Riser CSG X	
		15.47	58.65	Ground	
	Average	15.47		Other	
MISS-5B		17.45	Top of Riser	Protective CSG	
Permit #		17.45	Elevation:	Riser CSG X	
		17.45	59.76	Ground	
	Average	17.45		Other	
MISS-6A		14.57	Top of Riser	Protective CSG	
Permit #		14.57	Elevation:	Riser CSG X	
		14.57	58.26	Ground	
	Average	14.57	Prot.Cas.damaged	Other	
MISS-7A		9.41	Top of Riser	Protective CSG	
Permit #		9.41	Elevation:	Riser CSG X	
		9.41	55.6	Ground	
	Average	9.41		Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0
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Measured by: J. Dekoskie

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water (0.01 ft)**	**Remarks**	**Measurement Reference Point**	**X**
MISS-7B		12.52	Top of Riser	Protective CSG	
Permit #		12.52	Elevation:	Riser CSG X	
		12.52	55.77	Ground	
	Average	12.52	Cracked conc. Pa	Other	
B38W01S		8.43	Top of Riser	Protective CSG	
Permit #	1	8.43	Elevation:	Riser CSG X	
		8.43	60.72	Ground	
	Average	8.43		Other	
B38W02D		24.49	Top of Riser	Protective CSG	
Permit # 2614082-9		24.49	Elevation:	Riser CSG X	
		24.49	67.7	Ground	
	Average	24.49	Needs Lock	Other	
B38W03B		12.57	Top of Riser	Protective CSG	
Permit #		12.57	Elevation:	Riser CSG X	
		12.57	58.27	Ground	
	Average	12.57	Cracked conc. Pa	Other	
B38W04B		13.52	Top of Riser	Protective CSG	
Permit #		13.52	Elevation:	Riser CSG X	
		13.52	65.85	Ground	
	Average	13.52	Cas. cover rusted	Other	
B38W05B		17.90	Top of Riser	Protective CSG	
Permit #		17.89	Elevation:	Riser CSG X	
		17.89	71.05	Ground	
	Average	17.89		Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0
Rev:

WATER LEVEL RECORD SHEET

Date: 11/21/2001 **Site:MISS** **Page 4 of 6**

Measured by: J. Dekoskie

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water** (0.01 ft)	**Remarks**	**Measurement Reference Point**	**X**
B38W06B		12.36	Top of Riser	Protective CSG	
Permit #		12.36	Elevation:	Riser CSG X	
		12.36	54.41	Ground	
	Average	12.36		Other	
B38W07B		12.75	Top of Riser	Protective CSG	
Permit #		12.75	Elevation:	Riser CSG X	
		12.75	54.63	Ground	
	Average	12.75		Other	
B38W12A		8.46	Top of Riser	Protective CSG	
Permit #		8.47	Elevation:	Riser CSG X	
		8.47	50.1	Ground	
	Average	8.47		Other	
B38W12B		8.20	Top of Riser	Protective CSG	
Permit #		8.20	Elevation:	Riser CSG X	
		8.20	49.78	Ground	
	Average	8.20		Other	
B38W14S		5.65	Top of Riser	Protective CSG	
Permit #		5.65	Elevation:	Riser CSG X	
		5.65	43.89	Ground	
	Average	5.65		Other	
B38W14D		4.28	Top of Riser	Protective CSG	
Permit #		4.28	Elevation:	Riser CSG X	
		4.28	43.79	Ground	
	Average	4.28		Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0

[b] USACE data qualifier flags based (**Rev:**

WATER LEVEL RECORD SHEET

Date: 11/21/2001 **Site:MISS** **Page 5 of 6**

Measured by: J. Dekoskie

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:____________________

Well No. (Enter Complete Well No.)	**Time** (24-hour format)	**Depth to water (0.01 ft)**	**Remarks**	**Measurement Reference Point**	**X**
B38W15S		7.10	Top of Riser	Protective CSG	
Permit #		7.10	Elevation:	Riser CSG X	
		7.10	45.7	Ground	
	Average	7.10		Other	
B38W15D		6.32	Top of Riser	Protective CSG	
Permit #		6.32	Elevation:	Riser CSG X	
		6.32	45.89	Ground	
	Average	6.32		Other	
B38W17A		11.04	Top of Riser	Protective CSG	
Permit #		11.04	Elevation:	Riser CSG X	
		11.04	53.24	Ground	
	Average	11.04		Other	
B38W17B		11.05	Top of Riser	Protective CSG	
Permit #		11.05	Elevation:	Riser CSG X	
		11.05	53.28	Ground	
	Average	11.05		Other	
B38W18D		6.33	Top of Casing	Protective CSG	
Permit #		6.33	Elevation:	Riser CSG X	
		6.33	57.85	Ground	
	Average	6.33		Other	
B38W19S		17.33	Top of Riser	Protective CSG	
Permit #		17.33	Elevation:	Riser CSG X	
		17.33	59.91	Ground	
	Average	17.33		Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0
Rev:

WATER LEVEL RECORD SHEET

Date: 11/21/2001 **Site:MISS** **Page 6 of 6**

Measured by: J. Dekoskie

G. Moyer

☐ Battery Check ☐ Funct. Check ☐ Physical Exam.
☐ Electric Sounder ☐ Chalked Tape ☐ Other _____________
☐ Calibration of electric sounder
Date of last calibration:_____________________

Well No. (Enter Complete Well No.)	Time (24-hour format)	Depth to water (0.01 ft)	Remarks	Measurement Reference Point	X
B38W19D		17.61	Top of Riser	Protective CSG	
Permit #		17.61	Elevation:	Riser CSG X	
		17.61	59.98	Ground	
	Average	17.61		Other	
B38W24S		11.42	Top of Riser	Protective CSG	
Permit #		11.42	Elevation:	Riser CSG X	
		11.42	55.04	Ground	
	Average	11.42		Other	
B38W24D		12.13	Top of Casing	Protective CSG	
Permit #		12.13	Elevation:	Riser CSG X	
		12.13	54.91	Ground	
	Average	12.13		Other	
B38W25S		10.27	Top of Riser	Protective CSG	
Permit #		10.27	Elevation:	Riser CSG X	
		10.27	57.44	Ground	
	Average	10.27		Other	
B38W25D		10.48	Top of Riser	Protective CSG	
Permit #		10.48	Elevation:	Riser CSG X	
		10.48	58.24	Ground	
	Average	10.48	Prot.Cas damage(	Other	
				Protective CSG	
Permit #				Riser CSG X	
				Ground	
	Average			Other	

X - if well head and pad are in good condition
FUSRAP SOP: SW-MWD-410- 0
Rev:

APPENDIX C

Annual NESHAPS Compliance Report for the Year 2001

New York District
Formerly Utilized Sites Remedial Action Program
Maywood Superfund Site

Prepared by:
Stone & Webster, Inc.
100 West Hunter Ave.
Maywood, New Jersey 07607

for:
US Army Corps of Engineers - Kansas City District
Formerly Utilized Sites Remedial Action Program
Contract No. DACW41-99-D-9001

US Army Corps of Engineers

June 2002

ANNUAL NESHAP COMPLIANCE REPORT – YEAR 2001

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, NEW JERSEY

SITE-SPECIFIC ENVIRONMENTAL RESTORATION
CONTRACT NO. DACW41-99-D-9001
TASK ORDER No. 0001
WAD 02, WBS07

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 10007

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

Submitted by:

Stone & Webster Incorporated
100 West Hunter Avenue
Maywood, NJ 07607

June 2002

Issued to: ______________________ Date: ______________

Copy No. ______ ☐ Controlled ☒ Uncontrolled

ANNUAL NESHAP COMPLIANCE REPORT – YEAR 2001

FUSRAP MAYWOOD SUPERFUND SITE
MAYWOOD, NEW JERSEY

SITE-SPECIFIC ENVIRONMENTAL RESTORATION
CONTRACT NO. DACW41-99-D-9001
TASK ORDER No. 0001
WAD 02, WBS07

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 10007

Department of the Army
U.S. Army Engineer District, Kansas City
Corps of Engineers
700 Federal Building
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Submitted by:

Stone & Webster Incorporated
100 West Hunter Avenue
Maywood, NJ 07607

June 2002

Reviewed / Approved by: ______________________ Date: __________
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Kevin F. Donnelly, P.E.
Project Environmental Engineer

Reviewed / Approved by: ______________________ Date: __________
Alan F. Brown, P.E.
Construction Quality System Manager

Reviewed / Approved by: ______________________ Date: __________
Barabara Reider
Certified Health Physicist

REVISIONS

Revision No.	Description of Revision	Date
0	Internal Original Issue	March 2002
0	Original Issue	April 2002
0	Final Issue	June 2002

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ABBREVIATIONS AND ACRONYMS

AEC	Atomic Energy Commission
AP-42	Compilation of Air Pollutant Emission Factors – Volume 1
BP	Ballod Property
BNI	Bechtel National, Incorporated
°C	Degrees Centigrade
CAA	Clean Air Act
CAP88-PC	Clean Air Act Assessment Package 1988 – Personal Computer (Version 2)
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
Ci/yr	Curies per year
Cm	centimeters
CFR	Code of Federal Regulations
DOE	Department of Energy
EPA	U.S. Environmental Protection Agency
°F	Degrees Fahrenheit
FFA	Federal Facilities Agreement
ft	feet
ft^2	square feet
FUSRAP	Formerly Utilized Sites Remedial Action Program
G	gram
HEPA	High Efficiency Particulate Air
in.	inches
ICRP	International Commission on Radiological Protection
kph	kilometers per hour
km	kilometers
m	meters
m^2	square meters
mi	miles
MCW	Maywood Chemical Works
MISS	Maywood Interim Storage Site
mph	miles per hour
mSv/yr	millisievert per year
mrem	millirem
mrem/yr	millirem per year
NESHAP	National Emission Standards for Hazardous Air Pollutants
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NOAA	National Oceanic and Atmospheric Administration
NRC	Nuclear Regulatory Commission
ORAU	Oak Ridge Associated Universities
ORNL	Oak Ridge National Laboratory

pCi/g	Picocuries per gram
PDA	Pilot Demonstration Area
Ra	Radium
Rn	Radon
TCRA	Time Critical Removal Action
Th	Thorium
U	Uranium
USACE	U.S. Army Corps of Engineers

1.0 FACILITY INFORMATION

1.1 SITE DESCRIPTION

The Maywood Interim Storage Site (MISS) is a 4.7 hectare (11.7 acre) property located in the Borough of Maywood and the Township of Rochelle Park in Bergen County, New Jersey. MISS lies approximately 20 km (12 mi) northwest of New York City and 21 km (13 mi) northeast of Newark, New Jersey (see Appendix A, **Figure 1**). The MISS property was previously part of a 30-acre property owned by the Stepan Company and it was formerly part of the Maywood Chemical Works (MCW). The property is bordered on the west by State Route 17, on the north by a New York, Susquehanna, and Western Railway line, and on the south and east by commercial and industrial properties.

Land use in the vicinity is primarily commercial and residential (see Appendix A, **Figure 2**). The nearest commercial buildings are located approximately 25 meters (80 ft) south of Segment 1 and 60 meters (195 ft) north of Segment 2 of the water line installation. Other commercial properties are located 110 meters (360 ft) north-northeast of the Interstate 80 (I-80) soil excavation and 135 meters (440 ft) west of the spring and fall soil load-out area (see Appendix A, **Figure 3**). The nearest residences are approximately 130 meters (425 ft) north-northeast of Segment 1 and 85 meters (280 ft) east-northeast of Segment 2 of the water line installation, 40 meters (130 ft) south-southwest of the I-80 soil excavation, and 135 m (440 ft) east of the spring and fall soil load-out area. The nearest schools are 0.8 km (0.5 mi) northeast and northwest of the MISS. There is no farm land in the vicinity of MISS.

Based on the National Oceanic and Atmospheric Administration (NOAA) records for the year 2001 for Teterboro Airport, monthly average temperatures ranged from -0.7 ^{o}C (30.7 ^{o}F) in January to 25.2 ^{o}C (77.4 ^{o}F) in August. Total monthly precipitation ranged from 1.75 cm (0.69 in) in October to 17.8 cm (7.00 in) in March. Monthly average wind speed ranged from 9.2 kilometers per hour (kph) or 5.7 mph from the north-northwest in October to 15.0 kph (9.3 mph) from the northwest in March.

Due to the absence of on-site meteorological monitoring data, observations from Teterboro Airport were used to represent the general climatic conditions at MISS. Teterboro Airport is located approximately 3 miles south of the MISS and thus, meteorological data collected at this location is considered to be the best available data to represent the climatic regime at the MISS.

1.2 SITE HISTORY

MISS was established to provide storage for low level radioactive soils found in the vicinity of the former MCW. From 1916 through 1959, the MCW processed monazite sand (a thorium-containing ore) for industrial uses. Process wastes were placed in surface impoundments on-site. Some of these process wastes migrated off-site via surface water drainage and some were later used as mulch and fill on nearby properties, thus contaminating them with radioactive thorium.

After the enactment of the Atomic Energy Act of 1954, the Atomic Energy Commission (AEC) issued a license to the MCW for the processing and manufacture of radioactive material. The MCW stopped processing thorium in 1959 and shortly thereafter was sold to the Stepan Company. Based on AEC inspections and information, remedial actions were performed by the Stepan Company.

Subsequent radiological surveys from 1980 to 1984 identified additional areas of Th-232, Ra-226 and U-238, and their respective daughters contamination, both on-site and off-site. Through a provision of the Energy and Water Development Appropriations Act of 1984, Congress authorized the Department of Energy (DOE) to conduct a decontamination research and development project at the Maywood site. The site was assigned to the Formerly Utilized Sites Remedial Action Program (FUSRAP). In 1984, the DOE negotiated a lease for Stepan Company land on which MISS would be established. The land was transferred in 1985 to DOE ownership and currently provides interim storage for contaminated materials removed from vicinity properties.

FUSRAP was transferred from DOE to the U.S. Army Corps of Engineers (USACE) by Congressional action. The limits of USACE's responsibilities for the Maywood site are defined under a Federal Facilities Agreement (FFA) between DOE and the U.S. Environmental Protection Agency (EPA), Region II, that became effective April 22, 1991. The USACE became a successor to the DOE as of March 17, 1999.

1.3 MODEL SOURCES

The computer program used to model potential off-site exposure from airborne emissions is the Clean Air Act Assessment Package – 1988 Personal Computer (CAP88-PC) program (Version 2.0). Airborne emissions contributing to off-site exposure could occur from areas where the radioactively contaminated soil is exposed to the elements and from operations that generate airborne emissions (see Appendix A, Figure 3). During the year 2001, the potential sources of airborne emissions at MISS and nearby properties were as follows.

- In situ, contaminated areas totaling approximately 59,000 m^2 (635,000 ft^2) of MISS and the adjacent Stepan Company property (within the MISS fence line) were potentially exposed to wind erosion during the year 2001.
- The performance of a soil load-out, transportation, and disposal operation of the existing stockpile took place in the Spring of 2001. This stockpile consisted of soil and debris that had been transported to MISS from the Time-Critical Removal Action (TCRA) performed to restore hydraulic flow to a swale located at the FUSRAP Maywood Superfund Site, the remediation and restoration of the Ballod Property adjacent to the MISS, and the operation of a pilot facility that used gravel separation and rinse technology to reduce the volume of contaminated soil requiring off-site disposal. This action involved the load-out of approximately 13,117 tons of material, which was placed into railcars for transport to a disposal facility in Utah.
- The installation of a 2-inch diameter water line that originates at the existing fire hydrant in the parking area for the Stone & Webster / USACE trailer office complex and extends westward into the MISS. The water line is approximately 2,000 ft in length and runs along the existing access road at MISS. In addition, seven yard hydrants were installed as part of this project. The water line was installed to provide general purpose water for operations such as dust control and the decontamination of equipment. This action involved the excavation of approximately 675 tons of contaminated soil.
- The excavation of soil along a portion of Interstate 80 to allow for the installation of sound barriers. The excavation was performed by the New Jersey Department of Transportation (NJDOT). The excavated soil was stockpiled and then loaded into trucks for transport to MISS. This action involved the excavation and transport to MISS of approximately 399 tons of contaminated soil.
- The performance of a soil load-out, transportation, and disposal operation of the new soil stockpile at MISS in the Fall of 2001. This stockpile consisted of soil and debris resulting from the excavation of contaminated soil for the installation of sound barriers along a portion of Interstate 80 and the installation of the water line at MISS. This action involved the load-out of approximately 955 tons of material which was placed into railcars for transport to a disposal facility in Utah.

- The operation of the exhaust system for the soil sample preparation laboratory located in Building 76 (see Figure 3). Soil samples collected from various construction activities at MISS were brought to this laboratory to prepare the samples for radiological analysis. The individual soil samples were dried and then ground before placing the soil into sealed containers. The grinding operations, which generated very small amounts of dust, were performed under a laboratory hood. Air from the exhaust hood is passed through a high efficiency particulate air (HEPA) filter prior to discharge to the ambient air.

The simulated airborne emissions from these potential sources are used by CAP88-PC to estimate the annual dose from airborne particulates to the population within 80 km (50 mi) of the site (see Appendix). In addition, for user-defined distances from the center of the emission areas, CAP88-PC estimates individual effective dose equivalents in all compass directions. For specific potentially exposed individuals (workers and residents) at known distances and compass directions from the site, the user can determine and compare the calculated effective dose equivalents.

Analyses were performed separately for the Spring soil load-out, the installation of the water line, the excavation and transport of contaminated soil to MISS from sound barrier installation along Interstate 80, and the Fall soil load-out given the differences in receptor locations most affected by each of these areas. The in situ wind erosion emissions and the exhaust hood emissions were found to be negligible, and thus these sources were not included in the modeling analyses. Where individual receptors are affected by more than one emission source, doses caused by those sources are added. The individual (worker and resident) corresponding to the maximum effective dose equivalent is identified as the hypothetical maximally exposed individual. Because dose from airborne emissions is dependent on prevailing wind direction in addition to proximity to the site, the hypothetical maximally exposed individual is not necessarily the person nearest the site. The model was used to predict the annual effective dose at numerous receptors resulting from the combined impact of the above sources. Although the model determined the annual effective dose at numerous receptors, only the hypothetical maximally exposed resident and worker are discussed in this report.

The individual effective dose equivalents given in the CAP88-PC output are based on the default assumption that the receptor occupies the location 100 percent of the time (i.e., 24 hours per day, 7 days per week, 52 weeks per year). The occupancy factor of 100 percent, although conservative, is considered to be appropriate for a resident. To estimate the dose to an employee working normal hours, an occupancy factor of 24 percent (i.e., 8 hours per day, 5 days per week, 50 weeks per year) is applied to the CAP88-PC result.

The program calculates the effective dose equivalents by combining the inhalation and ingestion intake rates and the air and ground surface concentrations with dose conversion factors, using the weighting factors in "Recommendations of the International Commission on Radiological Protection" (ICRP Publication 26, 1977). CAP88-PC calculates dose to the gonads, breast, lungs, red marrow, thyroid, and endosteum in addition to the 50-year effective dose equivalent. Doses can be tabulated as a function of radionuclide, pathway, location, and organ as shown in the output (see Appendix B, pages 23 – 113) for the CAP88-PC runs.

1.4 DETAILED SOURCE DESCRIPTIONS

As discussed in the previous section, the key sources of potential airborne radioactive particulate releases to the atmosphere during the year 2001 were the Spring soil load-out, the installation of the water line, the excavation and transport of contaminated soil for sound barrier installation along Interstate 80, and the Fall soil load-out. In addition, in situ wind erosion at MISS and operation of the exhaust system for the sample preparation laboratory in Building 76 were potential sources of radioactive particulates. A more comprehensive discussion of the activities performed at the above sources, including the soil radiological concentrations and the potential pathways for the airborne release of contaminated particulates, is provided in Sections 1.4.1 through 1.4.6.

1.4.1 Spring Soil Load-Out

During the year 2000, a stockpile was created that consisted of soil and debris transported to MISS from three sources:

1. The TCRA at the swale
2. The remediation and restoration of the Ballod property
3. The operation of a pilot facility which utilized gravel separation and rinse technology to reduce the volume of contaminated soil requiring off-site disposal

The stockpile was covered when not being actively worked to prevent wind and rain erosion. Concrete blocks were placed around the stockpile to prevent storm water runoff through the pile.

A soil load-out, transportation, and disposal operation for the above stockpile was performed in the Spring of 2001. The soil load-out commenced on April 13, 2001 and was completed on May 22, 2002. This action involved the load-out of approximately 13,117 tons of material, which was placed into railcars for transport to Envirocare's Clive, Utah facility for disposal. Each railcar held approximately 70-85 cubic yards of soil. A total of 122 railcars were utilized to complete the soil load-out.

A front-end loader was used to transport soil from the existing stockpile to the storage bins located near the railcar access ramp. The storage bins were sized to hold approximately 80-85 cubic yards of soil. An excavator was then used to place the soil from the storage bins into railcars containing liners. The use of a liner ensured that the railcars complied with DOT requirements, the waste materials were protected from the elements, the potential loss of soil during shipping was prevented and potential impacts to the community were minimized. In Appendix A, **Figures 4a** and **4b** show various photographs depicting the soil load-out operation.

Prior to loading the soil into each railcar, a composite sample was generated from the soil in the stockpile. Five soil samples were collected from the perimeter of the stockpile. These samples were homogenized into one composite sample and analyzed by gamma spectroscopy for thorium, radium, and uranium. The average soil radionuclide concentrations of thorium-232, radium-226, and uranium-238 for the Spring soil load-out were 15.7 pCi/g, 2.0 pCi/g, and 6.2 pCi/g; respectively.

In addition, the soil moisture content was determined for each individual railcar. A portion of the composite sample generated for radiological analysis of each railcar was used to determine the soil moisture content. If the moisture content of the soil was too high, a pre-determined amount of absorbent, based upon the soil moisture content of the soil, was blended into the soil stockpile.

Upon completion of loading, the railcars were moved eastward down the rail spur, the liner was closed, and an outgoing railcar survey performed. Prior to a loaded railcar being shipped off-site for disposal, the proper labels and placards were attached and a radiological release survey performed.

1.4.2 Water Line Installation

A water line was installed at the MISS to provide general purpose water for operations such as dust control and decontamination of equipment. Construction of the water line commenced in June 2001 and was performed in stages, with completion occurring in November 2001. The water line has a 2-in diameter; it originates at the existing fire hydrant in the parking area for the Stone & Webster / USACE trailer complex and extends westward into the MISS. The water line is approximately 2,000 ft in length and runs along the existing access road at MISS (see Appendix, **Figure 3**). Seven yard hydrants were installed in conjunction with the water line.

A wheel mounted backhoe was used to perform the required excavation for the installation of the water line. In the parking area, the excavated soil was placed onto plastic sheets laid next to the trench. After installation of the water line, some of the excavated soil was placed back into the trench. Twelve (12) inches of clean fill were then placed into the trench and compacted. Finally, the trench was paved with asphalt to permanently seal the area. The excess soil from the trench excavation was transported to MISS for disposal.

At MISS, the excavated soil from the trench was placed directly onto the ground in contaminated areas, while plastic lining was placed on the ground for temporary storage in uncontaminated areas. After installation of the water line, the excavated soil was placed back into the trench.

Radiological data collected by Stone & Webster during the pre-design investigation was used to assess the soil radiological concentrations of the excavated soil. Specifically, sampling locations located near the route of the water line were used to determine the average soil radiological concentrations for thorium-232, radium-226, and uranium-238.

The pre-design investigation showed that the soil radiological concentrations in the vicinity of the parking area for the Stone & Webster / USACE trailer complex were considerably higher than the levels found at MISS. Consequently, the water line excavation was divided into two separate segments for modeling purposes. The first segment stretched from the water line's origin at the existing hydrant in the parking area for the trailer complex to the MISS fence line. The second segment extended from the MISS fence line and continued along the existing access road to the water line's terminus at MISS (see **Figure 3**).

For each of these segments, the average soil radionuclide concentrations for thorium-232, radium-226, and uranium-238 were determined using the pre-design investigation radiological data for the affected areas (see SW 2000b). In addition, the corresponding tonnage of excavated soil for each of the segments was determined (see **Table 1-1**).

Table 1-1
Water Line Installation – Average Soil Radionuclide Concentrations by Segment

Segment	Thorium-232 (pCi/g)	Radium-226 (pCi/g)	Uranium-238 (pCi/g)	Tonnage	Surface Area (Ft^2)
1	611.9	50.1	155.8	83.3	500
2	17.8	9.7	12.5	591.7	3,500

The installation of the water line required the excavation of approximately 675 tons of soil. The breakdown of the amount of excavated soil for Segments 1 and 2 were 83.3 and 591.7 tons; respectively. Figure 5 shows selected photographs of the water line installation at the MISS.

1.4.3 Interstate 80 Sound Barrier Installation

During 2001, the NJDOT installed sound barriers along Interstate 80 to mitigate adverse impacts from traffic noise on nearby residences. Erection of the sound barriers required the excavation of soil to install caisons, which served as anchors for the sound barriers. Some of the excavated soil was found to contain radiological contamination and was transported to MISS for disposal.

The excavated soil was initially stockpiled by the NJDOT adjacent to the construction site along Interstate 80. This soil was then placed into roll-off containers, loaded onto trucks, covered and transported to MISS. Upon arrival at MISS, the roll-off containers were emptied and the soil stockpiled using a front-end loader. In Appendix A, **Figures 6a** and **6b** show selected photographs of the excavation, loading, and transport of contaminated soil from the Interstate 80 work site to MISS.

The transport of contaminated soil from the Interstate 80 construction site to MISS commenced in June 2001 and continued occasionally through August 2001. Approximately 399 tons of contaminated soil was transported to MISS for disposal during the above time period. Based on radiological testing performed during loading operations, the average soil radiological concentrations of thorium-232, radium-226, and uranium-238 of the excavated soil were 7.3 pCi/g, 1.3pCi/g and 3.0pCi/g; respectively.

1.4.4 Fall Soil Load-Out

During the summer of 2001, a new stockpile was created which consisted of soil that was transported to MISS from the installation of the water line and the installation of the sound barriers along Interstate 80. The stockpile was covered when not being actively worked to prevent wind and rain erosion. Concrete blocks were placed around the stockpile to prevent storm water runoff through the pile.

A soil load-out, transportation, and disposal operation for the above stockpile was performed in the Fall of 2001. The soil load-out commenced on September 19, 2001 and was completed on October 3, 2001.This action involved the load-out of approximately 955 tons of material which was placed into railcars for transport to Envirocare's Clive, Utah facility for disposal. Each railcar held approximately 70-85 cubic yards of soil. A total of 9 railcars were utilized to complete the soil load-out.

A front-end loader was used to transport soil from the existing stockpile to the storage bins located near the railcar access ramp. The storage bins were sized to hold approximately 80-85 cubic yards of soil. An excavator was then used to place the soil from the storage bins into railcars containing liners. The use of a liner ensured that the railcars complied with DOT requirements, the waste materials were protected from the elements, the potential loss of soil during shipping was prevented, and potential impacts to the community were minimized.

Prior to loading the stockpiled soil into each railcar, a composite sample was generated from the soil in the stockpile. Five soil samples were collected from the perimeter of the stockpile. These samples were homogenized into one composite sample and analyzed by gamma spectroscopy for thorium, radium and uranium. The average soil radionuclide concentrations of thorium-232, radium-226, and uranium-238 for the Fall soil load-out were 29.2 pCi/g, 6.9 pCi/g, and 4.4 pCi/g, respectively.

In addition, the soil moisture content was determined for each individual railcar. A portion of the composite sample generated for radiological analysis of each railcar was used to determine the soil moisture content. If the moisture content of the soil was too high, a pre-determined amount of absorbent, based upon the soil moisture content of the soil, was blended into the soil stockpile.

Upon completion of loading, the railcars were moved eastward down the rail spur, the liner was closed, and an outgoing railcar survey performed. Prior to a loaded railcar being shipped off-site for disposal, the proper labels and placards were attached and a radiological release survey performed.

1.4.5 In Situ Wind Erosion

The MISS and adjacent Stepan Company property (within the MISS fence line) consists of approximately 59,000 m^2 (635,000 ft^2) of contaminated areas that were potentially exposed to wind erosion throughout the year 2000. The surface characteristics of the northern portion of the MISS (north of the soil load-out rail spur) did not change significantly during the year 2001.

The amount of bare soil present at MISS, which has the greatest wind erosion potential, has decreased considerably from past years due to the placement of gravel / stone and a plastic liner over much of the area. At present, the approximate breakdown of the types of various surfaces found at MISS (see Appendix A, **Figure 3**) is the following: bare soil, 5,000 m^2 (54,000 ft^2); vegetation, 22,760 m^2 (245,000 ft^2); gravel / stone, 22,110 m^2 (238,000 ft^2); water basin, 740 m^2 (8,000 ft^2); and asphalt, 835 m^2 (90,000 ft^2).

Other than for bare soil, the wind erosion potential for the other surfaces is negligible. It should be noted that any storage piles created as a result of remediation activities and operation of the pilot facility were covered with tarps and sandbags to prevent wind erosion. In addition, best management practices such as spraying water on dry soil were used during the year to reduce the potential for wind erosion.

In order to assess the amount of wind erosion that occurred during the year 2001 at MISS, it is necessary to determine the fastest 2-minute wind speeds over the course of the year and then compare them to the friction velocity most representative of bare soil as defined in EPA's AP-42 publication (Industrial Wind Erosion). As mentioned previously, meteorological data from nearby Teterboro Airport was used to represent conditions at MISS. The results of this analysis showed that the fastest 2-minute wind speeds obtained from Teterboro Airport for the year 2001 do not result in the threshold friction velocity being exceeded at any time during the year. Thus, by definition, no in situ wind erosion occurred at MISS during the year 2001.

1.4.6 System Exhaust for Soil Sample Preparation Laboratory

The soil sample preparation laboratory is located in Building 76 (see Figure 3). Soil samples collected for the pilot demonstration facility were taken to this laboratory to prepare them for radiological analysis. Each sample was dried thoroughly to minimize the moisture content and then ground to create a homogeneous mixture. The presence of moisture, rocks, or void spaces in the prepared sample could lead to inaccurate radioanalytical laboratory results.

The laboratory operates two electric ovens to dry the samples. These ovens are vented directly to the main laboratory fume hood for the removal of waste heat. The grinding of the soil samples is performed in a bench grinder positioned under the main laboratory fume hood. Each soil sample is weighed before and after the grinding process. The grinding of the individual soil samples produces minimal particulate emissions as detailed below.

The fume hood operates anytime that the ovens or grinder are operational. Dust generated by the grinding process is collected by the fume hood and passed through a HEPA filter with a 99.97 % removal efficiency before being discharged to the outside air. In Appendix A, **Figure 7** shows selected photographs depicting operations at the soil sample preparation laboratory.

Approximately 150 "tuna can" style soil samples were prepared for radiological analysis from September 4 to December 10, 2001. The total time that grinding was performed during soil sample preparation was approximately 23 hours. The average weight of the soil samples prior to grinding was 364 grams. The average weight of the soil samples after grinding was 313 grams. Thus, the average amount of "unrecovered" dried soil during the grinding process was 51 grams. At least 75% (38.25 grams) of the "unrecovered" mass was subsequently recovered during the grinder decontamination process with no more than 25% (12.75 grams) entering the hood ventilation system as particulate emissions.

Based on the above, the total amount of particulate emissions generated during the preparation of all the soil samples was approximately 1,913 grams. However, after passage through the HEPA filter, the particulate emissions discharged to the outside air was less than 1 gram – a miniscule amount compared to the total amount of particulates (2,961grams) that were emitted to the atmosphere from the other sources. The discharge of this miniscule amount of contaminated particulate to the atmosphere would have a negligible impact on the off-site radiological exposure; therefore, this source was not included in the CAP88-PC modeling analyses.

2.0 AIR EMISSIONS DATA

The potential radionuclide particulate emission sources and controls for the year 2001 are summarized in **Table 2-1**.

Table 2-1
Description of Radionuclide Particulate Emissions Sources

Source	**Type Control**	**Efficiency**
Point Sources		
Soil Sample Preparation Laboratory	HEPA Filter	99.97 percent
Non-Point Sources	**Type Control**	Efficiency
In situ soil	Gravel / Stone Vegetative cover Bare Soil	99 percent 99 percent 0 percent
Spring Soil Load-out	Water Sprays for Dust Suppression. Use of tarps to cover storage piles and liners for railcars.	No credit taken for dust controls
Water Line Installation	Water Sprays for Dust Suppression. Use of tarps to cover storage piles.	No credit taken for dust controls
Interstate 80 Sound Barrier Installation	Water Sprays for Dust Suppression. Use of tarps to cover storage piles and liners for roll-off containers.	No credit taken for dust controls
Fall Soil Load-out	Water Sprays for Dust Suppression. Use of tarps to cover storage piles and liners for railcars.	No credit taken for dust controls

Radionuclide emission rates are based on the particulate release rates and average radionuclide source concentrations determined from sample measurements. The radioactive particulate release rates from in situ wind erosion, the Spring soil load-out, the installation of the water line, the Interstate 80 sound barrier installation, and the Fall soil load-out are calculated using EPA's "Compilation of Air Pollutant Emission Factors – Volume 1: Stationary Point and Area Sources," known as AP-42.

Source concentration for isotopes of thorium-232, radium-226, and uranium-238 are based on average values for the in situ soils and average values determined for the excavated soils resulting from the Spring soil load-out, water line installation, Interstate 80 sound barrier installation, and Fall soil load-out. Unknown radionuclide source concentrations are based on the known source concentrations assuming secular equilibrium in the decay chains. The radionuclide emissions for the year 2001 from each of the above emission sources, with the exception of the soil sample preparation laboratory, are shown in **Table 2-2**.

Table 2-2
Year 2001 – Airborne Radionuclide Emissions from Various Source Operations (Ci/yr)†

Source Radionuclides	In Situ Soil*	Spring Soil Load-out	Water Line Segment 1	Water Line Segment 2	I-80 Soil Excavation / Transport	I-80 Soil Disposal at MISS	Fall Soil Load-out
U-238	0	1.56E-08	2.49E-09	1.42E-09	2.32E-10	1.55E-10	8.07E-10
Th-234	0	1.56E-08	2.49E-09	1.42E-09	2.32E-10	1.55E-10	8.07E-10
Pa-234m	0	1.56E-08	2.49E-09	1.42E-09	2.32E-10	1.55E-10	8.07E-10
Pa-234	0	2.03E-11	3.24E-12	1.85E-12	3.02E-13	2.01E-13	1.05E-12
U-234	0	1.67E-08	2.67E-09	1.52E-09	2.48E-10	1.66E-10	8.63E-10
Th-230	0	1.67E-08	2.67E-09	1.52E-09	2.48E-10	1.66E-10	8.63E-10
Ra-226	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Po-218	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Pb-214	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Bi-214	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Po-214	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Pb-210	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Bi-210	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
Po-210	0	5.04E-09	8.02E-10	1.10E-09	9.89E-11	6.59E-11	1.27E-09
U-235	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Th-231	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Pa-231	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Ac-227	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Th-227	0	7.21E-10	1.15E-10	6.56E-11	1.07E-11	7.15E-12	3.73E-11
Fr-223	0	1.01E-11	1.61E-12	9.18E-13	1.50E-13	1.00E-13	5.22E-13
Ra-223	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Po-215	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Pb-211	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Bi-211	0	7.31E-10	1.17E-10	6.65E-11	1.09E-11	7.25E-12	3.78E-11
Po-211	0	2.00E-12	3.19E-13	1.82E-13	2.97E-14	1.98E-14	1.03E-13
Tl-207	0	7.29E-10	1.16E-10	6.63E-11	1.08E-11	7.23E-12	3.77E-11
Th-232	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Ra-228	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Ac-228	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Th-228	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Ra-224	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Po-216	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Pb-212	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Bi-212	0	3.96E-08	9.79E-09	2.02E-09	5.60E-10	3.73E-10	5.36E-09
Po-212	0	2.53E-08	6.27E-09	1.30E-09	3.59E-10	2.39E-10	3.43E-09
Tl-208	0	1.42E-08	3.52E-09	7.27E-10	2.01E-10	1.34E-10	1.92E-09

Notes:
* The in situ soil emissions are zero as the fastest 2-min wind speeds at Teterboro Airport for the year 2001 do not result in the threshold friction velocity being exceeded at any time.
† Soil sample preparation laboratory is not considered a source due to the miniscule amount of particulates released to the atmosphere.

3.0 DOSE ASSESSMENTS

3.1 DESCRIPTION OF DOSE MODEL

The effective dose equivalent for the collective population and for the hypothetical maximally exposed individual were calculated in a two-step process. The first step was to model the release of particulates from the site using the methodology given in the EPA's "Estimation of Air Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites" (EPA-451/R-93-004). Particulate emissions were determined based on the number of times the soil was disturbed (e.g., excavated, stockpiled, loaded into trucks / containers / railcars, unloaded, moved) at both the source and at MISS. The second step was to input these particulate release rates, along with local population and meteorological data, into the CAP88-PC program (EPA 402-B-92-001).

The model was used to predict the annual effective dose at numerous receptors resulting from the combined impacts of radiologically contaminated particulate emissions from the Spring soil load-out, water line installation, Interstate 80 sound barrier installation, and Fall soil load-out. Although the emission of radon gas is not considered in this analysis, the daughters of radon gas generated by the decay of radon-226 in dust off-site are accounted for by the model in the computation of the effective dose equivalents for the various internal and external exposure pathways.

The CAP88-PC model uses a modified Gaussian plume equation to estimate the average dispersion of radionuclides released from a site. Assessments are done for a circular grid of distances and directions for a radius of 80 km (50 mi) around the site. The program computes radionuclide concentrations in air, rates of deposition on ground surfaces, concentrations in food, and intake rates to people from ingestion of food produced in the assessment area.

By coupling the output of the atmospheric transport models with the terrestrial food chain models from the U.S. Nuclear Regulatory Commission Regulatory Guide 1.109 ("Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I"), the program estimates the radionuclide concentrations in produce, leafy vegetables, milk, and meat consumed by humans. The population distribution array used in the computer model was calculated from known land uses surrounding the site and year 2000 census figures.

CAP88-PC also uses a modified version of DARTAB (ORNL5692) and a database of dose and risk factors generated by RADRISK (ORNL7105 and ORNL7745) for estimating dose and risk. Dose and risk factors are provided for the pathways of ingestion and inhalation intake, ground level immersion, and ground surface irradiation. For assessments where Rn-222 decay products are not considered, the dose estimates are made by combining the inhalation and ingestion intake rates as well as the air and ground surface concentrations with the appropriate dose conversion factors.

3.2 SUMMARY OF INPUT PARAMETERS

- Average Annual Temperature for year 2001: 12.6 C (54.7 F)
- Total Annual Precipitation for year 2001: 84.6 cm (33.3 in.)
- Wind Speed and Direction: Teterboro Airport, NJ STAR Data (1989-1999)
- Population Distribution: calculated from the year 2000 census data
- Annual Radionuclide Emission Rates (see Table 3)
- Surface areas of Emission Points
- Distances to Individual Resident and Worker Receptor Locations

3.3 COMPLIANCE ASSESSMENT

The maximum annual effective dose to residents and workers resulting from each of the key sources during the year 2001 (the Spring soil load-out, the water line installation, Interstate 80 sound barrier installations, and Fall soil load-out) as determined by the CAP88-PC modeling analyses are shown in **Table 3-1**. The annual effective dose to the maximally exposed resident and worker, as well as the collective population dose, resulting from total site activities during the year 2000 are the following:

- Resident located 235m NE of MISS (100% occupancy): 5.71×10^{-6} mSv/yr (5.71×10^{-4} mrem/yr)
- Employee located 25m S of MISS (24% occupancy): 1.36×10^{-5} mSv/yr (1.36×10^{-3} mrem/yr)
- Annual effective dose to the public within 80 km of MISS: 2.85×10^{-3} person-rem/year

The maximum annual effective dose to the residents and workers are well below the Subpart H NESHAP's standard of 10 mrem/yr (40 CFR 61.92). The maximum annual effective doses are almost entirely the result of the internal doses received from the inhalation of dust particles, with a small contribution from the ingestion of plant borne dust. Air immersion in the dust plume and ground surface irradiation contribute a negligible amount to the total dose.

Table 3-1
Maximum Annual Effective Dose Equivalents

Source	Location of Maximum Impact**	Annual Dose (mrem/yr)	Occupancy Factor (%)	Annual Effective Dose (mrem/yr)
Spring Soil Load-out				
• Population (person-rem/yr)	N/A	2.00E-03	N/A	2.00E-03
• Maximally Exposed Resident	235 m NE	2.80E-04	100	2.80E-04
• Maximally Exposed Worker	160 m N	5.50E-04	24	1.32E-04
Water Line Installation-Segment 1				
• Population (person-rem/yr)	N/A	4.46E-04	N/A	4.46E-04
• Maximally Exposed Resident	135 m NE	1.90E-04	100	1.90E-04
• Maximally Exposed Worker	25 m S	5.20E-03	24	1.25E-03
Water Line Installation-Segment 2				
• Population (person-rem/yr)	N/A	1.25E-04	N/A	1.25E-04
• Maximally Exposed Resident	85 m ENE	6.60E-05	100	6.60E-05
• Maximally Exposed Worker	60 m N	2.20E-04	24	5.28E-05
I-80: Sound Barrier Installation				
• Population (person-rem/yr)	N/A	2.87E-05	N/A	2.87E-05
• Maximally Exposed Resident	40 m S	1.10E-04	100	1.10E-04
• Maximally Exposed Worker	110 m NE	1.70E-05	24	4.08E-06
I-80: Soil Unloading at MISS				
• Population (person-rem/yr)	N/A	1.91E-05	N/A	1.91E-05
• Maximally Exposed Resident	235 m NE	2.70E-06	100	2.70E-06
• Maximally Exposed Worker	160 m N	5.30E-06	24	1.27E-06
Fall Soil Load-out				
• Population (person-rem/yr)	N/A	2.27E-04	N/A	2.27E-04
• Maximally Exposed Resident	235 m NE	3.20E-05	100	3.20E-05
• Maximally Exposed Worker	160 m N	6.30E-05	24	1.51E-05
Total Site*				
• Population (person-rem/yr)	N/A	2.85E-03	N/A	2.85E-03
• Maximally Exposed Resident	235 m NE	5.71E-04	100	5.71E-04
• Maximally Exposed Worker	25 m S	5.65E-03	24	1.36E-03

Note(s):
* The total site dose for the maximally exposed resident and worker represent the combined impacts of radiologically contaminated particulate emissions from the Spring soil load-out, water line installation, Interstate 80 sound barrier installation, and Fall soil load-out at the specified locations.

**Although exposures from other directions and distances may be reported in the model output, only those directions/distances corresponding to a potential receptor location are reported here. Note: all calculated exposures were on a similar order of magnitude of those reported here (much less than 1 mrem/yr).

3.4 CERTIFICATION

I certify under penalty of law that I have personally examined, and am familiar with, the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. (see 18USC1001.)

Name/Title:____

Signature: ________________________ Date: ______________

4.0 RADON FLUX MONITORING

4.1 RADON-222 FLUX

Radon flux monitoring was performed in January 2001 for the existing storage pile at the MISS to determine compliance with 40 CFR Part 61, Subpart Q. To determine radon flux from the storage pile, charcoal canisters were placed on the pile at 25 ft intervals; the canisters remained on the pile for 24 hours. The results of the radon flux monitoring for the storage pile are presented in **Table 4-1**; the measurement locations are shown in **Figure 8**.

The radon-222 concentrations obtained from the flux monitoring ranged from non-detectable to a maximum of 0.54 $pCi/m^2/s$. All of the measured radon-222 concentrations form the storage pile are well below the 20 $pCi/m^2/s$ radon flux standard specified in 40 CFR Part 61, Subpart Q.

Given the radon-222 flux sampling results for the existing pile, which was removed in the spring of 2001, and other past experiences onsite, it was determined that additional radon-222 flux monitoring of the new pile generated in the summer of 2001 was not required due to the temporary nature of the pile and the low radium-226 activity levels. The new stockpile lasted only a few months; it was created during the summer months and removed during late September and early October 2001.

Table 4-1
Year 2001 - Radon Flux Monitoring Results For Storage Pile At MISS

Sample ID[a]	Date Collected	Date Analyzed	Analyte	Result pCi/m²/s		Error	MDA[b] pCi/m²/s
RC-1	1/24/2001	1/25/2001	RN-222	0.049	±	0.036	0.077
RC-10	1/24/2001	1/25/2001	RN-222	0.137	±	0.047	0.120
RC-10-DUP	1/24/2001	1/25/2001	RN-222	0.118	±	0.025	0.041
RC-11	1/24/2001	1/25/2001	RN-222	0.055	±	0.041	0.107
RC-12	1/24/2001	1/25/2001	RN-222	0.098	±	0.055	0.147
RC-13	1/24/2001	1/25/2001	RN-222	0.061	±	0.030	0.081
RC-14	1/24/2001	1/25/2001	RN-222	0.059	±	0.045	0.114
RC-15	1/24/2001	1/25/2001	RN-222	0.073	±	0.034	0.087
RC-16	1/24/2001	1/25/2001	RN-222	0.126	±	0.057	0.150
RC-17	1/24/2001	1/25/2001	RN-222	0.034	±	0.025	0.069
RC-18	1/24/2001	1/25/2001	RN-222	0.039	±	0.042	0.106
RC-19	1/24/2001	1/25/2001	RN-222	0.085	±	0.039	0.095
RC-2	1/24/2001	1/25/2001	RN-222	0.103	±	0.046	0.109
RC-20	1/24/2001	1/25/2001	RN-222	0.519	±	0.078	0.055
RC-20-DUP	1/24/2001	1/25/2001	RN-222	0.541	±	0.079	0.092
RC-21	1/24/2001	1/25/2001	RN-222	0.085	±	0.041	0.094
RC-22	1/24/2001	1/25/2001	RN-222	0.075	±	0.046	0.123
RC-23	1/24/2001	1/25/2001	RN-222	0.063	±	0.030	0.078
RC-24	1/24/2001	1/25/2001	RN-222	0.063	±	0.048	0.130
RC-25	1/24/2001	1/25/2001	RN-222	0.082	±	0.049	0.096
RC-26	1/24/2001	1/25/2001	RN-222	0.105	±	0.069	0.154
RC-27	1/24/2001	1/25/2001	RN-222	0.051	±	0.031	0.074
RC-28	1/24/2001	1/25/2001	RN-222	0.040	±	0.034	0.096
RC-29	1/24/2001	1/25/2001	RN-222	-0.003	±	0.029	0.057
RC-3	1/24/2001	1/25/2001	RN-222	0.080	±	0.050	0.133
RC-30	1/24/2001	1/25/2001	RN-222	0.045	±	0.036	0.101
RC-30-DUP	1/24/2001	1/25/2001	RN-222	0.061	±	0.044	0.117
RC-31	1/24/2001	1/25/2001	RN-222	0.084	±	0.040	0.097
RC-4	1/24/2001	1/25/2001	RN-222	0.115	±	0.050	0.113
RC-5	1/24/2001	1/25/2001	RN-222	0.083	±	0.048	0.129
RC-6	1/24/2001	1/25/2001	RN-222	0.111	±	0.048	0.111
RC-7	1/24/2001	1/25/2001	RN-222	0.061	±	0.043	0.116
RC-8	1/24/2001	1/25/2001	RN-222	0.142	±	0.028	0.049
RC-9	1/24/2001	1/25/2001	RN-222	0.083	±	0.048	0.122

[a]All monitoring locations for the storage pile are shown in Figure 8.
[b]Minimum Detectable Activity (MDA).

5.0 REFERENCES

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12. USEPA 1985 - "Rapid Assessment of Exposure to Particulate Emissions from Surface Contaminated Sites" *EPA Report No. EPA-600/8-85/002*, U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Washington, D.C. February 1985.
13. USEPA 1993 - "Estimation of Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites," *EPA Report No. EPA-451/R-93/004*, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC. April 1993.
14. USEPA 1995 - *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources* U.S. Environmental Protection Agency, 5th Edition, AP-42 (Sections 13.2.4 and 13.2.5). January 1, 1995.

APPENDIX A
FIGURES

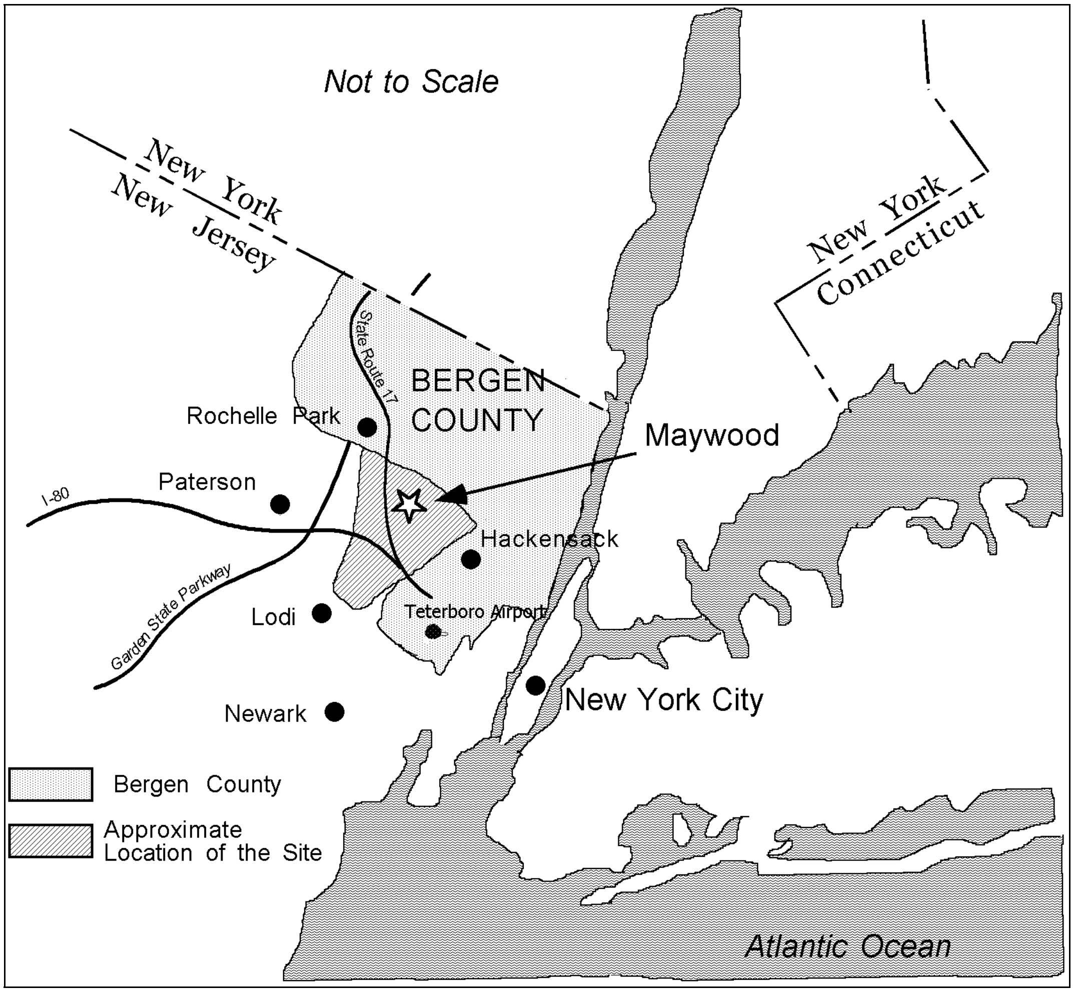


Figure 1
MISS General Location Map

LEGEND

= MISS PROPERTY

= WATER LINE (TWO INCH I.D.)

= SOIL STOCK PILE (SPRING LOAD-OUT)

= ACCESS RAMP/STORAGE BINS FOR LOADING OF RAIL CARS

= I-80 SOUND BARRIER INSTALLATION

N

Figure 2
Aerial View of MISS and Adjacent Properties

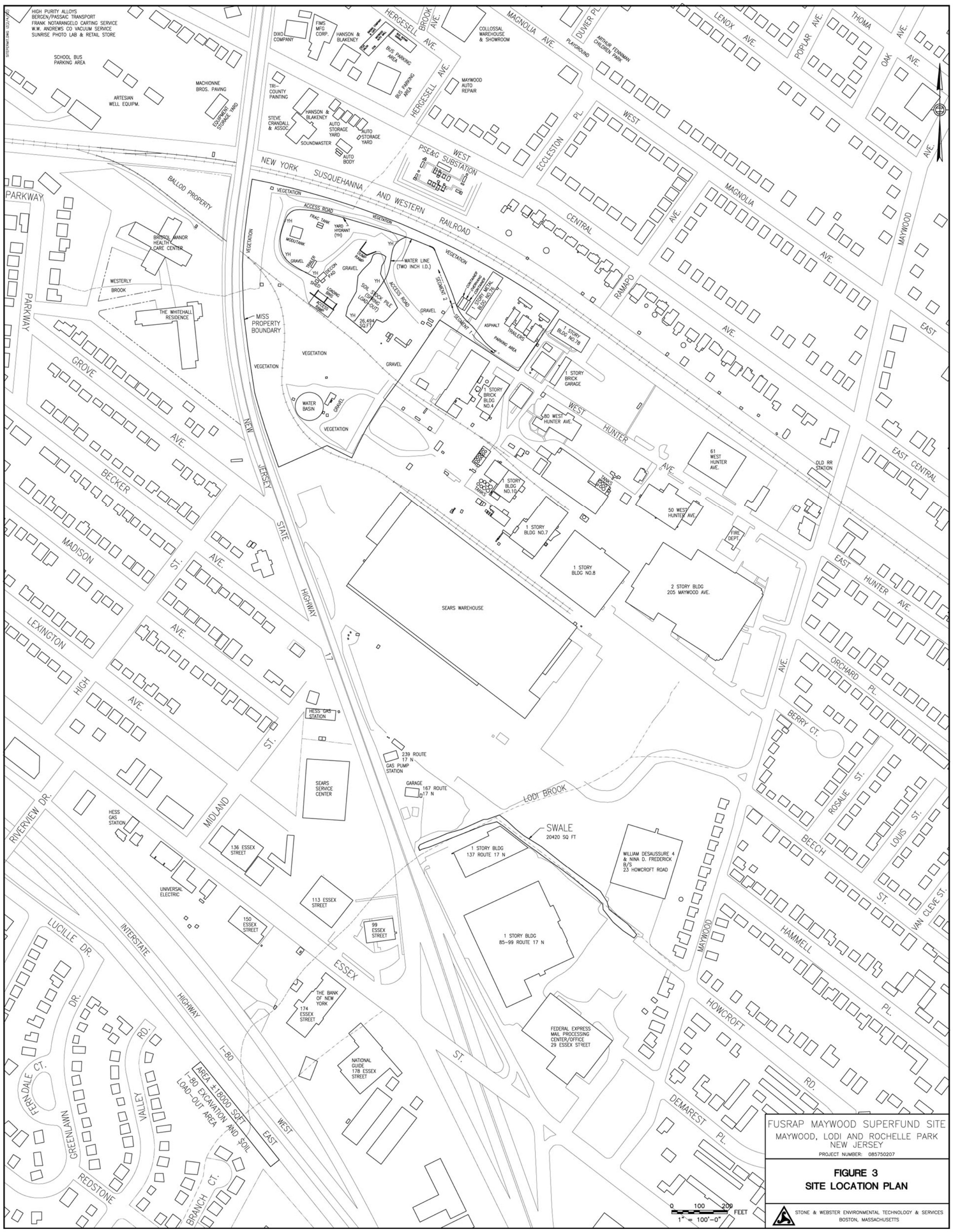


Figure 3
Site Location Plan

April 2001 – Covered soil stockpile before start of soil load-out. Excavator in foreground.

April 2001 – Westward view of MISS. Front-end loader removing soil from stockpile.

Front-end loader placing soil into storage bins. Excavator loading soil from bins into railcars.

Soil in temporary storage bins awaiting placement into railcars by excavator.

Soil being placed into storage bins by front-end loader. Excavator loading soil from bins into railcars.

Excavator loading soil from the two storage bins into railcars containing liners.

Figure 4a
Soil Load-Out, Selected Photographs

Dust control measures during soil load-out. Excavator loading railcar in distance.

Railcars with liners awaiting loading of soil for off-site disposal.

Loading of soil by excavator into railcars containing liners.

Workers in railcars closing liners before shipment.

Workers in railcars securing liners before rail shipment.

Railcar liner closed and secured and ready for shipment to Envirocare's facility in Utah for disposal.

Figure 4b
Soil Load-Out, Selected Photographs (cont)

Making preparations for connecting new water line to the existing hydrant.

Using excavator to dig trench for water line installation.

View looking south from trailer office complex of trench excavation.

Excavation at MISS for water line installation. Worker spraying water for dust control.

Excavation along access road perimeter at MISS for installation of water line and yard hydrants.

View of soil conditions found during trench excavation. Plastic had been previously placed on ground at MISS to prevent wind erosion.

Figure 5
Water Line Installation, Selected Photographs

Interstate 80 – Work area for installation of sound barriers.

Interstate 80 – Erection of sound barriers. Excavated soil temporarily stored in work area.

Excavation for installation of caisons to anchor sound barriers.

Installation of plastic sheets for soil erosion and sediment control measures.

Soil storage pile from excavation for sound barrier installation.

Delivery of roll-off containers for transporting excavated soil to MISS for disposal.

Figure 6a
Interstate 80 Sound Barrier Installation, Selected Photographs

Workers installing liner in roll-off container before loading soil.

Excavator loading soil into container with liner.

Excavator removing soil from storage pile for placement into container.

Workers closing liner before shipping container by truck to MISS for disposal.

Truck arriving at MISS with contaminated soil from excavations for sound barrier installations along Interstate 80.

Unloading soil at MISS. Plastic liner was placed on the ground before unloading soil. Storage piles are covered with plastic to prevent wind erosion.

Figure 6b
Interstate 80 Sound Barrier Installation, Selected Photographs (cont)

Building 76 on MISS – Location of Soil Sample Preparation Laboratory.

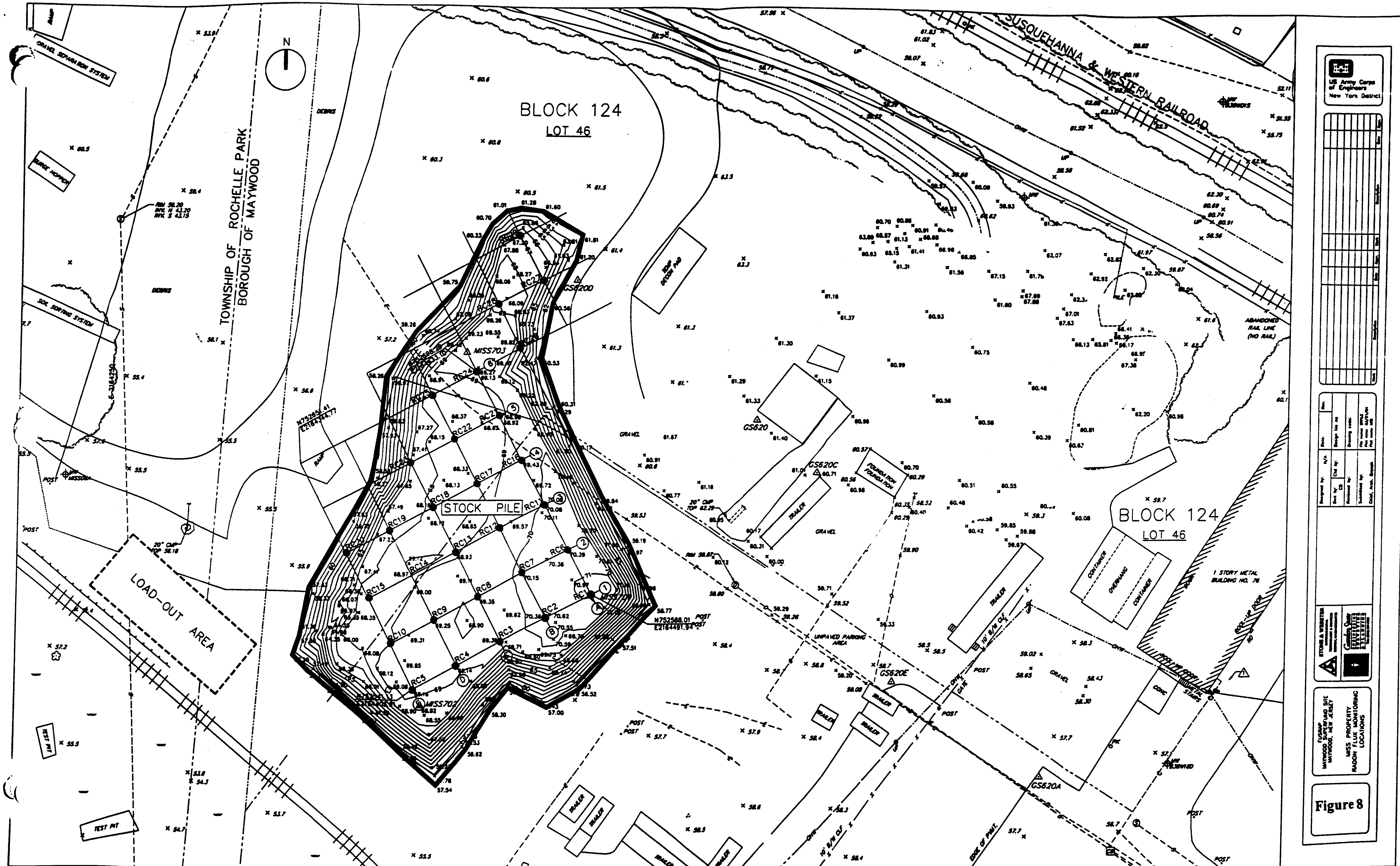
Electric ovens are used to dry the soil samples prior to grinding.

Grinding of soil sample is performed under the fume hood, which exhausts to the HEPA filter.

Exhaust fan and HEPA filter in rear of lab. Air monitor is stored in cat carrier for protection from elements.

Figure 7
Soil Sample Preparation Laboratory, Selected Photographs

Figure 8
Radon Flux Measurment Locations



BLOCK 124
LOT 46
SUSQUEHANNA & WESTERN RAILROAD
TOWNSHIP OF ROCHELLE PARK
BOROUGH OF MAYWOOD
STOCK PILE
LOAD-OUT AREA
GRAVEL SEPARATION SYSTEM
SOIL SORTING SYSTEM
SURGE HOPPER
UNPAVED PARKING AREA
FOUNDATION
TRAILER
CONTAINER
OVERHANG
1 STORY METAL BUILDING NO. 76
ABANDONED RAIL LINE (NO RAIL)
TEST PIT
MISS703
MISS702
GS620
GS620A
GS620C
GS620D
GS620E
US Army Corps of Engineers New York District
STONE & WEBSTER
FUSRAP
MAYWOOD SUPERFUND SITE
MAYWOOD, NEW JERSEY
MISS PROPERTY
RADON FLUX MONITORING LOCATIONS

Figure 8

APPENDIX B
CALCULATIONS

STONE & WEBSTER ENGINEERING CORPORATION

5010.65

CALCULATION TITLE PAGE

CLIENT & PROJECT: U.S. ARMY CORPS OF ENGINEERS/FUSRAP-MISS	PAGE 1 of 113 Total Pages: 122 w/attachments pages 9
CALCULATION TITLE: MISS 2001 Annual NESHAPS Calculation	QA CATEGORY (✓) ☐ I ☐ III ☐ II

CALCULATION IDENTIFICATION NUMBER				OPTIONAL WORK PACKAGE NO.
JOB ORDER NO.	DISCIPLINE	CURRENT CALC NO	OPTIONAL TASK CODE	
08575.0207	E(B)	04		

APPROVALS - SIGNATURE & DATE			REVISION NO. OR NEW CALCULATION NO.	SUPERSEDES CALCULATION NO. OR REVISON NO.	CONFIRMATION REQUIRED (✓)	
PREPARES(S) / DATE(S)	REVIEWER(S) / DATES(S)	INDEPENDENT REVIEWER(S) / DATE(S)	.	.	YES	NO
Stephen A. Vigeant	Joseph McLaughlin		0			

DISTRIBUTION

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CHANGE HISTORY PAGE

REVISION NO.	DESCRIPTION OF CHANGES	PAGES REVISED	PAGES ADDED	PAGES REPLACED
0	N/A	N/A	N/A	N/A

TABLE OF CONTENTS

1. OBJECTIVE

To estimate the annual effective dose from airborne radioactivity releases at the Maywood Interim Storage Site (MISS) generated during calendar year 2001. The activities generating these releases include: in situ wind erosion; water line installation; I-80 soil excavation; and spring and fall soil load-outs.

2. METHODOLOGY

During the year 2001, the potential sources of airborne emissions at MISS and nearby properties were:

- In situ, contaminated areas totaling approximately 59,000 m^2 (635,000 ft^2) of MISS and the adjacent Stepan Company property (within the MISS fence line) were potentially exposed to wind erosion during the year 2001.

- The installation of a two inch diameter water line which originates at the existing hydrant in the parking area for the Stone & Webster / USACE trailer office complex and extends westward into the MISS. The water line is approximately 2,000 feet in length and runs along the existing access road at MISS. The water line was installed to provide general purpose water for operations such as dust control and the decontamination of equipment. This action involved the excavation and transport of approximately 675 tons of contaminated soil divided into two segments (i.e., Segment 1 and Segment 2) based on the radiological content of the soil.

- The excavation of soil along a portion of Interstate 80 to allow for the installation of sound barriers. The excavation was performed by the New Jersey Department of Transportation (NJDOT). The excavated soil was stockpiled and then loaded into trucks for transport to MISS. This action involved the excavation, loading and transport to MISS of approximately 399 tons of contaminated soil.

- The performance of soil load-out, transportation and disposal of the existing stockpile in the Spring of 2001. This action involved the load-out of approximately 13,117 tons of material that was placed into rail cars for transport to a disposal facility in Utah.

- The performance of soil load-out, transportation and disposal of the new soil stockpile at MISS in the Fall of 2001. This stockpile consisted of soil and debris resulting from the excavation of contaminated soil for the installation of sound barriers along a portion of Interstate 80 and the installation of the water line at MISS. This action involved the load-out of approximately 955 tons of material which was placed into rail cars for transport to a disposal facility in Utah.

The calculation is performed using the U.S. Environmental Protection Agency (EPA) Clean Air Act Assessment Package - 1988 (CAP88-PC) model (Ref. 9.1) to estimate air doses to the population and hypothetical maximally exposed individuals. The radioactive particulate release rates from in situ wind erosion, water line installation, I-80 soil excavation, and spring and fall soil load-outs are calculated using EPA's Compilation of Air Pollutant Emission Factors - Volume 1:Stationary Point and Area Sources, also known as AP-42 (Ref. 9.2). The AP-42 expressions used to perform these calculations are provided in the "Equations" section of this calculation. The actual calculations are performed using an Excel spreadsheet, the results of which are provided in Attachment A.

Radionuclide emission rates are based on the particulate release rates and average radionuclide source concentrations based on sample measurements. Source concentrations for isotopes of uranium (U_{238}), radium (Ra_{226}), and thorium (Th_{232}) are based on average values for in situ soil (Ref. 9.7) and average values measured during the water line installation; I-80 soil excavation; and spring and fall soil load-outs. Unknown radionuclide source concentrations are based on the known source concentrations assuming secular equilibrium in the decay chains (Ref. 9.4).

The CAP88-PC computer model is a set of computer programs, databases, and associated utility programs developed by the EPA for estimation of dose and risk from radionuclide emissions to air. CAP88-PC is used for the purpose of demonstrating compliance with Subpart H of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) as codified in 40 CFR 61.93a. CAP88-PC performs dose and risk assessments for both collective populations and maximally-exposed individuals.

This computer code estimates the annual average dispersion of radionuclides released from up to six sources. The sources may be either elevated stacks or uniform area sources. All sources are modeled as if located at the same point. Uniform contamination is assumed for area sources. Plume rise can be calculated assuming either a momentum or buoyancy driven plume. Assessments are done for a circular grid of distances and directions with a radius of 80 kilometers around the facility. The program computes radionuclide concentrations in air, rates of deposition on ground surfaces, concentrations in food, and intake rates to people from ingestion of food produced in the assessment area.

CAP88-PC uses a modified version of the AIRDOS-EPA (Mo79) program to calculate environmental transport. Plume dispersion is based on the Gaussian plume equation of Pasquill as modified by Gifford, using sector-average concentrations. Plume rise is calculated using either Rupp's equation for momentum dominated plume rise or Briggs equation for buoyancy dominated plume rise. Dry deposition is handled using a proportionality constant applied to the ground-level concentration of the radionuclide and wet deposition is based on a scavenging coefficient related to the rainfall rate. Radionuclides are depleted from the plume by precipitation scavenging, dry deposition, and radioactive decay.

CAP88-PC also uses a modified version of DARTAB (ORNL5692) and a database of dose and risk factors generated by RADRISK (ORNL7105 and ORNL7745) for estimating dose and risk. Dose and risk factors are provided for the pathways of: ingestion and inhalation intake; ground level immersion; and ground surface irradiation. For assessments where Rn-222 decay products are not considered, doses are estimated combining the inhalation and ingestion intake rates as well as the air and ground surface concentrations with the appropriate dose conversion factors. CAP88-PC calculates dose to the gonads, breast, lungs, red marrow, thyroid, and endosteum in addition to the 50-year effective dose equivalent. Doses can be tabulated as a function of radionuclide, pathway, location, and organ.

For a given distance, the CAP88-PC model computes the annual effective dose equivalent for all compass directions. Specifically, the model computes the annual dose at a user-defined distance for all 22.5-degree compass point sectors (i.e., N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW). The CAP88-PC model computes an average sector concentration; thus, the annual dose computed for receptors at a given distance within a sector will be the same.

A review of land use surrounding the site and the prevailing wind directions was performed to select the appropriate receptors for inclusion in the modeling analyses. Analyses are performed separately for the water line installation (Segment 1 and Segment 2), I-80 soil excavation, and spring and fall soil load-outs given the differences in receptor locations most affected by each of these areas. Where individual receptors are affected by more than one emission source, doses caused by those sources are added.

Based on this information, residences and commercial properties located to the north, northeast and east of the MISS along West Central Avenue were selected as the receptors of most concern for the water line installation and spring and fall soil load-outs. Receptor locations in other compass directions such as west and west-southwest of the MISS (west of Route 17) were also selected, along with residential receptors west and south of the I-80 soil excavation on the southwest side of I-80 and businesses to the north and east of I-80. These receptor locations were used to establish the downwind distances that were input into the model to capture the maximally exposed individual (see Assumptions sections below for specific receptor locations).

3. ASSUMPTIONS

3.1 The contamination is uniformly distributed over a symmetrical land area with the concentration in respirable particles (PM-10) equaling the bulk contamination concentration in the surface material.

3.2 The erodibility classification of the site is “limited reservoir” characterized by a finite availability of erodible particles impregnated with nonerodible elements.

3.3 Emissions due to wind erosion and mechanical entrainment processes are continuous and steady state.

3.4 The locations of potential maximally exposed individuals (i.e., nearest residents and off-site workers) are based on a central point representative of each of the MISS site area emissions (Ref. 9.10) as follows:

Area	Distance (meters)	Direction
Water Line Installation Segment 1		
Residents:	130	North-northeast
	135	Northeast
	145	East-northeast
	170	East
	255	East-southeast
	300	West
	300	West-southwest
	320	West-northwest
Workers:	25	South
	30	South-southeast
	30	South-southwest
	75	Southeast
	75	Southwest
	75	East-southeast
	85	East
	145	North
	155	North-northwest
	235	Northwest
	300	West
	300	West-southwest
	320	West-northwest
Water Line Installation Segment 2		
Residents:	85	East-northeast
	95	West
	105	West-southwest
	120	East
	130	North-northeast
	130	North
	190	East-southeast

Workers:	60	North
	65	North-northeast
	75	North-northwest
	95	West
	105	West-southwest
	120	South-southeast
	135	Northwest
	135	South
	155	Southeast
	155	East-southeast

<u>I-80 Soil Excavation</u>

Residents:	40	South-southwest
	40	South
	65	Southwest
	70	West-southwest
	75	West
	85	West-northwest
	115	Northwest
Workers:	110	North-northeast
	110	Northeast
	115	East
	120	East-northeast
	150	East-southeast
	190	North
	245	North-northwest

<u>Spring/Fall Soil Load-out</u>

Residents:	135	West
	145	West-southwest
	155	West-northwest
	185	Southwest
	215	East-northeast
	235	South-southwest
	235	North-northeast
	235	Northeast
	270	East
Workers:	135	West
	145	West-southwest
	155	West-northwest
	160	North
	165	Northeast
	165	East-southeast
	165	Southeast
	190	North-northeast
	225	South-southeast
	235	North-northwest
	250	East
	255	South

3.5 The occupancy factor for the residents is 100 percent and 24 percent for workers (i.e., 40-hour work-week x 52 weeks per year = 2080 hours/8760 hours).

3.6 The number of disturbances relative to wind erosion of in situ soil is once per week from April to September and once per month from October to March for a total of 32 disturbances per year. A separate calculation is performed for soils covered by vegetation/gravel and for bare soils.

3.7 Daughters in the decay chain of radionuclides are considered to be in secular equilibrium with their parents until a radionuclide in the chain is encountered with a measured concentration whereupon the measured concentration is used (Ref. 9.4). Although the direct emission of radon gas is not considered in the analysis, the daughters of radon generated by the decay of Ra-226 in dust offsite is accounted for by the model in the computation of the effective dose equivalents for the various internal and external exposure pathways.

4. EQUATIONS

4.1 In Situ Wind Erosion Emissions: (Ref. 9.2, Section 13.2.5, "Industrial Wind Erosion")

The wind speed profile in the surface boundary layer is found to follow a logarithmic distribution:

$$u(z) = \frac{u^*}{0.4} \ln \frac{z}{z_o} \qquad (z > z_o) \tag{1}$$

where:

u = wind speed (cm/s)
u^* = friction velocity (cm/s)
z = height above test surface (cm)
z_o = roughness height (cm)
0.4 = von Karman's constant (dimensionless)

The friction velocity (u^*) is a measure of wind shear stress on the erodible surface, as determined from the slope of the logarithmic velocity profile. The roughness height (z_o) is a measure of the roughness of the exposed surface as determined from the y intercept of the velocity profile (i.e., the height at which the wind speed is zero).

Emissions generated by wind erosion are also dependent on the frequency of disturbance of the erodible surface because each time that a surface is disturbed, its erosion potential is restored. A disturbance is defined as an action that results in the exposure of fresh surface material. On a storage pile, this would occur whenever aggregate material is either added to or removed from the old surface. A disturbance of an exposed area may also result from the turning of surface material to a depth exceeding the size of the largest pieces of material present.

The emission factor for wind-generated particulate emissions from mixtures of erodible and nonerodible surface material subject to disturbance may be expressed in units of grams per square meter (g/m^2) per year as follows:

$$\text{Emission factor} = k \sum_{i=1}^{N} P_i \tag{2}$$

where:

k = particle size multiplier
N = number of disturbances per year
P_i = erosion potential corresponding to the observed (or probable) fastest mile of wind for the ith period between disturbances (g/m^2)

The particle size multiplier (k) for Equation 2 varies with aerodynamic particle size as follows:

Aerodynamic Particle Size Multipliers For Equation 2			
30 µm	<15 µm	<10 µm	<2.5 µm
1.0	0.6	0.5	0.2

This distribution of particle size within the under 30 micrometer (μm) fraction is comparable to the distributions reported for other fugitive dust sources where wind speed is a factor. This is illustrated, for example, in the distributions for batch and continuous drop operations encompassing a number of test aggregate materials (see AP-42 Section 13.2.4).

In calculating emission factors, each area of an erodible surface that is subject to a different frequency of disturbance should be treated separately. For a surface disturbed daily, N = 365 per year and for a surface disturbance once every 6 months, N = 2 per year.

The erosion potential function for a dry, exposed surface is:

$$P = 58\,(u^* - u_t^*)^2 + 25(u^* - u_t^*)$$

$$P = 0 \text{ for } u^* \le u_t^* \qquad (3)$$

where:

u^* = friction velocity (m/s)
u_t = threshold friction velocity (m/s)

Because of the nonlinear form of the erosion potential function, each erosion event must be treated separately. Equations 2 and 3 apply only to dry, exposed materials with limited erosion potential. The resulting calculation is valid only for a time period as long or longer than the period between disturbances.

Threshold friction velocities for several surface types have been determined by field measurements with a portable wind tunnel. These values are presented below:

THRESHOLD FRICTION VELOCITIES

Material	Threshold Friction Velocity (m/s)	Roughness Height (cm)	Threshold Wind Velocity At 10 m (m/s)	
			z_o = Act	z_o = 0.5 cm
Overburden[a]	1.02	0.3	21	19
Scoria (roadbed material)[a]	1.33	0.3	27	25
Ground coal (surrounding coal pile)[a]	0.55	0.01	16	10
Uncrusted coal pile[a]	1.12	0.3	23	21
Scraper tracks on coal pile[a,b]	0.62	0.06	15	12
Fine coal dust on concrete pad[c]	0.54	0.2	11	10

[a] Western surface coal mine.
[b] Lightly crusted.
[c] Eastern power plant.

The fastest mile of wind for the periods between disturbances may be obtained from the monthly LCD summaries for the nearest reporting weather station that is representative of the site in question. These summaries report actual fastest mile values for each day of a given month. Because the erosion potential is a highly nonlinear function of the fastest mile, mean values of the fastest mile are inappropriate. The anemometer heights of reporting weather should be corrected to a 10-m reference height using Equation 1.

To convert the fastest mile of wind (u^+) from a reference anemometer height of 10 m to the equivalent friction velocity (u^*), the logarithmic wind speed profile may be used to yield the following equation:

$$u^* = 0.053\ u^+_{10} \qquad (4)$$

where:

u^* = friction velocity (m/s)
u^+_{10} = fastest mile of reference anemometer for period between disturbances (m/s)

This assumes a typical roughness height of 0.5 cm for open terrain. Equation 4 is restricted to large relatively flat piles or exposed areas with little penetration into the surface wind layer.

Implementation of the above procedure is carried out in the following steps:

1. Determine threshold friction velocity for erodible material of interest (see above table or determine from mode of aggregate size distribution).

2. Divide the exposed surface area into subareas of constant frequency of disturbance (N).

3. Tabulate fastest mile values (u^+) for each frequency of disturbance and correct them to 10 m (u^+) using Equation 1

4. Convert fastest mile values (u_{10}) to equivalent friction velocities (u^*), taking into account (a) the uniform wind exposure of nonelevated surfaces, using Equation 4.

5. Multiply the resulting emission factor for each subarea by the size of the subarea, and add the emission contributions of all subareas. Note that the highest 24-hour (hr) emissions would be expected to occur on the windiest day of the year. Maximum emissions are calculated assuming a single event with the highest fastest mile value for the annual period.

4.2 Drop Operations Emissions: (Ref. 9.2, Section 13.2.4, "Aggregate Handling and Storage Piles")

$$E = k\ (0.0032)[U/5]^{1.3} / [M/2]^{1.4} \qquad (5)$$

where:

E = emission factor (lb/ton)
k = particle size multiplier (dimensionless)
U = mean wind speed, meters per second (mph)
M = material moisture content (%)

The particle size multiplier in the equation, k, varies with aerodynamic particle size range, as follows:

Aerodynamic Particle Size Multiplier (k) For Equation 5				
< 30 µm	< 15 µm	< 10 µm	< 5 µm	< 2.5 µm
0.74	0.48	0.35	0.20	0.11

4.3 Radionuclide Emission Rates

The radionuclide source concentrations (S) for isotopes of uranium (U_{238}), radium (Ra_{226}), and thorium (Th_{232}) are based on average values for in situ soil (Ref. 9.7) and average values measured during soil transfers and excavations. These values are as follows:

Emission Source	S_{U238} (pCi/g)	S_{Ra226} (pCi/g))	S_{Th232} (pCi/g)
• In situ soil	27.5	4.30	24.80
• Water Line Installation			
- Segment 1	155.8	50.1	611.9
- Segment 2	12.5	9.7	17.8
• I-80 Soil Excavation	3.03	1.29	7.3
• Spring Soil Load-out	6.2	2.0	15.7
• Fall Soil Load-out	4.4	6.9	29.2

Ratios of uranium isotopes are calculated from the percentage of activity of U_{238}, U_{234}, and U_{235} in natural uranium as these components make up total uranium. The percentage (P) of each isotope comprising total uranium activity (Ref. 9.8) is:

Emission Source	P_{U238}	P_{U234}	P_{U235}
All sources (%)	47.249	50.539	2.212

The source concentrations (S) of total uranium, U_{234}, and U_{235} are then given by:

$S_{Utot} = (S_{U238}/ P_{U238}) = (27.5/0.47249) = \underline{58.2\ pCi/g}$ (In situ soil)
$S_{U234} = (S_{Utot} \times P_{U234}) = (58.2\ pCi/g) \times 0.50539 = \underline{29.4\ pCi/g}$ (In situ soil)
$S_{U235} = (S_{Utot} \times P_{U235}) = (58.2\ pCi/g) \times 0.02212 = \underline{1.29\ pCi/g}$ (In situ soil)

The annual radionuclide emissions (R) are then the individual radionuclide source concentrations (S) multiplied by the annual particulate emissions rate (E) for the In situ soil, water line installation, I-80 soil excavation, and spring and fall soil load-outs (R = S x E). Unknown radionuclide source emission rates are based on the known source emission rates assuming secular equilibrium in the decay chains (Ref. 9.4) as follows:

$R_{Th234} = R_{U238}$ $R_{Pa234m} = R_{U238}$ $R_{Pa234} = 0.0013R_{Pa234m}$ $R_{Th230} = R_{U234}$

$R_{Po218} = R_{Ra226}$ $R_{Pb214} = 0.9998R_{Po218}$ $R_{Bi214} = R_{Po218}$ $R_{Po214} = 0.99979R_{Bi214}$

$R_{Pb210} = R_{Bi214}$ $R_{Bi210} = R_{Pb210}$ $R_{Po210} = 0.9999987R_{Bi210}$ $R_{Th231} = R_{U235}$

$R_{Pa231} = R_{Th231}$ $R_{Ac227} = R_{Pa231}$ $R_{Th227} = 0.9862R_{Ac227}$ $R_{Fr223} = 0.0138R_{Ac227}$

$R_{Ra223} = R_{Ac227}$ $R_{Po215} = R_{Ra223}$ $R_{Pb211} = 0.9999977R_{Po215}$ $R_{Bi211} = R_{Po215}$

$R_{Po211} = 0.00273R_{Bi211}$ $R_{Tl207} = R_{Bi211}$ $R_{Ra228} = R_{Th232}$ $R_{Ac228} = R_{Ra228}$

$R_{Th228} = R_{Ac228}$ $R_{Ra224} = R_{Th228}$ $R_{Po216} = R_{Ra224}$ $R_{Pb212} = R_{Po216}$

$R_{Bi212} = R_{Pb212}$ $R_{Po212} = 0.6407R_{Bi212}$ $R_{Tl208} = 0.3593R_{Bi212}$

Secular equilibrium is a condition in which the parent species in a radioactive series has a much longer half-life than its succeeding species, such that there is no significant change in its concentration during the time interval over which the shorter-lived species attain their equilibria, whereupon all species appear to decay at the same rate.

Although the direct emission of radon gas is not considered in this analysis, the daughters of radon generated by the decay of Ra-226 in dust offsite is accounted for by the model in the computation of the effective dose equivalents for the various internal and external exposure pathways.

5. INPUT DATA

5.1 In Situ Soil Wind Erosion Emissions:

- k =0.50 (PM-10) - (Ref. 9.2, Section 13.2.5)
- No. of Disturbances = 32 per year (See Assumption 3.6)
- Surface Area of MISS vegetative soil = 22,762 m^2 (Ref. 9.10)
- Surface Area of MISS bare soil = 5,017 m^2 (Ref. 9.10)
- Surface Area of gravel/crushed stone = 22,111 m^2 (Ref. 9.10)
- u^* = 1.02 m/sec - (Ref. 9.2, Section 13.2.5 – value for “overburden” from page 9)
- Anemometer Height = 6.1 m (Ref. 9.3)

Month	Week	Fastest Mile Wind Speed (mph)
Jan.	1-4	25
Feb.	1-4	31
Mar.	1-4	32
Apr.	1	18
	2	22
	3	23
	4	28
May	1	31
	2	22
	3	24
	4	24
Jun.	1	23
	2	28
	3	28
	4	22
Jul.	1	26
	2	30
	3	17
	4	21
	5	20
Aug.	1	21
	2	24
	3	23
	4	26
	5	24
Sept.	1	28
	2	21
	3	26
	4	25
Oct.	1-4	29
Nov.	1-4	29
Dec.	1-4	28

5.2 Drop Operations Emissions:

- k=0.35 (PM-10) - (Ref. 9.2, Section 13.2.4)
- U = 7.0 mph - (Ref. 9.3)
- M =12.0 % - (Ref. 9.2, Section 13.2.4)

	Soil Moved (tons)	No. Times Dropped	Soil Handled (tons)	Surface Area (m^2)
• Water Line Installation				
- Segment 1	83.3	3	249.9	46.5
- Segment 2	591.7	3	1,775	325.2
• I-80 Soil Excavation				
- Loading to MISS	399	3	1,197	1,672
- Unloading at MISS	399	2	798.0	92.9
• Spring Soil Load-out	13,117	3	39,351	2,461
• Fall Soil Load-out	955	3	2,865	179.2

The soil-handled amounts account for the total tonnage of soil that is moved and the number of times that it is dropped. For example, the total amount of soil moved during the spring soil load-out was 13,117 tons but it was handled or dropped 3 times for a total amount handled of 3 x 13,117 tons or 39,351 tons.

5.3 CAP88-PC Input Data

- Meteorological Data (1989-1999 Teterboro, NJ data, Ref. 3.9):

  - Annual average temperature = 54.7 ^oF (12.6 ^oC) – Ref. 3.3
  - Annual precipitation = 33.3 inches (84.6 cm) – Ref. 3.3

ARITHMETIC AVERAGE WIND SPEEDS (WIND TOWARDS)

Pasquill Stability Class

Dir	A	B	C	D	E	F	G
N	2.572	3.108	4.093	4.718	3.300	2.295	0.000
NNW	2.572	3.188	4.226	4.923	3.134	2.235	0.000
NW	2.572	3.117	3.970	4.515	2.980	2.224	0.000
WNW	2.058	3.353	3.918	3.929	2.883	2.145	0.000
W	2.503	3.084	4.002	4.245	2.916	2.116	0.000
WSW	2.508	3.186	4.004	4.383	3.045	2.135	0.000
SW	2.572	3.061	3.786	4.346	3.141	2.270	0.000
SSW	2.572	2.925	3.915	4.789	3.387	2.309	0.000
S	2.460	3.095	3.933	4.955	3.585	2.265	0.000
SSE	2.572	3.241	4.362	5.782	3.989	2.333	0.000
SE	2.572	3.347	4.585	6.192	4.068	2.408	0.000
ESE	2.572	3.481	4.509	6.238	4.044	2.403	0.000
E	2.572	3.359	4.464	5.809	3.858	2.363	0.000
ENE	2.572	3.412	4.413	5.407	3.763	2.401	0.000
NE	2.337	3.236	4.159	4.694	3.384	2.293	0.000
NNE	2.494	3.357	4.068	4.362	3.415	2.265	0.000

FREQUENCIES OF STABILITY CLASSES (WIND TOWARDS)

	Pasquill Stability Class						
Dir	A	B	C	D	E	F	G
N	0.0030	0.0319	0.1169	0.5521	0.1757	0.1205	0.0000
NNW	0.0030	0.0424	0.1054	0.6320	0.1212	0.0960	0.0000
NW	0.0066	0.0512	0.1076	0.6499	0.0996	0.0851	0.0000
WNW	0.0079	0.0634	0.1156	0.6526	0.0943	0.0662	0.0000
W	0.0075	0.0531	0.0937	0.7203	0.0624	0.0630	0.0000
WSW	0.0069	0.0438	0.0734	0.7476	0.0578	0.0705	0.0000
SW	0.0008	0.0461	0.0977	0.6544	0.0923	0.1088	0.0000
SSW	0.0014	0.0337	0.1052	0.6373	0.1114	0.1108	0.0000
S	0.0015	0.0339	0.1039	0.5371	0.1580	0.1657	0.0000
SSE	0.0016	0.0272	0.1025	0.5851	0.1759	0.1077	0.0000
SE	0.0025	0.0267	0.0997	0.6255	0.1680	0.0777	0.0000
ESE	0.0025	0.0330	0.1023	0.6281	0.1589	0.0752	0.0000
E	0.0026	0.0367	0.1156	0.5691	0.1690	0.1070	0.0000
ENE	0.0030	0.0427	0.1109	0.5468	0.1922	0.1044	0.0000
NE	0.0028	0.0343	0.1175	0.4804	0.2024	0.1626	0.0000
NNE	0.0032	0.0334	0.1027	0.4707	0.2223	0.1678	0.0000
TOT	0.0029	0.0361	0.1053	0.5857	0.1555	0.1144	0.0000

- Radionuclide Emission Rates:

  - See Attachment A (Excel spreadsheet)

- Population Data based on 2000 Census (Ref. 9.11):

  - 1990 population distribution adjusted for the 8.4 percent increase from 1990 to 2000 for the New York-Northern New Jersey-Long Island, NY-NJ-CT-PA Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (see page 30)

- Individual Receptors:

Area	**Distance** (meters)	**Direction**
Water Line Installation Segment 1		
Residents:	130	North-northeast
	135	Northeast
	145	East-northeast
	170	East
	255	East-southeast
	300	West
	300	West-southwest
	320	West-northwest
Workers:	25	South
	30	South-southeast
	30	South-southwest
	75	Southeast
	75	Southwest
	75	East-southeast
	85	East
	145	North
	155	North-northwest
	235	Northwest
	300	West
	300	West-southwest
	320	West-northwest

Water Line Installation
Segment 2

Residents:	85	East-northeast
	95	West
	105	West-southwest
	120	East
	130	North-northeast
	130	North
	190	East-southeast
Workers:	60	North
	65	North-northeast
	75	North-northwest
	95	West
	105	West-southwest
	120	South-southeast
	135	Northwest
	135	South
	155	Southeast
	155	East-southeast

I-80 Soil Excavation

Residents:	40	South-southwest
	40	South
	65	Southwest
	70	West-southwest
	75	West
	85	West-northwest
	115	Northwest
Workers:	110	North-northeast
	110	Northeast
	115	East
	120	East-northeast
	150	East-southeast
	190	North
	245	North-northwest

Spring/Fall Soil Load-out

Residents:	135	West
	145	West-southwest
	155	West-northwest
	185	Southwest
	215	East-northeast
	235	South-southwest
	235	North-northeast
	235	Northeast
	270	East
Workers:	135	West
	145	West-southwest
	155	West-northwest
	160	North
	165	Northeast
	165	East-southeast
	165	Southeast
	190	North-northeast
	225	South-southeast
	235	North-northwest
	250	East
	255	South

6. CALCULATION

The actual radionuclide emission rate calculations are performed using an Excel spreadsheet, a printout of which is provided in Attachment A. The dose calculations are performed by the CAP88-PC model, the output of which is provided on pages 23-113.

7. RESULTS

The CAP88-PC output for the annual doses to the maximally exposed individuals and population within 80 km of MISS is provided on pages 23-113 as follows:

Release Area	**Page Numbers**
Water Line Installation (Segment 1)	23 - 38
Water Line Installation (Segment 2)	39 - 53
I-80 Soil Excavation	54 - 68
Spring Soil Load-out at MISS	69 - 83
Fall Soil Load-out at MISS	84 - 98
I-80 Soil Unloading at MISS	99 - 113

The maximum annual effective doses are summarized below:

Receptor	Location	Annual Dose (mrem/yr)	Occupancy Factor (%)	Annual Effective Dose (mrem/yr)
Water Line Installation (Segment 1)				
• Population (person-rem/yr)	N/A	4.46E-04	N/A	4.46E-04
• Maximally Exposed Resident	135 m NE	1.90E-04	100	1.90E-04
• Maximally Exposed Worker	25 m S	5.20E-03	24	1.25E-03
Water Line Installation (Segment 2)				
• Population (person-rem/yr)	N/A	1.25E-04	N/A	1.25E-04
• Maximally Exposed Resident	85 m ENE	6.60E-05	100	6.60E-05
• Maximally Exposed Worker	60 m N	2.20E-04	24	5.28E-05
I-80 Soil Excavation				
• Population (person-rem/yr)	N/A	2.87E-05	N/A	2.87E-05
• Maximally Exposed Resident	40 m S	1.10E-04	100	1.10E-04
• Maximally Exposed Worker	110 m NE	1.70E-05	24	4.08E-06
Spring Soil Load-out				
• Population (person-rem/yr)	N/A	2.00E-03	N/A	2.00E-03
• Maximally Exposed Resident	235 m NE	2.80E-04	100	2.80E-04
• Maximally Exposed Worker	160 m N	5.50E-04	24	1.32E-04
Fall Soil Load-out				
• Population (person-rem/yr)	N/A	2.27E-04	N/A	2.27E-04
• Maximally Exposed Resident	235 m NE	3.20E-05	100	3.20E-05
• Maximally Exposed Worker	160 m N	6.30E-05	24	1.51E-05
I-80 Soil Unloading at MISS				
• Population (person-rem/yr)	N/A	1.91E-05	N/A	1.91E-05
• Maximally Exposed Resident	235 m NE	2.70E-06	100	2.70E-06
• Maximally Exposed Worker	160 m N	5.30E-06	24	1.27E-06
Total Site				
• Population (person-rem/yr)	N/A	2.85E-03	N/A	2.85E-03
• Maximally Exposed Resident	235 m NE	5.71E-04	100	5.71E-04
• Maximally Exposed Worker	25 m S	5.65E-03	24	1.36E-03

The maximum annual effective doses are almost entirely the result of the internal doses from the inhalation of dust particles and the ingestion of plant borne dust. The air immersion in the dust plume and ground surface irradiation from dust deposition pathways contribute a negligible amount to the total dose. The dominant pathway is inhalation as shown in the following example for the maximally exposed individual annual effective dose for the Spring Soil Load-out from page 73:

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	1.13E-05
INHALATION	1.00E-03
AIR IMMERSION	1.97E-09
GROUND SURFACE	1.22E-07
INTERNAL	1.02E-03
EXTERNAL	1.24E-07
TOTAL	1.02E-03

8. CONCLUSIONS

The annual effective dose to the public within 80 km of MISS from airborne particulate releases during 2001 was **2.85E-03 person-rem/yr**. The annual effective dose to the maximally exposed resident (located northeast of MISS on West Central Avenue) was **5.71E-04 mrem/yr** while the annual effective dose to the maximally exposed worker (located south of MISS) was **1.36E-03 mrem/yr** during 2001. These annual effective doses are due primarily to inhalation of airborne particulate releases.

These doses are well below the NESHAPS standard of 10 mrem/yr (40 CFR 61.92).

9. REFERENCES

9.1 Parks, Barry, "CAP88-PC Version 2.0 User's Guide". U.S. Department of Energy, ER-8/GTN, Germantown, Maryland, June, 1997. Stone & Webster Library Reference No. EN-293, V00, L00.

9.2 U. S. Environmental Protection Agency, "Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources", 5th Edition, AP-42, January 1, 1995 (Sections 13.2.4 and 13.2.5).

9.3 National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Service, National Climatic Data Center. Unedited Local Climatological Data for January - December, 2001 Teterboro, NJ.

9.4 Shlein, "The Health Physics and Radiological Health Handbook", Revised Edition, Scinta, Inc. Silver Springs, MD, 1992.

9.5 U.S. Environmental Protection Agency, "Rapid Assessment of Exposure to Particulate Emissions from Surface Contaminated Sites". EPA Report No. EPA-600/8-85/002, Office of Health and Environmental Assessment, Washington, D.C., February, 1985.

9.6 U.S. Environmental Protection Agency, "Estimation of Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites". EPA Report No. EPA-451/R-93/004, Office of Air Quality Planning and Standards, Research Triangle Park, NC, April, 1993.

9.7 Bechtel National, Inc. (BNI), "Characterization Report for the Maywood Interim Storage Site, Maywood, New Jersey". DOE/OR/20722-139, Oak Ridge, TN, June, 1987.

9.8 Bechtel National, Inc. (BNI), "Natural Uranium Specific Activity", 14501-191-CV-005, Rev. 2, Oak Ridge, TN, 1995.

9.9 1989-1999 Stability Array (STAR) data for Teterboro, NJ supplied by the National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC.

9.10 Figure 3 - Site Location Plan, FUSRAP Maywood Superfund Site - Maywood, Lodi and Rochelle Park. Prepared by Stone & Webster Environmental Technology & Services, 2/4/02.

9.11 U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File and 1990 Census. Census 2000 PHC-T-3, Ranking Table for Metropolitan Areas: 1990 and 2000, Table 1: Metropolitan Areas and their Geographic Components in Alphabetical Sort, 1990 and 2000 Population and Numeric and Percent Population Change: 1990 to 2000.

10. CAP88-PC OUTPUT

```
                         C A P 8 8 - P C

                          Version 2.00


             Clean Air Act Assessment Package - 1988


                     S Y N O P S I S   R E P O R T

                   Non-Radon Individual Assessment
                        Feb  22, 2002  03:59 pm


         Facility:  Maywood Interim Storage Site - Water Line Seg. 1
          Address:  100 W. Hunter Avenue
             City:  Maywood
            State:  NJ          Zip:  07607-


         Source Category:  Particulate Emission w radon daughters
             Source Type:  Area
           Emission Year:  2001


         Comments:  Stone & Webster, Inc. for
                    U.S. Army Corps of Engineers


                     Effective Dose Equivalent
                            (mrem/year)
                     _________________________

                              5.21E-03
                     _________________________


        At This Location:     25 Meters South

           Dataset Name:  MISS Water Seg 1
           Dataset Date:  Feb  22, 2002  08:41 am
              Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	24 OF113

Feb 22, 2002 03:59 pm

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 25 Meters South
Lifetime Fatal Cancer Risk: 5.98E-08

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	2.73E-05
BREAST	2.41E-05
R MAR	2.42E-03
LUNGS	3.32E-02
THYROID	2.34E-05
ENDOST	3.01E-02
RMNDR	9.15E-05
EFFEC	5.21E-03

Feb 22, 2002 03:59 pm

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	1.2E-10	1.2E-10
AC-228	Y	1.00	9.8E-09	9.8E-09
BI-211	W	1.00	1.2E-10	1.2E-10
BI-212	W	1.00	9.8E-09	9.8E-09
FR-223	D	1.00	1.6E-12	1.6E-12
PA-234M	Y	1.00	2.5E-09	2.5E-09
PA-231	Y	1.00	1.2E-10	1.2E-10
PB-211	D	1.00	1.2E-10	1.2E-10
PO-211	-	0.00	3.2E-13	3.2E-13
PO-216	W	1.00	9.8E-09	9.8E-09
PB-212	D	1.00	9.8E-09	9.8E-09
PO-212	W	1.00	6.3E-09	6.3E-09
PO-215	W	1.00	1.2E-10	1.2E-10
RA-223	W	1.00	1.2E-10	1.2E-10
RA-224	W	1.00	9.8E-09	9.8E-09
TH-232	Y	1.00	9.8E-09	9.8E-09
TH-228	Y	1.00	9.8E-09	9.8E-09
TH-231	Y	1.00	1.2E-10	1.2E-10
TH-227	Y	1.00	1.2E-10	1.2E-10
TL-208	D	1.00	3.5E-09	3.5E-09
U-235	Y	1.00	1.2E-10	1.2E-10
TL-207	D	1.00	1.2E-10	1.2E-10
U-238	Y	1.00	2.5E-09	2.5E-09
TH-234	Y	1.00	2.5E-09	2.5E-09
PA-234	Y	1.00	3.2E-12	3.2E-12
U-234	Y	1.00	2.7E-09	2.7E-09
TH-230	Y	1.00	2.7E-09	2.7E-09
RA-226	W	1.00	8.0E-10	8.0E-10
PO-218	W	1.00	8.0E-10	8.0E-10
PB-214	D	1.00	8.0E-10	8.0E-10
BI-214	W	1.00	8.0E-10	8.0E-10
PO-214	W	1.00	8.0E-10	8.0E-10
PB-210	D	1.00	8.0E-10	8.0E-10
BI-210	W	1.00	8.0E-10	8.0E-10
PO-210	W	1.00	8.0E-10	8.0E-10
RA-228	W	1.00	9.8E-09	9.8E-09

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 47.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

25 30 75 85 130 135 145 155 170 235
255 300 320

Feb 22, 2002 03:59 pm

SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	2.73E-05
BREAST	2.41E-05
R MAR	2.42E-03
LUNGS	3.32E-02
THYROID	2.34E-05
ENDOST	3.01E-02
RMNDR	9.15E-05
EFFEC	5.21E-03

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	2.25E-05
INHALATION	5.19E-03
AIR IMMERSION	1.18E-08
GROUND SURFACE	4.74E-07
INTERNAL	5.21E-03
EXTERNAL	4.85E-07
TOTAL	5.21E-03

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	5.16E-05
AC-228	5.87E-07
BI-211	8.58E-11
BI-212	2.31E-07
FR-223	3.05E-12
PA-234M	1.72E-11
PA-231	3.92E-05
PB-211	7.74E-10
PO-211	6.54E-19
PO-216	4.39E-21
PB-212	1.14E-06
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	6.82E-07
RA-224	2.37E-05
TH-232	2.43E-03
TH-228	1.70E-03
TH-231	8.12E-11
TH-227	9.29E-07
TL-208	5.70E-09
U-235	1.01E-05
TL-207	7.65E-13
U-238	2.02E-04
TH-234	7.42E-08
PA-234	6.92E-12
U-234	2.43E-04
TH-230	4.60E-04
RA-226	5.80E-06
PO-218	2.84E-11
PB-214	6.11E-10
BI-214	7.86E-10
PO-214	0.00E+00
PB-210	1.13E-05
BI-210	1.08E-07
PO-210	5.81E-06
RA-228	2.19E-05
TOTAL	5.21E-03

Feb 22, 2002 03:59 pm

SUMMARY
Page 5

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	25	30	75	85	130	135	145
N	3.9E-03	2.8E-03	5.1E-04	4.1E-04	1.9E-04	1.8E-04	1.6E-04
NNW	1.4E-03	1.0E-03	2.0E-04	1.6E-04	7.8E-05	7.3E-05	6.6E-05
NW	8.2E-04	5.9E-04	1.2E-04	9.6E-05	4.9E-05	4.7E-05	4.2E-05
WNW	6.8E-04	4.9E-04	1.0E-04	8.1E-05	4.3E-05	4.1E-05	3.7E-05
W	1.2E-03	9.0E-04	1.7E-04	1.4E-04	7.0E-05	6.6E-05	5.9E-05
WSW	1.5E-03	1.1E-03	2.1E-04	1.7E-04	8.1E-05	7.7E-05	6.8E-05
SW	2.1E-03	1.5E-03	2.9E-04	2.3E-04	1.1E-04	1.0E-04	9.1E-05
SSW	2.7E-03	2.0E-03	3.7E-04	3.0E-04	1.4E-04	1.3E-04	1.2E-04
S	5.2E-03	3.8E-03	6.9E-04	5.5E-04	2.5E-04	2.4E-04	2.1E-04
SSE	3.0E-03	2.2E-03	4.0E-04	3.2E-04	1.5E-04	1.4E-04	1.3E-04
SE	2.6E-03	1.9E-03	3.6E-04	2.9E-04	1.3E-04	1.3E-04	1.1E-04
ESE	2.0E-03	1.4E-03	2.7E-04	2.2E-04	1.0E-04	9.8E-05	8.7E-05
E	2.7E-03	1.9E-03	3.6E-04	2.9E-04	1.4E-04	1.3E-04	1.1E-04
ENE	2.2E-03	1.6E-03	2.9E-04	2.3E-04	1.1E-04	1.0E-04	9.3E-05
NE	4.1E-03	2.9E-03	5.4E-04	4.3E-04	2.0E-04	1.9E-04	1.6E-04
NNE	3.7E-03	2.7E-03	5.0E-04	4.0E-04	1.8E-04	1.7E-04	1.5E-04

	Distance (m)					
Direction	155	170	235	255	300	320
N	1.4E-04	1.2E-04	7.0E-05	6.2E-05	4.8E-05	4.4E-05
NNW	5.9E-05	5.2E-05	3.3E-05	3.0E-05	2.5E-05	2.4E-05
NW	3.9E-05	3.4E-05	2.4E-05	2.2E-05	1.9E-05	1.8E-05
WNW	3.4E-05	3.1E-05	2.2E-05	2.0E-05	1.8E-05	1.7E-05
W	5.4E-05	4.7E-05	3.1E-05	2.8E-05	2.4E-05	2.2E-05
WSW	6.2E-05	5.4E-05	3.5E-05	3.1E-05	2.6E-05	2.4E-05
SW	8.2E-05	7.0E-05	4.4E-05	3.9E-05	3.2E-05	2.9E-05
SSW	1.0E-04	8.9E-05	5.3E-05	4.7E-05	3.8E-05	3.5E-05
S	1.8E-04	1.6E-04	9.0E-05	7.9E-05	6.1E-05	5.5E-05
SSE	1.1E-04	9.6E-05	5.7E-05	5.1E-05	4.0E-05	3.7E-05
SE	1.0E-04	8.6E-05	5.2E-05	4.6E-05	3.7E-05	3.4E-05
ESE	7.8E-05	6.7E-05	4.2E-05	3.8E-05	3.1E-05	2.9E-05
E	1.0E-04	8.6E-05	5.2E-05	4.6E-05	3.7E-05	3.4E-05
ENE	8.3E-05	7.2E-05	4.4E-05	4.0E-05	3.2E-05	3.0E-05
NE	1.5E-04	1.2E-04	7.3E-05	6.4E-05	5.0E-05	4.5E-05
NNE	1.3E-04	1.2E-04	6.8E-05	6.0E-05	4.7E-05	4.3E-05

```
                        C A P 8 8 - P C

                         Version 2.00


              Clean Air Act Assessment Package - 1988



                    S Y N O P S I S   R E P O R T

                  Non-Radon Population Assessment
                       Feb  22, 2002  04:02 pm



         Facility:  Maywood Interim Storage Site - Water Line Seg. 1
          Address:  100 W. Hunter Avenue
             City:  Maywood
            State:  NJ          Zip:  07607-


  Source Category:  Particulate Emission w radon daughters
      Source Type:  Area
    Emission Year:  2001


         Comments:  Stone & Webster, Inc. for
                    U.S. Army Corps of Engineers


                   Effective Dose Equivalent
                          (mrem/year)
                   _________________________

                           6.95E-05
                   _________________________


 At This Location:    250 Meters South

     Dataset Name:  MISS WL1 POP
     Dataset Date:  Feb  22, 2002  03:38 pm
        Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
  Population File:  C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP
```

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 7.99E-10

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	3.19E-07	2.18E-06
BREAST	2.77E-07	1.93E-06
R MAR	3.21E-05	2.07E-04
LUNGS	4.44E-04	2.85E-03
THYROID	2.67E-07	1.84E-06
ENDOST	3.99E-04	2.57E-03
RMNDR	9.84E-07	6.89E-06
EFFEC	6.95E-05	4.46E-04

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	7.24E-08	7.24E-08

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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	1.2E-10	1.2E-10
AC-228	Y	1.00	9.8E-09	9.8E-09
BI-211	W	1.00	1.2E-10	1.2E-10
BI-212	W	1.00	9.8E-09	9.8E-09
FR-223	D	1.00	1.6E-12	1.6E-12
PA-234M	Y	1.00	2.5E-09	2.5E-09
PA-231	Y	1.00	1.2E-10	1.2E-10
PB-211	D	1.00	1.2E-10	1.2E-10
PO-211	-	0.00	3.2E-13	3.2E-13
PO-216	W	1.00	9.8E-09	9.8E-09
PB-212	D	1.00	9.8E-09	9.8E-09
PO-212	W	1.00	6.3E-09	6.3E-09
PO-215	W	1.00	1.2E-10	1.2E-10
RA-223	W	1.00	1.2E-10	1.2E-10
RA-224	W	1.00	9.8E-09	9.8E-09
TH-232	Y	1.00	9.8E-09	9.8E-09
TH-228	Y	1.00	9.8E-09	9.8E-09
TH-231	Y	1.00	1.2E-10	1.2E-10
TH-227	Y	1.00	1.2E-10	1.2E-10
TL-208	D	1.00	3.5E-09	3.5E-09
U-235	Y	1.00	1.2E-10	1.2E-10
TL-207	D	1.00	1.2E-10	1.2E-10
U-238	Y	1.00	2.5E-09	2.5E-09
TH-234	Y	1.00	2.5E-09	2.5E-09
PA-234	Y	1.00	3.2E-12	3.2E-12
U-234	Y	1.00	2.7E-09	2.7E-09
TH-230	Y	1.00	2.7E-09	2.7E-09
RA-226	W	1.00	8.0E-10	8.0E-10
PO-218	W	1.00	8.0E-10	8.0E-10
PB-214	D	1.00	8.0E-10	8.0E-10
BI-214	W	1.00	8.0E-10	8.0E-10
PO-214	W	1.00	8.0E-10	8.0E-10
PB-210	D	1.00	8.0E-10	8.0E-10
BI-210	W	1.00	8.0E-10	8.0E-10
PO-210	W	1.00	8.0E-10	8.0E-10
RA-228	W	1.00	9.8E-09	9.8E-09

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 47.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

POPULATION DATA

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	73	218	869	1449	2029	2609	21742
NNW	73	218	869	1449	2029	2609	21742
NW	73	218	869	1449	2029	2609	21742
WNW	73	218	869	1449	2029	2609	19528
W	73	218	869	1449	2029	2609	17315
WSW	73	218	869	1449	2029	2609	17315
SW	73	218	869	1449	2029	2609	17591
SSW	73	218	869	1449	2029	2609	21742
S	73	218	869	1449	2029	2609	21742
SSE	73	218	869	1449	2029	2609	28091
SE	73	218	869	1449	2029	2609	21742
ESE	73	218	869	1449	2029	2609	21742
E	73	218	869	1449	2029	2609	21742
ENE	73	218	869	1449	2029	2609	21742
NE	73	218	869	1449	2029	2609	21742
NNE	73	218	869	1449	2029	2609	21742

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	80798	65252	76762	32421	30759	35625	34311
NNW	86967	108564	41578	27967	34183	40397	44258
NW	80798	85308	115432	137220	52008	27730	34466
WNW	61467	70794	99111	47297	22710	26840	27148
W	69500	91150	51699	64974	51977	44409	32825
WSW	121661	181519	61189	64411	76208	642285	32256
SW	130148	246712	257716	159760	121585	85815	138721
SSW	154093	270126	307311	229696	166289	195532	418196
S	256284	386875	314462	29692	52912	109433	99211
SSE	582532	1056258	1213638	41383	0	0	0
SE	881708	735691	836989	393629	38016	0	0
ESE	907647	524419	302264	331780	302990	112269	55872
E	614558	315168	62296	158874	81945	96843	111743
ENE	91625	83008	86601	65130	59702	70558	81413
NE	70873	62256	111184	140795	174717	137656	155442
NNE	70955	32638	87309	136246	82725	41310	44223

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SUMMARY
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ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	3.19E-07	2.18E-06
BREAST	2.77E-07	1.93E-06
R MAR	3.21E-05	2.07E-04
LUNGS	4.44E-04	2.85E-03
THYROID	2.67E-07	1.84E-06
ENDOST	3.99E-04	2.57E-03
RMNDR	9.84E-07	6.89E-06
EFFEC	6.95E-05	4.46E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	1.07E-08	7.64E-07
INHALATION	6.95E-05	4.45E-04
AIR IMMERSION	1.36E-10	4.33E-10
GROUND SURFACE	6.58E-09	6.52E-08
INTERNAL	6.95E-05	4.46E-04
EXTERNAL	6.71E-09	6.56E-08
TOTAL	6.95E-05	4.46E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	6.86E-07	4.41E-06
AC-228	7.84E-09	4.25E-08
BI-211	7.31E-13	5.55E-13
BI-212	3.04E-09	9.48E-09
FR-223	3.89E-14	6.88E-14
PA-234M	1.07E-13	7.42E-14
PA-231	5.19E-07	3.34E-06
PB-211	1.01E-11	2.39E-11
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	1.52E-08	8.83E-08
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	8.94E-09	5.75E-08
RA-224	3.17E-07	2.01E-06
TH-232	3.25E-05	2.08E-04
TH-228	2.28E-05	1.46E-04
TH-231	1.09E-12	6.77E-12
TH-227	1.24E-08	7.95E-08
TL-208	5.52E-11	4.51E-11
U-235	1.34E-07	8.71E-07
TL-207	8.27E-15	7.57E-15
U-238	2.68E-06	1.72E-05
TH-234	8.33E-10	5.73E-09
PA-234	9.32E-14	5.80E-13
U-234	3.23E-06	2.08E-05
TH-230	6.15E-06	3.94E-05
RA-226	6.66E-08	4.57E-07
PO-218	2.75E-13	2.25E-13
PB-214	7.86E-12	1.57E-11
BI-214	9.99E-12	1.68E-11
PO-214	0.00E+00	0.00E+00
PB-210	1.04E-07	7.77E-07
BI-210	1.44E-09	9.14E-09
PO-210	6.44E-08	4.45E-07
RA-228	2.22E-07	1.60E-06
TOTAL	6.95E-05	4.46E-04

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

Direction	Distance (m) 250	750	1500	2500	3500	4500	7500
N	5.2E-05	6.5E-06	1.9E-06	8.0E-07	4.7E-07	3.2E-07	1.5E-07
NNW	1.9E-05	2.5E-06	7.2E-07	3.0E-07	1.8E-07	1.2E-07	5.4E-08
NW	1.1E-05	1.4E-06	4.1E-07	1.7E-07	1.0E-07	6.8E-08	3.1E-08
WNW	9.3E-06	1.2E-06	3.5E-07	1.4E-07	8.4E-08	5.7E-08	2.6E-08
W	1.7E-05	2.2E-06	6.5E-07	2.7E-07	1.6E-07	1.1E-07	4.8E-08
WSW	2.1E-05	2.6E-06	7.7E-07	3.2E-07	1.9E-07	1.3E-07	5.8E-08
SW	2.9E-05	3.6E-06	1.1E-06	4.4E-07	2.6E-07	1.8E-07	8.0E-08
SSW	3.7E-05	4.7E-06	1.4E-06	5.8E-07	3.4E-07	2.3E-07	1.0E-07
S	7.0E-05	8.7E-06	2.5E-06	1.1E-06	6.1E-07	4.2E-07	1.9E-07
SSE	4.1E-05	5.1E-06	1.5E-06	6.3E-07	3.7E-07	2.5E-07	1.2E-07
SE	3.6E-05	4.6E-06	1.4E-06	5.7E-07	3.3E-07	2.3E-07	1.1E-07
ESE	2.7E-05	3.5E-06	1.0E-06	4.3E-07	2.5E-07	1.7E-07	7.8E-08
E	3.6E-05	4.6E-06	1.3E-06	5.6E-07	3.3E-07	2.2E-07	1.0E-07
ENE	2.9E-05	3.7E-06	1.1E-06	4.6E-07	2.7E-07	1.8E-07	8.4E-08
NE	5.4E-05	6.8E-06	2.0E-06	8.3E-07	4.8E-07	3.3E-07	1.5E-07
NNE	5.0E-05	6.2E-06	1.8E-06	7.6E-07	4.4E-07	3.0E-07	1.4E-07

Direction	Distance (m) 15000	25000	35000	45000	55000	65000	75000
N	5.4E-08	2.5E-08	1.5E-08	1.1E-08	7.7E-09	5.1E-09	4.1E-09
NNW	2.0E-08	8.9E-09	5.6E-09	3.8E-09	2.7E-09	1.8E-09	1.5E-09
NW	1.1E-08	5.0E-09	3.1E-09	2.1E-09	1.5E-09	1.0E-09	8.3E-10
WNW	9.2E-09	4.1E-09	2.5E-09	1.7E-09	1.2E-09	8.6E-10	6.8E-10
W	1.7E-08	7.5E-09	4.6E-09	3.1E-09	2.2E-09	1.5E-09	1.2E-09
WSW	2.0E-08	9.0E-09	5.5E-09	3.7E-09	2.6E-09	1.8E-09	1.4E-09
SW	2.9E-08	1.3E-08	7.9E-09	5.4E-09	3.9E-09	2.6E-09	2.0E-09
SSW	3.8E-08	1.7E-08	1.1E-08	7.4E-09	5.3E-09	3.5E-09	2.8E-09
S	7.1E-08	3.2E-08	2.0E-08	1.4E-08	9.8E-09	6.4E-09	5.0E-09
SSE	4.3E-08	2.0E-08	1.2E-08	8.7E-09	0.0E+00	0.0E+00	0.0E+00
SE	3.9E-08	1.8E-08	1.2E-08	8.0E-09	5.9E-09	0.0E+00	0.0E+00
ESE	2.9E-08	1.4E-08	8.6E-09	6.0E-09	4.4E-09	3.1E-09	2.5E-09
E	3.8E-08	1.8E-08	1.1E-08	7.8E-09	5.6E-09	3.8E-09	3.1E-09
ENE	3.1E-08	1.5E-08	9.2E-09	6.4E-09	4.7E-09	3.2E-09	2.6E-09
NE	5.6E-08	2.6E-08	1.6E-08	1.1E-08	8.0E-09	5.2E-09	4.2E-09
NNE	5.1E-08	2.3E-08	1.5E-08	1.0E-08	7.3E-09	4.8E-09	3.8E-09

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COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	3.8E-06	1.4E-06	1.7E-06	1.2E-06	9.5E-07	8.3E-07	3.2E-06
NNW	1.4E-06	5.4E-07	6.2E-07	4.4E-07	3.6E-07	3.1E-07	1.2E-06
NW	8.1E-07	3.1E-07	3.6E-07	2.5E-07	2.0E-07	1.8E-07	6.7E-07
WNW	6.8E-07	2.6E-07	3.0E-07	2.1E-07	1.7E-07	1.5E-07	5.0E-07
W	1.3E-06	4.8E-07	5.6E-07	3.9E-07	3.2E-07	2.8E-07	8.3E-07
WSW	1.5E-06	5.7E-07	6.7E-07	4.7E-07	3.8E-07	3.3E-07	1.0E-06
SW	2.1E-06	7.9E-07	9.2E-07	6.4E-07	5.2E-07	4.6E-07	1.4E-06
SSW	2.7E-06	1.0E-06	1.2E-06	8.4E-07	6.8E-07	6.0E-07	2.3E-06
S	5.1E-06	1.9E-06	2.2E-06	1.5E-06	1.2E-06	1.1E-06	4.2E-06
SSE	3.0E-06	1.1E-06	1.3E-06	9.2E-07	7.5E-07	6.6E-07	3.2E-06
SE	2.6E-06	1.0E-06	1.2E-06	8.3E-07	6.8E-07	6.0E-07	2.3E-06
ESE	2.0E-06	7.5E-07	8.8E-07	6.2E-07	5.1E-07	4.5E-07	1.7E-06
E	2.6E-06	9.9E-07	1.2E-06	8.1E-07	6.6E-07	5.8E-07	2.2E-06
ENE	2.1E-06	8.1E-07	9.4E-07	6.6E-07	5.4E-07	4.8E-07	1.8E-06
NE	4.0E-06	1.5E-06	1.7E-06	1.2E-06	9.8E-07	8.6E-07	3.3E-06
NNE	3.6E-06	1.4E-06	1.6E-06	1.1E-06	9.0E-07	7.9E-07	3.0E-06

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	4.4E-06	1.6E-06	1.2E-06	3.5E-07	2.4E-07	1.8E-07	1.4E-07
NNW	1.7E-06	9.7E-07	2.3E-07	1.1E-07	9.4E-08	7.5E-08	6.5E-08
NW	9.0E-07	4.3E-07	3.6E-07	2.9E-07	7.9E-08	2.9E-08	2.9E-08
WNW	5.7E-07	2.9E-07	2.5E-07	8.2E-08	2.8E-08	2.3E-08	1.8E-08
W	1.2E-06	6.8E-07	2.4E-07	2.0E-07	1.1E-07	6.7E-08	3.9E-08
WSW	2.5E-06	1.6E-06	3.3E-07	2.4E-07	2.0E-07	1.1E-06	4.6E-08
SW	3.7E-06	3.2E-06	2.0E-06	8.7E-07	4.7E-07	2.2E-07	2.8E-07
SSW	5.9E-06	4.7E-06	3.3E-06	1.7E-06	8.8E-07	6.9E-07	1.2E-06
S	1.8E-05	1.2E-05	6.3E-06	4.1E-07	5.2E-07	7.0E-07	5.0E-07
SSE	2.5E-05	2.1E-05	1.5E-05	3.6E-07	0.0E+00	0.0E+00	0.0E+00
SE	3.4E-05	1.3E-05	9.6E-06	3.2E-06	2.2E-07	0.0E+00	0.0E+00
ESE	2.6E-05	7.1E-06	2.6E-06	2.0E-06	1.3E-06	3.4E-07	1.4E-07
E	2.4E-05	5.6E-06	7.0E-07	1.2E-06	4.6E-07	3.7E-07	3.4E-07
ENE	2.9E-06	1.2E-06	8.0E-07	4.2E-07	2.8E-07	2.3E-07	2.1E-07
NE	4.0E-06	1.6E-06	1.8E-06	1.6E-06	1.4E-06	7.2E-07	6.5E-07
NNE	3.7E-06	7.6E-07	1.3E-06	1.4E-06	6.0E-07	2.0E-07	1.7E-07

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Individual Assessment
Feb 22, 2002 04:01 pm

```
Facility:  Maywood Interim Storage Site - Water Line Seg. 2
 Address:  100 W. Hunter Avenue
    City:  Maywood
   State:  NJ          Zip:  07607-


Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001


Comments:  Stone & Webster, Inc. for
           U.S. Army Corps of Engineers
```

Effective Dose Equivalent
(mrem/year)

2.94E-04

```
At This Location:     60 Meters South

    Dataset Name:  MISS Water Seg 2
    Dataset Date:  Feb  22, 2002  09:38 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	40 OF113

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MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 60 Meters South
Lifetime Fatal Cancer Risk: 3.30E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	2.29E-06
BREAST	1.90E-06
R MAR	1.43E-04
LUNGS	1.82E-03
THYROID	1.84E-06
ENDOST	1.78E-03
RMNDR	1.35E-05
EFFEC	2.94E-04

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	6.6E-11	6.6E-11
AC-228	Y	1.00	2.0E-09	2.0E-09
BI-211	W	1.00	6.6E-11	6.6E-11
BI-212	W	1.00	2.0E-09	2.0E-09
FR-223	D	1.00	9.2E-13	9.2E-13
PA-234M	Y	1.00	1.4E-09	1.4E-09
PA-231	Y	1.00	6.6E-11	6.6E-11
PB-211	D	1.00	6.6E-11	6.6E-11
PO-211	-	0.00	1.8E-13	1.8E-13
PO-216	W	1.00	2.0E-09	2.0E-09
PB-212	D	1.00	2.0E-09	2.0E-09
PO-212	W	1.00	1.3E-09	1.3E-09
PO-215	W	1.00	6.6E-11	6.6E-11
RA-223	W	1.00	6.6E-11	6.6E-11
RA-224	W	1.00	2.0E-09	2.0E-09
TH-232	Y	1.00	2.0E-09	2.0E-09
TH-228	Y	1.00	2.0E-09	2.0E-09
TH-231	Y	1.00	6.6E-11	6.6E-11
TH-227	Y	1.00	6.6E-11	6.6E-11
TL-208	D	1.00	7.3E-10	7.3E-10
U-235	Y	1.00	6.6E-11	6.6E-11
TL-207	D	1.00	6.6E-11	6.6E-11
U-238	Y	1.00	1.4E-09	1.4E-09
TH-234	Y	1.00	1.4E-09	1.4E-09
PA-234	Y	1.00	1.8E-12	1.8E-12
U-234	Y	1.00	1.5E-09	1.5E-09
TH-230	Y	1.00	1.5E-09	1.5E-09
RA-226	W	1.00	1.1E-09	1.1E-09
PO-218	W	1.00	1.1E-09	1.1E-09
PB-214	D	1.00	1.1E-09	1.1E-09
BI-214	W	1.00	1.1E-09	1.1E-09
PO-214	W	1.00	1.1E-09	1.1E-09
PB-210	D	1.00	1.1E-09	1.1E-09
BI-210	W	1.00	1.1E-09	1.1E-09
PO-210	W	1.00	1.1E-09	1.1E-09
RA-228	W	1.00	2.0E-09	2.0E-09

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 325.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

60 65 75 85 95 105 120 130 135 155
190

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	2.29E-06
BREAST	1.90E-06
R MAR	1.43E-04
LUNGS	1.82E-03
THYROID	1.84E-06
ENDOST	1.78E-03
RMNDR	1.35E-05
EFFEC	2.94E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	4.90E-06
INHALATION	2.89E-04
AIR IMMERSION	6.19E-10
GROUND SURFACE	5.92E-08
INTERNAL	2.94E-04
EXTERNAL	5.98E-08
TOTAL	2.94E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	5.86E-06
AC-228	2.41E-08
BI-211	8.97E-12
BI-212	9.44E-09
FR-223	3.43E-13
PA-234M	1.70E-12
PA-231	4.47E-06
PB-211	8.70E-11
PO-211	2.17E-23
PO-216	1.68E-34
PB-212	4.68E-08
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	7.84E-08
RA-224	9.75E-07
TH-232	9.97E-05
TH-228	7.00E-05
TH-231	9.18E-12
TH-227	1.05E-07
TL-208	2.22E-10
U-235	1.15E-06
TL-207	8.40E-14
U-238	2.31E-05
TH-234	9.56E-09
PA-234	7.86E-13
U-234	2.78E-05
TH-230	5.22E-05
RA-226	1.78E-06
PO-218	7.34E-12
PB-214	1.65E-10
BI-214	2.12E-10
PO-214	0.00E+00
PB-210	3.90E-06
BI-210	2.94E-08
PO-210	1.82E-06
RA-228	1.08E-06
TOTAL	2.94E-04

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

Distance (m)

Direction	60	65	75	85	95	105	120
N	2.2E-04	1.9E-04	1.5E-04	1.2E-04	9.4E-05	7.9E-05	6.2E-05
NNW	8.3E-05	7.2E-05	5.6E-05	4.5E-05	3.7E-05	3.2E-05	2.5E-05
NW	4.9E-05	4.3E-05	3.3E-05	2.7E-05	2.3E-05	1.9E-05	1.6E-05
WNW	4.1E-05	3.6E-05	2.8E-05	2.3E-05	2.0E-05	1.7E-05	1.4E-05
W	7.3E-05	6.3E-05	4.9E-05	4.0E-05	3.3E-05	2.8E-05	2.3E-05
WSW	8.7E-05	7.5E-05	5.8E-05	4.7E-05	3.9E-05	3.3E-05	2.6E-05
SW	1.2E-04	1.0E-04	8.1E-05	6.4E-05	5.3E-05	4.5E-05	3.5E-05
SSW	1.6E-04	1.4E-04	1.0E-04	8.3E-05	6.8E-05	5.7E-05	4.5E-05
S	2.9E-04	2.5E-04	1.9E-04	1.5E-04	1.3E-04	1.0E-04	8.2E-05
SSE	1.7E-04	1.5E-04	1.1E-04	9.1E-05	7.4E-05	6.2E-05	4.9E-05
SE	1.5E-04	1.3E-04	1.0E-04	8.0E-05	6.6E-05	5.5E-05	4.4E-05
ESE	1.1E-04	9.9E-05	7.6E-05	6.1E-05	5.0E-05	4.2E-05	3.4E-05
E	1.5E-04	1.3E-04	1.0E-04	8.1E-05	6.6E-05	5.6E-05	4.4E-05
ENE	1.2E-04	1.1E-04	8.3E-05	6.6E-05	5.4E-05	4.6E-05	3.6E-05
NE	2.3E-04	2.0E-04	1.5E-04	1.2E-04	9.9E-05	8.2E-05	6.5E-05
NNE	2.1E-04	1.8E-04	1.4E-04	1.1E-04	9.1E-05	7.6E-05	6.0E-05

Distance (m)

Direction	130	135	155	190
N	5.4E-05	5.0E-05	4.0E-05	2.8E-05
NNW	2.2E-05	2.1E-05	1.7E-05	1.3E-05
NW	1.4E-05	1.4E-05	1.1E-05	8.8E-06
WNW	1.2E-05	1.2E-05	1.0E-05	7.9E-06
W	2.0E-05	1.9E-05	1.5E-05	1.2E-05
WSW	2.3E-05	2.2E-05	1.8E-05	1.3E-05
SW	3.1E-05	2.9E-05	2.3E-05	1.7E-05
SSW	3.9E-05	3.7E-05	2.9E-05	2.1E-05
S	7.1E-05	6.6E-05	5.2E-05	3.6E-05
SSE	4.3E-05	4.0E-05	3.2E-05	2.3E-05
SE	3.8E-05	3.6E-05	2.9E-05	2.1E-05
ESE	3.0E-05	2.8E-05	2.2E-05	1.6E-05
E	3.8E-05	3.6E-05	2.9E-05	2.1E-05
ENE	3.2E-05	3.0E-05	2.4E-05	1.7E-05
NE	5.6E-05	5.3E-05	4.1E-05	2.9E-05
NNE	5.2E-05	4.9E-05	3.8E-05	2.7E-05

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Population Assessment
Feb 22, 2002 04:02 pm

Facility: Maywood Interim Storage Site - Water Line Seg. 2
Address: 100 W. Hunter Avenue
City: Maywood
State: NJ Zip: 07607-

Source Category: Particulate Emission w radon daughters
Source Type: Area
Emission Year: 2001

Comments: Stone & Webster, Inc. for
U.S. Army Corps of Engineers

Effective Dose Equivalent
(mrem/year)

1.95E-05

At This Location: 250 Meters South

Dataset Name: MISS WL2 POP
Dataset Date: Feb 22, 2002 03:39 pm
Wind File: C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
Population File: C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	47 OF113

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 2.20E-10

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.14E-07	7.99E-07
BREAST	8.88E-08	6.47E-07
R MAR	9.26E-06	5.98E-05
LUNGS	1.23E-04	7.86E-04
THYROID	8.48E-08	6.08E-07
ENDOST	1.15E-04	7.45E-04
RMNDR	5.35E-07	3.92E-06
EFFEC	1.95E-05	1.25E-04

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	2.00E-08	2.00E-08

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	48 OF113

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SYNOPSIS
Page 2

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	6.6E-11	6.6E-11
AC-228	Y	1.00	2.0E-09	2.0E-09
BI-211	W	1.00	6.6E-11	6.6E-11
BI-212	W	1.00	2.0E-09	2.0E-09
FR-223	D	1.00	9.2E-13	9.2E-13
PA-234M	Y	1.00	1.4E-09	1.4E-09
PA-231	Y	1.00	6.6E-11	6.6E-11
PB-211	D	1.00	6.6E-11	6.6E-11
PO-211	-	0.00	1.8E-13	1.8E-13
PO-216	W	1.00	2.0E-09	2.0E-09
PB-212	D	1.00	2.0E-09	2.0E-09
PO-212	W	1.00	1.3E-09	1.3E-09
PO-215	W	1.00	6.6E-11	6.6E-11
RA-223	W	1.00	6.6E-11	6.6E-11
RA-224	W	1.00	2.0E-09	2.0E-09
TH-232	Y	1.00	2.0E-09	2.0E-09
TH-228	Y	1.00	2.0E-09	2.0E-09
TH-231	Y	1.00	6.6E-11	6.6E-11
TH-227	Y	1.00	6.6E-11	6.6E-11
TL-208	D	1.00	7.3E-10	7.3E-10
U-235	Y	1.00	6.6E-11	6.6E-11
TL-207	D	1.00	6.6E-11	6.6E-11
U-238	Y	1.00	1.4E-09	1.4E-09
TH-234	Y	1.00	1.4E-09	1.4E-09
PA-234	Y	1.00	1.8E-12	1.8E-12
U-234	Y	1.00	1.5E-09	1.5E-09
TH-230	Y	1.00	1.5E-09	1.5E-09
RA-226	W	1.00	1.1E-09	1.1E-09
PO-218	W	1.00	1.1E-09	1.1E-09
PB-214	D	1.00	1.1E-09	1.1E-09
BI-214	W	1.00	1.1E-09	1.1E-09
PO-214	W	1.00	1.1E-09	1.1E-09
PB-210	D	1.00	1.1E-09	1.1E-09
BI-210	W	1.00	1.1E-09	1.1E-09
PO-210	W	1.00	1.1E-09	1.1E-09
RA-228	W	1.00	2.0E-09	2.0E-09

SITE INFORMATION

Temperature:	13 degrees C
Precipitation:	85 cm/y
Mixing Height:	1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 325.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

Feb 22, 2002 04:02 pm

SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.14E-07	7.99E-07
BREAST	8.88E-08	6.47E-07
R MAR	9.26E-06	5.98E-05
LUNGS	1.23E-04	7.86E-04
THYROID	8.48E-08	6.08E-07
ENDOST	1.15E-04	7.45E-04
RMNDR	5.35E-07	3.92E-06
EFFEC	1.95E-05	1.25E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	6.38E-09	4.57E-07
INHALATION	1.95E-05	1.25E-04
AIR IMMERSION	3.76E-11	1.07E-10
GROUND SURFACE	4.11E-09	4.07E-08
INTERNAL	1.95E-05	1.25E-04
EXTERNAL	4.15E-09	4.08E-08
TOTAL	1.95E-05	1.25E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	3.90E-07	2.50E-06
AC-228	1.62E-09	8.76E-09
BI-211	4.15E-13	3.16E-13
BI-212	6.27E-10	1.96E-09
FR-223	2.22E-14	3.92E-14
PA-234M	6.08E-14	4.23E-14
PA-231	2.95E-07	1.90E-06
PB-211	5.72E-12	1.36E-11
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	3.15E-09	1.82E-08
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	5.08E-09	3.27E-08
RA-224	6.54E-08	4.14E-07
TH-232	6.70E-06	4.30E-05
TH-228	4.71E-06	3.02E-05
TH-231	6.18E-13	3.85E-12
TH-227	7.09E-09	4.54E-08
TL-208	1.14E-11	9.32E-12
U-235	7.60E-08	4.95E-07
TL-207	4.73E-15	4.33E-15
U-238	1.53E-06	9.82E-06
TH-234	4.75E-10	3.27E-09
PA-234	5.32E-14	3.31E-13
U-234	1.84E-06	1.18E-05
TH-230	3.50E-06	2.24E-05
RA-226	9.14E-08	6.27E-07
PO-218	3.77E-13	3.08E-13
PB-214	1.08E-11	2.16E-11
BI-214	1.37E-11	2.31E-11
PO-214	0.00E+00	0.00E+00
PB-210	1.42E-07	1.07E-06
BI-210	1.97E-09	1.25E-08
PO-210	8.83E-08	6.10E-07
RA-228	4.59E-08	3.29E-07
TOTAL	1.95E-05	1.25E-04

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	1.5E-05	1.8E-06	5.4E-07	2.3E-07	1.3E-07	9.0E-08	4.1E-08
NNW	5.5E-06	6.9E-07	2.0E-07	8.5E-08	4.9E-08	3.4E-08	1.5E-08
NW	3.1E-06	4.0E-07	1.2E-07	4.8E-08	2.8E-08	1.9E-08	8.7E-09
WNW	2.6E-06	3.3E-07	9.7E-08	4.1E-08	2.4E-08	1.6E-08	7.2E-09
W	4.8E-06	6.2E-07	1.8E-07	7.6E-08	4.4E-08	3.0E-08	1.3E-08
WSW	5.8E-06	7.4E-07	2.2E-07	9.1E-08	5.3E-08	3.6E-08	1.6E-08
SW	8.0E-06	1.0E-06	3.0E-07	1.2E-07	7.2E-08	4.9E-08	2.2E-08
SSW	1.0E-05	1.3E-06	3.9E-07	1.6E-07	9.4E-08	6.4E-08	2.9E-08
S	1.9E-05	2.4E-06	7.0E-07	3.0E-07	1.7E-07	1.2E-07	5.4E-08
SSE	1.1E-05	1.4E-06	4.2E-07	1.8E-07	1.0E-07	7.1E-08	3.2E-08
SE	1.0E-05	1.3E-06	3.8E-07	1.6E-07	9.4E-08	6.4E-08	2.9E-08
ESE	7.6E-06	9.7E-07	2.8E-07	1.2E-07	7.0E-08	4.8E-08	2.2E-08
E	1.0E-05	1.3E-06	3.7E-07	1.6E-07	9.2E-08	6.3E-08	2.9E-08
ENE	8.2E-06	1.0E-06	3.0E-07	1.3E-07	7.5E-08	5.1E-08	2.3E-08
NE	1.5E-05	1.9E-06	5.5E-07	2.3E-07	1.4E-07	9.2E-08	4.2E-08
NNE	1.4E-05	1.7E-06	5.1E-07	2.1E-07	1.2E-07	8.5E-08	3.9E-08

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	1.5E-08	6.9E-09	4.3E-09	3.0E-09	2.2E-09	1.5E-09	1.2E-09
NNW	5.6E-09	2.5E-09	1.6E-09	1.1E-09	7.8E-10	5.3E-10	4.2E-10
NW	3.1E-09	1.4E-09	8.8E-10	6.1E-10	4.4E-10	3.0E-10	2.4E-10
WNW	2.6E-09	1.2E-09	7.2E-10	4.9E-10	3.6E-10	2.5E-10	2.0E-10
W	4.8E-09	2.1E-09	1.3E-09	8.8E-10	6.3E-10	4.3E-10	3.5E-10
WSW	5.7E-09	2.5E-09	1.5E-09	1.0E-09	7.5E-10	5.1E-10	4.1E-10
SW	8.1E-09	3.6E-09	2.2E-09	1.5E-09	1.1E-09	7.3E-10	5.8E-10
SSW	1.1E-08	4.8E-09	3.0E-09	2.1E-09	1.5E-09	1.0E-09	8.0E-10
S	2.0E-08	8.9E-09	5.6E-09	3.9E-09	2.8E-09	1.8E-09	1.4E-09
SSE	1.2E-08	5.6E-09	3.5E-09	2.4E-09	0.0E+00	0.0E+00	0.0E+00
SE	1.1E-08	5.1E-09	3.2E-09	2.3E-09	1.7E-09	0.0E+00	0.0E+00
ESE	8.2E-09	3.8E-09	2.4E-09	1.7E-09	1.2E-09	8.7E-10	7.0E-10
E	1.1E-08	5.0E-09	3.1E-09	2.2E-09	1.6E-09	1.1E-09	8.7E-10
ENE	8.8E-09	4.1E-09	2.6E-09	1.8E-09	1.3E-09	9.1E-10	7.3E-10
NE	1.6E-08	7.2E-09	4.5E-09	3.2E-09	2.3E-09	1.5E-09	1.2E-09
NNE	1.4E-08	6.6E-09	4.1E-09	2.9E-09	2.1E-09	1.3E-09	1.1E-09

COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	1.1E-06	4.0E-07	4.7E-07	3.3E-07	2.7E-07	2.3E-07	8.9E-07
NNW	4.0E-07	1.5E-07	1.7E-07	1.2E-07	1.0E-07	8.7E-08	3.3E-07
NW	2.3E-07	8.6E-08	1.0E-07	7.0E-08	5.7E-08	5.0E-08	1.9E-07
WNW	1.9E-07	7.2E-08	8.4E-08	5.9E-08	4.8E-08	4.2E-08	1.4E-07
W	3.5E-07	1.3E-07	1.6E-07	1.1E-07	8.9E-08	7.8E-08	2.3E-07
WSW	4.2E-07	1.6E-07	1.9E-07	1.3E-07	1.1E-07	9.3E-08	2.8E-07
SW	5.8E-07	2.2E-07	2.6E-07	1.8E-07	1.5E-07	1.3E-07	3.9E-07
SSW	7.6E-07	2.9E-07	3.4E-07	2.4E-07	1.9E-07	1.7E-07	6.4E-07
S	1.4E-06	5.3E-07	6.1E-07	4.3E-07	3.5E-07	3.1E-07	1.2E-06
SSE	8.3E-07	3.1E-07	3.7E-07	2.6E-07	2.1E-07	1.8E-07	9.1E-07
SE	7.4E-07	2.8E-07	3.3E-07	2.3E-07	1.9E-07	1.7E-07	6.4E-07
ESE	5.6E-07	2.1E-07	2.5E-07	1.7E-07	1.4E-07	1.2E-07	4.8E-07
E	7.4E-07	2.8E-07	3.2E-07	2.3E-07	1.9E-07	1.6E-07	6.3E-07
ENE	6.0E-07	2.3E-07	2.6E-07	1.9E-07	1.5E-07	1.3E-07	5.1E-07
NE	1.1E-06	4.1E-07	4.8E-07	3.4E-07	2.7E-07	2.4E-07	9.2E-07
NNE	1.0E-06	3.8E-07	4.4E-07	3.1E-07	2.5E-07	2.2E-07	8.4E-07

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	1.2E-06	4.5E-07	3.3E-07	9.8E-08	6.6E-08	5.2E-08	4.0E-08
NNW	4.8E-07	2.7E-07	6.5E-08	3.0E-08	2.7E-08	2.1E-08	1.9E-08
NW	2.5E-07	1.2E-07	1.0E-07	8.4E-08	2.3E-08	8.4E-09	8.4E-09
WNW	1.6E-07	8.2E-08	7.1E-08	2.3E-08	8.1E-09	6.7E-09	5.5E-09
W	3.3E-07	1.9E-07	6.7E-08	5.7E-08	3.3E-08	1.9E-08	1.1E-08
WSW	7.0E-07	4.6E-07	9.4E-08	6.8E-08	5.7E-08	3.3E-07	1.3E-08
SW	1.1E-06	8.9E-07	5.8E-07	2.4E-07	1.3E-07	6.3E-08	8.1E-08
SSW	1.7E-06	1.3E-06	9.3E-07	4.8E-07	2.5E-07	2.0E-07	3.3E-07
S	5.1E-06	3.5E-06	1.8E-06	1.2E-07	1.5E-07	2.0E-07	1.4E-07
SSE	7.0E-06	5.9E-06	4.3E-06	1.0E-07	0.0E+00	0.0E+00	0.0E+00
SE	9.7E-06	3.8E-06	2.7E-06	8.9E-07	6.3E-08	0.0E+00	0.0E+00
ESE	7.4E-06	2.0E-06	7.3E-07	5.6E-07	3.7E-07	9.8E-08	3.9E-08
E	6.6E-06	1.6E-06	2.0E-07	3.5E-07	1.3E-07	1.1E-07	9.7E-08
ENE	8.0E-07	3.4E-07	2.2E-07	1.2E-07	7.9E-08	6.4E-08	6.0E-08
NE	1.1E-06	4.5E-07	5.1E-07	4.4E-07	3.9E-07	2.0E-07	1.8E-07
NNE	1.0E-06	2.1E-07	3.6E-07	3.9E-07	1.7E-07	5.6E-08	4.7E-08

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                         C A P 8 8 - P C

                          Version 2.00


             Clean Air Act Assessment Package - 1988



                    S Y N O P S I S   R E P O R T

                   Non-Radon Individual Assessment
                        Feb  22, 2002  04:01 pm



       Facility:  Maywood Interim Storage Site - I80 Soil to MISS
        Address:  100 W. Hunter Avenue
           City:  Maywood
          State:  NJ          Zip:  07607-


       Source Category:  Particulate Emission w radon daughters
           Source Type:  Area
         Emission Year:  2001


       Comments:  Stone & Webster, Inc. for
                  U.S. Army Corps of Engineers


                   Effective Dose Equivalent
                          (mrem/year)
                   _________________________

                           1.12E-04
                   _________________________


      At This Location:     40 Meters North Northeast

          Dataset Name:  I80 Soil to MISS
          Dataset Date:  Feb  22, 2002  10:21 am
             Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

Feb 22, 2002 04:01 pm

SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 40 Meters North Northeast
Lifetime Fatal Cancer Risk: 1.27E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	6.80E-07
BREAST	5.74E-07
R MAR	5.29E-05
LUNGS	7.03E-04
THYROID	5.56E-07
ENDOST	6.58E-04
RMNDR	2.87E-06
EFFEC	1.12E-04

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	56 OF113

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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	1.1E-11	1.1E-11
AC-228	Y	1.00	5.6E-10	5.6E-10
BI-211	W	1.00	1.1E-11	1.1E-11
BI-212	W	1.00	5.6E-10	5.6E-10
FR-223	D	1.00	1.5E-13	1.5E-13
PA-234M	Y	1.00	2.3E-10	2.3E-10
PA-231	Y	1.00	1.1E-11	1.1E-11
PB-211	D	1.00	1.1E-11	1.1E-11
PO-211	-	0.00	3.0E-14	3.0E-14
PO-216	W	1.00	5.6E-10	5.6E-10
PB-212	D	1.00	5.6E-10	5.6E-10
PO-212	W	1.00	3.6E-10	3.6E-10
PO-215	W	1.00	1.1E-11	1.1E-11
RA-223	W	1.00	1.1E-11	1.1E-11
RA-224	W	1.00	5.6E-10	5.6E-10
TH-232	Y	1.00	5.6E-10	5.6E-10
TH-228	Y	1.00	5.6E-10	5.6E-10
TH-231	Y	1.00	1.1E-11	1.1E-11
TH-227	Y	1.00	1.1E-11	1.1E-11
TL-208	D	1.00	2.0E-10	2.0E-10
U-235	Y	1.00	1.1E-11	1.1E-11
TL-207	D	1.00	1.1E-11	1.1E-11
U-238	Y	1.00	2.3E-10	2.3E-10
TH-234	Y	1.00	2.3E-10	2.3E-10
PA-234	Y	1.00	3.0E-13	3.0E-13
U-234	Y	1.00	2.5E-10	2.5E-10
TH-230	Y	1.00	2.5E-10	2.5E-10
RA-226	W	1.00	9.9E-11	9.9E-11
PO-218	W	1.00	9.9E-11	9.9E-11
PB-214	D	1.00	9.9E-11	9.9E-11
BI-214	W	1.00	9.9E-11	9.9E-11
PO-214	W	1.00	9.9E-11	9.9E-11
PB-210	D	1.00	9.9E-11	9.9E-11
BI-210	W	1.00	9.9E-11	9.9E-11
PO-210	W	1.00	9.9E-11	9.9E-11
RA-228	W	1.00	5.6E-10	5.6E-10

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 1672.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

40 65 70 75 85 110 115 120 150 190
245

Feb 22, 2002 04:01 pm

SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	6.80E-07
BREAST	5.74E-07
R MAR	5.29E-05
LUNGS	7.03E-04
THYROID	5.56E-07
ENDOST	6.58E-04
RMNDR	2.87E-06
EFFEC	1.12E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	9.62E-07
INHALATION	1.11E-04
AIR IMMERSION	2.35E-10
GROUND SURFACE	1.43E-08
INTERNAL	1.12E-04
EXTERNAL	1.46E-08
TOTAL	1.12E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	1.60E-06
AC-228	1.11E-08
BI-211	2.57E-12
BI-212	4.37E-09
FR-223	9.39E-14
PA-234M	5.03E-13
PA-231	1.22E-06
PB-211	2.38E-11
PO-211	5.23E-22
PO-216	9.38E-28
PB-212	2.16E-08
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	2.13E-08
RA-224	4.50E-07
TH-232	4.61E-05
TH-228	3.23E-05
TH-231	2.51E-12
TH-227	2.87E-08
TL-208	1.06E-10
U-235	3.13E-07
TL-207	2.33E-14
U-238	6.27E-06
TH-234	2.50E-09
PA-234	2.14E-13
U-234	7.53E-06
TH-230	1.42E-05
RA-226	2.56E-07
PO-218	1.14E-12
PB-214	2.49E-11
BI-214	3.20E-11
PO-214	0.00E+00
PB-210	5.41E-07
BI-210	4.40E-09
PO-210	2.60E-07
RA-228	4.70E-07
TOTAL	1.12E-04

Feb 22, 2002 04:01 pm

SUMMARY
Page 5

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	40	65	70	75	85	110	115
N	8.9E-05	3.8E-05	3.4E-05	3.0E-05	2.5E-05	1.7E-05	1.5E-05
NNW	5.7E-05	2.0E-05	1.7E-05	1.5E-05	1.1E-05	6.6E-06	6.1E-06
NW	2.8E-05	1.1E-05	9.3E-06	8.2E-06	6.4E-06	4.0E-06	3.7E-06
WNW	2.6E-05	9.7E-06	8.3E-06	7.3E-06	5.6E-06	3.4E-06	3.2E-06
W	3.3E-05	1.4E-05	1.2E-05	1.1E-05	8.8E-06	5.8E-06	5.4E-06
WSW	4.6E-05	1.8E-05	1.6E-05	1.4E-05	1.1E-05	6.8E-06	6.3E-06
SW	6.1E-05	2.4E-05	2.1E-05	1.9E-05	1.5E-05	9.3E-06	8.6E-06
SSW	9.5E-05	3.5E-05	3.0E-05	2.6E-05	2.0E-05	1.2E-05	1.1E-05
S	1.1E-04	4.9E-05	4.4E-05	3.9E-05	3.3E-05	2.2E-05	2.0E-05
SSE	1.0E-04	3.8E-05	3.3E-05	2.8E-05	2.2E-05	1.3E-05	1.2E-05
SE	7.4E-05	3.0E-05	2.6E-05	2.3E-05	1.8E-05	1.2E-05	1.1E-05
ESE	6.9E-05	2.6E-05	2.2E-05	1.9E-05	1.5E-05	8.8E-06	8.2E-06
E	6.6E-05	2.8E-05	2.5E-05	2.2E-05	1.8E-05	1.2E-05	1.1E-05
ENE	8.4E-05	3.0E-05	2.5E-05	2.2E-05	1.7E-05	9.5E-06	8.8E-06
NE	9.7E-05	4.1E-05	3.6E-05	3.2E-05	2.6E-05	1.7E-05	1.6E-05
NNE	1.1E-04	4.3E-05	3.8E-05	3.3E-05	2.6E-05	1.6E-05	1.5E-05

	Distance (m)			
Direction	120	150	190	245
N	1.4E-05	9.4E-06	6.3E-06	4.1E-06
NNW	5.6E-06	3.9E-06	2.8E-06	2.0E-06
NW	3.5E-06	2.5E-06	1.9E-06	1.4E-06
WNW	3.0E-06	2.2E-06	1.7E-06	1.3E-06
W	5.0E-06	3.5E-06	2.5E-06	1.8E-06
WSW	5.9E-06	4.1E-06	2.9E-06	2.0E-06
SW	8.0E-06	5.5E-06	3.7E-06	2.6E-06
SSW	1.0E-05	6.9E-06	4.7E-06	3.2E-06
S	1.9E-05	1.2E-05	8.2E-06	5.3E-06
SSE	1.1E-05	7.5E-06	5.1E-06	3.4E-06
SE	9.9E-06	6.7E-06	4.6E-06	3.1E-06
ESE	7.6E-06	5.2E-06	3.6E-06	2.5E-06
E	9.9E-06	6.8E-06	4.6E-06	3.1E-06
ENE	8.2E-06	5.6E-06	3.8E-06	2.6E-06
NE	1.5E-05	9.8E-06	6.5E-06	4.3E-06
NNE	1.4E-05	9.1E-06	6.1E-06	4.0E-06

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Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Population Assessment
Feb 22, 2002 04:02 pm

Facility: Maywood Interim Storage Site - I80 Soil to MISS
Address: 100 W. Hunter Avenue
City: Maywood
State: NJ Zip: 07607-

Source Category: Particulate Emission w radon daughters
Source Type: Area
Emission Year: 2001

Comments: Stone & Webster, Inc. for
U.S. Army Corps of Engineers

Effective Dose Equivalent (mrem/year)
4.47E-06

At This Location: 250 Meters South

Dataset Name: I80 to MISS POP
Dataset Date: Feb 22, 2002 03:41 pm
Wind File: C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
Population File: C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	62 OF113

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 5.10E-11

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	2.21E-08	1.52E-07
BREAST	1.80E-08	1.28E-07
R MAR	2.09E-06	1.35E-05
LUNGS	2.84E-05	1.82E-04
THYROID	1.73E-08	1.21E-07
ENDOST	2.60E-05	1.67E-04
RMNDR	7.92E-08	5.65E-07
EFFEC	4.47E-06	2.87E-05

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	4.62E-09	4.62E-09

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	1.1E-11	1.1E-11
AC-228	Y	1.00	5.6E-10	5.6E-10
BI-211	W	1.00	1.1E-11	1.1E-11
BI-212	W	1.00	5.6E-10	5.6E-10
FR-223	D	1.00	1.5E-13	1.5E-13
PA-234M	Y	1.00	2.3E-10	2.3E-10
PA-231	Y	1.00	1.1E-11	1.1E-11
PB-211	D	1.00	1.1E-11	1.1E-11
PO-211	-	0.00	3.0E-14	3.0E-14
PO-216	W	1.00	5.6E-10	5.6E-10
PB-212	D	1.00	5.6E-10	5.6E-10
PO-212	W	1.00	3.6E-10	3.6E-10
PO-215	W	1.00	1.1E-11	1.1E-11
RA-223	W	1.00	1.1E-11	1.1E-11
RA-224	W	1.00	5.6E-10	5.6E-10
TH-232	Y	1.00	5.6E-10	5.6E-10
TH-228	Y	1.00	5.6E-10	5.6E-10
TH-231	Y	1.00	1.1E-11	1.1E-11
TH-227	Y	1.00	1.1E-11	1.1E-11
TL-208	D	1.00	2.0E-10	2.0E-10
U-235	Y	1.00	1.1E-11	1.1E-11
TL-207	D	1.00	1.1E-11	1.1E-11
U-238	Y	1.00	2.3E-10	2.3E-10
TH-234	Y	1.00	2.3E-10	2.3E-10
PA-234	Y	1.00	3.0E-13	3.0E-13
U-234	Y	1.00	2.5E-10	2.5E-10
TH-230	Y	1.00	2.5E-10	2.5E-10
RA-226	W	1.00	9.9E-11	9.9E-11
PO-218	W	1.00	9.9E-11	9.9E-11
PB-214	D	1.00	9.9E-11	9.9E-11
BI-214	W	1.00	9.9E-11	9.9E-11
PO-214	W	1.00	9.9E-11	9.9E-11
PB-210	D	1.00	9.9E-11	9.9E-11
BI-210	W	1.00	9.9E-11	9.9E-11
PO-210	W	1.00	9.9E-11	9.9E-11
RA-228	W	1.00	5.6E-10	5.6E-10

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 1672.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	65 OF113

Feb 22, 2002 04:02 pm

SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	2.21E-08	1.52E-07
BREAST	1.80E-08	1.28E-07
R MAR	2.09E-06	1.35E-05
LUNGS	2.84E-05	1.82E-04
THYROID	1.73E-08	1.21E-07
ENDOST	2.60E-05	1.67E-04
RMNDR	7.92E-08	5.65E-07
EFFEC	4.47E-06	2.87E-05

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	8.95E-10	6.41E-08
INHALATION	4.47E-06	2.86E-05
AIR IMMERSION	8.31E-12	2.58E-11
GROUND SURFACE	5.99E-10	5.94E-09
INTERNAL	4.47E-06	2.87E-05
EXTERNAL	6.08E-10	5.97E-09
TOTAL	4.47E-06	2.87E-05

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	6.39E-08	4.11E-07
AC-228	4.48E-10	2.43E-09
BI-211	6.81E-14	5.17E-14
BI-212	1.74E-10	5.42E-10
FR-223	3.63E-15	6.41E-15
PA-234M	9.93E-15	6.91E-15
PA-231	4.84E-08	3.12E-07
PB-211	9.37E-13	2.22E-12
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	8.72E-10	5.05E-09
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	8.32E-10	5.36E-09
RA-224	1.81E-08	1.15E-07
TH-232	1.86E-06	1.19E-05
TH-228	1.30E-06	8.37E-06
TH-231	1.01E-13	6.31E-13
TH-227	1.16E-09	7.40E-09
TL-208	3.15E-12	2.58E-12
U-235	1.25E-08	8.11E-08
TL-207	7.70E-16	7.05E-16
U-238	2.50E-07	1.61E-06
TH-234	7.76E-11	5.34E-10
PA-234	8.69E-15	5.41E-14
U-234	3.00E-07	1.93E-06
TH-230	5.71E-07	3.66E-06
RA-226	8.22E-09	5.64E-08
PO-218	3.39E-14	2.77E-14
PB-214	9.70E-13	1.94E-12
BI-214	1.23E-12	2.08E-12
PO-214	0.00E+00	0.00E+00
PB-210	1.28E-08	9.58E-08
BI-210	1.77E-10	1.13E-09
PO-210	7.94E-09	5.48E-08
RA-228	1.27E-08	9.13E-08
TOTAL	4.47E-06	2.87E-05

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	3.3E-06	4.2E-07	1.2E-07	5.2E-08	3.0E-08	2.1E-08	9.4E-09
NNW	1.3E-06	1.6E-07	4.6E-08	1.9E-08	1.1E-08	7.7E-09	3.5E-09
NW	7.1E-07	9.1E-08	2.7E-08	1.1E-08	6.5E-09	4.4E-09	2.0E-09
WNW	6.0E-07	7.6E-08	2.2E-08	9.3E-09	5.4E-09	3.7E-09	1.7E-09
W	1.1E-06	1.4E-07	4.1E-08	1.7E-08	1.0E-08	6.8E-09	3.1E-09
WSW	1.3E-06	1.7E-07	5.0E-08	2.1E-08	1.2E-08	8.2E-09	3.7E-09
SW	1.8E-06	2.3E-07	6.8E-08	2.9E-08	1.7E-08	1.1E-08	5.1E-09
SSW	2.4E-06	3.0E-07	8.9E-08	3.7E-08	2.2E-08	1.5E-08	6.7E-09
S	4.5E-06	5.6E-07	1.6E-07	6.8E-08	4.0E-08	2.7E-08	1.2E-08
SSE	2.6E-06	3.3E-07	9.7E-08	4.1E-08	2.4E-08	1.6E-08	7.4E-09
SE	2.3E-06	3.0E-07	8.7E-08	3.7E-08	2.1E-08	1.5E-08	6.8E-09
ESE	1.7E-06	2.2E-07	6.5E-08	2.8E-08	1.6E-08	1.1E-08	5.0E-09
E	2.3E-06	2.9E-07	8.6E-08	3.6E-08	2.1E-08	1.4E-08	6.6E-09
ENE	1.9E-06	2.4E-07	7.0E-08	2.9E-08	1.7E-08	1.2E-08	5.4E-09
NE	3.5E-06	4.3E-07	1.3E-07	5.3E-08	3.1E-08	2.1E-08	9.7E-09
NNE	3.2E-06	4.0E-07	1.2E-07	4.9E-08	2.8E-08	1.9E-08	8.9E-09

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	3.5E-09	1.6E-09	1.0E-09	6.9E-10	4.9E-10	3.3E-10	2.6E-10
NNW	1.3E-09	5.8E-10	3.6E-10	2.5E-10	1.8E-10	1.2E-10	9.5E-11
NW	7.2E-10	3.2E-10	2.0E-10	1.4E-10	9.9E-11	6.8E-11	5.4E-11
WNW	5.9E-10	2.7E-10	1.6E-10	1.1E-10	8.0E-11	5.6E-11	4.4E-11
W	1.1E-09	4.8E-10	2.9E-10	2.0E-10	1.4E-10	9.8E-11	7.7E-11
WSW	1.3E-09	5.8E-10	3.5E-10	2.4E-10	1.7E-10	1.2E-10	9.1E-11
SW	1.9E-09	8.3E-10	5.1E-10	3.5E-10	2.5E-10	1.7E-10	1.3E-10
SSW	2.5E-09	1.1E-09	6.9E-10	4.8E-10	3.4E-10	2.3E-10	1.8E-10
S	4.6E-09	2.0E-09	1.3E-09	8.9E-10	6.3E-10	4.1E-10	3.3E-10
SSE	2.8E-09	1.3E-09	8.0E-10	5.6E-10	0.0E+00	0.0E+00	0.0E+00
SE	2.5E-09	1.2E-09	7.4E-10	5.2E-10	3.8E-10	0.0E+00	0.0E+00
ESE	1.9E-09	8.8E-10	5.5E-10	3.9E-10	2.8E-10	2.0E-10	1.6E-10
E	2.5E-09	1.1E-09	7.2E-10	5.0E-10	3.6E-10	2.5E-10	2.0E-10
ENE	2.0E-09	9.4E-10	5.9E-10	4.1E-10	3.0E-10	2.1E-10	1.7E-10
NE	3.6E-09	1.6E-09	1.0E-09	7.2E-10	5.2E-10	3.4E-10	2.7E-10
NNE	3.3E-09	1.5E-09	9.5E-10	6.6E-10	4.7E-10	3.1E-10	2.4E-10

COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	2.4E-07	9.2E-08	1.1E-07	7.5E-08	6.1E-08	5.4E-08	2.0E-07
NNW	9.1E-08	3.5E-08	4.0E-08	2.8E-08	2.3E-08	2.0E-08	7.6E-08
NW	5.2E-08	2.0E-08	2.3E-08	1.6E-08	1.3E-08	1.1E-08	4.3E-08
WNW	4.4E-08	1.7E-08	1.9E-08	1.4E-08	1.1E-08	9.6E-09	3.2E-08
W	8.1E-08	3.1E-08	3.6E-08	2.5E-08	2.0E-08	1.8E-08	5.3E-08
WSW	9.7E-08	3.7E-08	4.3E-08	3.0E-08	2.4E-08	2.1E-08	6.4E-08
SW	1.3E-07	5.1E-08	5.9E-08	4.1E-08	3.4E-08	2.9E-08	9.0E-08
SSW	1.8E-07	6.6E-08	7.7E-08	5.4E-08	4.4E-08	3.9E-08	1.5E-07
S	3.3E-07	1.2E-07	1.4E-07	9.8E-08	8.0E-08	7.0E-08	2.7E-07
SSE	1.9E-07	7.2E-08	8.4E-08	5.9E-08	4.8E-08	4.2E-08	2.1E-07
SE	1.7E-07	6.5E-08	7.6E-08	5.3E-08	4.4E-08	3.8E-08	1.5E-07
ESE	1.3E-07	4.8E-08	5.7E-08	4.0E-08	3.3E-08	2.9E-08	1.1E-07
E	1.7E-07	6.4E-08	7.4E-08	5.2E-08	4.3E-08	3.8E-08	1.4E-07
ENE	1.4E-07	5.2E-08	6.1E-08	4.3E-08	3.5E-08	3.1E-08	1.2E-07
NE	2.5E-07	9.5E-08	1.1E-07	7.7E-08	6.3E-08	5.5E-08	2.1E-07
NNE	2.3E-07	8.7E-08	1.0E-07	7.1E-08	5.8E-08	5.1E-08	1.9E-07

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	2.8E-07	1.0E-07	7.6E-08	2.2E-08	1.5E-08	1.2E-08	9.0E-09
NNW	1.1E-07	6.3E-08	1.5E-08	6.9E-09	6.0E-09	4.8E-09	4.2E-09
NW	5.8E-08	2.8E-08	2.3E-08	1.9E-08	5.1E-09	1.9E-09	1.9E-09
WNW	3.6E-08	1.9E-08	1.6E-08	5.3E-09	1.8E-09	1.5E-09	1.2E-09
W	7.6E-08	4.4E-08	1.5E-08	1.3E-08	7.4E-09	4.3E-09	2.5E-09
WSW	1.6E-07	1.1E-07	2.2E-08	1.5E-08	1.3E-08	7.4E-08	3.0E-09
SW	2.4E-07	2.0E-07	1.3E-07	5.6E-08	3.0E-08	1.4E-08	1.8E-08
SSW	3.8E-07	3.0E-07	2.1E-07	1.1E-07	5.7E-08	4.5E-08	7.6E-08
S	1.2E-06	7.9E-07	4.1E-07	2.6E-08	3.4E-08	4.5E-08	3.2E-08
SSE	1.6E-06	1.3E-06	9.8E-07	2.3E-08	0.0E+00	0.0E+00	0.0E+00
SE	2.2E-06	8.6E-07	6.2E-07	2.0E-07	1.4E-08	0.0E+00	0.0E+00
ESE	1.7E-06	4.6E-07	1.7E-07	1.3E-07	8.5E-08	2.2E-08	8.9E-09
E	1.5E-06	3.6E-07	4.5E-08	8.0E-08	3.0E-08	2.4E-08	2.2E-08
ENE	1.8E-07	7.8E-08	5.1E-08	2.7E-08	1.8E-08	1.5E-08	1.4E-08
NE	2.6E-07	1.0E-07	1.2E-07	1.0E-07	9.0E-08	4.7E-08	4.2E-08
NNE	2.4E-07	4.9E-08	8.3E-08	9.0E-08	3.9E-08	1.3E-08	1.1E-08

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Individual Assessment
Feb 26, 2002 08:51 am

```
Facility:  Maywood Interim Storage Site - Spring Loadout
 Address:  100 W. Hunter Avenue
    City:  Maywood
   State:  NJ          Zip:  07607-


Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001


Comments:  Stone & Webster, Inc. for
           U.S. Army Corps of Engineers
```

Effective Dose Equivalent
(mrem/year)

1.02E-03

```
At This Location:    135 Meters South

    Dataset Name:  MISS Spring Load
    Dataset Date:  Feb  26, 2002  08:03 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 135 Meters South
Lifetime Fatal Cancer Risk: 1.15E-08

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	6.43E-06
BREAST	5.49E-06
R MAR	4.83E-04
LUNGS	6.39E-03
THYROID	5.33E-06
ENDOST	6.01E-03
RMNDR	2.64E-05
EFFEC	1.02E-03

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	7.3E-10	7.3E-10
AC-228	Y	1.00	4.0E-08	4.0E-08
BI-211	W	1.00	7.3E-10	7.3E-10
BI-212	W	1.00	4.0E-08	4.0E-08
FR-223	D	1.00	1.0E-11	1.0E-11
PA-234M	Y	1.00	1.6E-08	1.6E-08
PA-231	Y	1.00	7.3E-10	7.3E-10
PB-211	D	1.00	7.3E-10	7.3E-10
PO-211	-	0.00	2.0E-12	2.0E-12
PO-216	W	1.00	4.0E-08	4.0E-08
PB-212	D	1.00	4.0E-08	4.0E-08
PO-212	W	1.00	2.5E-08	2.5E-08
PO-215	W	1.00	7.3E-10	7.3E-10
RA-223	W	1.00	7.3E-10	7.3E-10
RA-224	W	1.00	4.0E-08	4.0E-08
TH-232	Y	1.00	4.0E-08	4.0E-08
TH-228	Y	1.00	4.0E-08	4.0E-08
TH-231	Y	1.00	7.3E-10	7.3E-10
TH-227	Y	1.00	7.2E-10	7.2E-10
TL-208	D	1.00	1.4E-08	1.4E-08
U-235	Y	1.00	7.3E-10	7.3E-10
TL-207	D	1.00	7.3E-10	7.3E-10
U-238	Y	1.00	1.6E-08	1.6E-08
TH-234	Y	1.00	1.6E-08	1.6E-08
PA-234	Y	1.00	2.0E-11	2.0E-11
U-234	Y	1.00	1.7E-08	1.7E-08
TH-230	Y	1.00	1.7E-08	1.7E-08
RA-226	W	1.00	5.0E-09	5.0E-09
PO-218	W	1.00	5.0E-09	5.0E-09
PB-214	D	1.00	5.0E-09	5.0E-09
BI-214	W	1.00	5.0E-09	5.0E-09
PO-214	W	1.00	5.0E-09	5.0E-09
PB-210	D	1.00	5.0E-09	5.0E-09
BI-210	W	1.00	5.0E-09	5.0E-09
PO-210	W	1.00	5.0E-09	5.0E-09
RA-228	W	1.00	4.0E-08	4.0E-08

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	72 OF113

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 2461.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

135 145 155 160 165 185 190 215 225 235
250 255 270

Feb 26, 2002 08:51 am

SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	6.43E-06
BREAST	5.49E-06
R MAR	4.83E-04
LUNGS	6.39E-03
THYROID	5.33E-06
ENDOST	6.01E-03
RMNDR	2.64E-05
EFFEC	1.02E-03

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	1.13E-05
INHALATION	1.00E-03
AIR IMMERSION	1.97E-09
GROUND SURFACE	1.22E-07
INTERNAL	1.02E-03
EXTERNAL	1.24E-07
TOTAL	1.02E-03

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	1.41E-05
AC-228	1.03E-07
BI-211	1.84E-11
BI-212	4.00E-08
FR-223	8.08E-13
PA-234M	3.10E-12
PA-231	1.07E-05
PB-211	2.06E-10
PO-211	2.73E-30
PO-216	0.00E+00
PB-212	1.99E-07
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	1.89E-07
RA-224	4.16E-06
TH-232	4.25E-04
TH-228	2.98E-04
TH-231	2.19E-11
TH-227	2.52E-07
TL-208	8.43E-10
U-235	2.76E-06
TL-207	1.87E-13
U-238	5.53E-05
TH-234	2.41E-08
PA-234	1.88E-12
U-234	6.66E-05
TH-230	1.25E-04
RA-226	1.86E-06
PO-218	6.55E-12
PB-214	1.63E-10
BI-214	2.08E-10
PO-214	0.00E+00
PB-210	4.27E-06
BI-210	2.93E-08
PO-210	1.92E-06
RA-228	4.99E-06
TOTAL	1.02E-03

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

Distance (m)

Direction	135	145	155	160	165	185	190
N	7.6E-04	6.6E-04	5.8E-04	5.5E-04	5.2E-04	4.2E-04	4.0E-04
NNW	2.9E-04	2.5E-04	2.2E-04	2.1E-04	2.0E-04	1.6E-04	1.6E-04
NW	1.7E-04	1.5E-04	1.3E-04	1.2E-04	1.2E-04	9.6E-05	9.2E-05
WNW	1.4E-04	1.2E-04	1.1E-04	1.0E-04	9.9E-05	8.2E-05	7.8E-05
W	2.5E-04	2.2E-04	2.0E-04	1.9E-04	1.8E-04	1.4E-04	1.4E-04
WSW	3.0E-04	2.6E-04	2.3E-04	2.2E-04	2.1E-04	1.7E-04	1.6E-04
SW	4.2E-04	3.7E-04	3.2E-04	3.0E-04	2.9E-04	2.3E-04	2.2E-04
SSW	5.5E-04	4.8E-04	4.2E-04	4.0E-04	3.7E-04	3.0E-04	2.9E-04
S	1.0E-03	8.8E-04	7.8E-04	7.3E-04	6.9E-04	5.6E-04	5.3E-04
SSE	5.9E-04	5.2E-04	4.6E-04	4.3E-04	4.1E-04	3.3E-04	3.1E-04
SE	5.3E-04	4.6E-04	4.1E-04	3.8E-04	3.6E-04	2.9E-04	2.8E-04
ESE	4.0E-04	3.5E-04	3.1E-04	2.9E-04	2.7E-04	2.2E-04	2.1E-04
E	5.3E-04	4.6E-04	4.1E-04	3.8E-04	3.6E-04	2.9E-04	2.8E-04
ENE	4.3E-04	3.7E-04	3.3E-04	3.1E-04	3.0E-04	2.4E-04	2.3E-04
NE	7.9E-04	6.9E-04	6.1E-04	5.8E-04	5.4E-04	4.4E-04	4.2E-04
NNE	7.3E-04	6.4E-04	5.6E-04	5.3E-04	5.0E-04	4.0E-04	3.8E-04

Distance (m)

Direction	215	225	235	250	255	270
N	3.2E-04	2.9E-04	2.7E-04	2.4E-04	2.3E-04	2.1E-04
NNW	1.2E-04	1.2E-04	1.1E-04	9.6E-05	9.3E-05	8.4E-05
NW	7.5E-05	6.9E-05	6.5E-05	5.9E-05	5.7E-05	5.2E-05
WNW	6.4E-05	5.9E-05	5.5E-05	5.0E-05	4.9E-05	4.5E-05
W	1.1E-04	1.0E-04	9.5E-05	8.6E-05	8.3E-05	7.6E-05
WSW	1.3E-04	1.2E-04	1.1E-04	1.0E-04	9.8E-05	8.9E-05
SW	1.8E-04	1.6E-04	1.5E-04	1.4E-04	1.3E-04	1.2E-04
SSW	2.3E-04	2.1E-04	2.0E-04	1.8E-04	1.7E-04	1.5E-04
S	4.2E-04	3.9E-04	3.6E-04	3.2E-04	3.1E-04	2.8E-04
SSE	2.5E-04	2.3E-04	2.1E-04	1.9E-04	1.8E-04	1.7E-04
SE	2.2E-04	2.1E-04	1.9E-04	1.7E-04	1.7E-04	1.5E-04
ESE	1.7E-04	1.6E-04	1.5E-04	1.3E-04	1.3E-04	1.1E-04
E	2.2E-04	2.1E-04	1.9E-04	1.7E-04	1.7E-04	1.5E-04
ENE	1.8E-04	1.7E-04	1.6E-04	1.4E-04	1.4E-04	1.2E-04
NE	3.3E-04	3.1E-04	2.8E-04	2.5E-04	2.4E-04	2.2E-04
NNE	3.1E-04	2.8E-04	2.6E-04	2.3E-04	2.2E-04	2.0E-04

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C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Population Assessment
Feb 26, 2002 08:51 am

```
Facility:  Maywood Interim Storage Site - Spring Loadout
 Address:  100 W. Hunter Avenue
    City:  Maywood
   State:  NJ          Zip:  07607-

Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001

Comments:  Stone & Webster, Inc. for
           U.S. Army Corps of Engineers
```

Effective Dose Equivalent
(mrem/year)

3.11E-04

```
At This Location:    250 Meters South

    Dataset Name:  MISS Spring Pop.
    Dataset Date:  Feb  26, 2002  08:05 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
 Population File:  C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP
```

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 3.55E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.49E-06	1.02E-05
BREAST	1.22E-06	8.61E-06
R MAR	1.45E-04	9.35E-04
LUNGS	1.98E-03	1.27E-02
THYROID	1.17E-06	8.14E-06
ENDOST	1.81E-03	1.16E-02
RMNDR	5.02E-06	3.56E-05
EFFEC	3.11E-04	2.00E-03

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	3.22E-07	3.22E-07

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SYNOPSIS
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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	7.3E-10	7.3E-10
AC-228	Y	1.00	4.0E-08	4.0E-08
BI-211	W	1.00	7.3E-10	7.3E-10
BI-212	W	1.00	4.0E-08	4.0E-08
FR-223	D	1.00	1.0E-11	1.0E-11
PA-234M	Y	1.00	1.6E-08	1.6E-08
PA-231	Y	1.00	7.3E-10	7.3E-10
PB-211	D	1.00	7.3E-10	7.3E-10
PO-211	-	0.00	2.0E-12	2.0E-12
PO-216	W	1.00	4.0E-08	4.0E-08
PB-212	D	1.00	4.0E-08	4.0E-08
PO-212	W	1.00	2.5E-08	2.5E-08
PO-215	W	1.00	7.3E-10	7.3E-10
RA-223	W	1.00	7.3E-10	7.3E-10
RA-224	W	1.00	4.0E-08	4.0E-08
TH-232	Y	1.00	4.0E-08	4.0E-08
TH-228	Y	1.00	4.0E-08	4.0E-08
TH-231	Y	1.00	7.3E-10	7.3E-10
TH-227	Y	1.00	7.2E-10	7.2E-10
TL-208	D	1.00	1.4E-08	1.4E-08
U-235	Y	1.00	7.3E-10	7.3E-10
TL-207	D	1.00	7.3E-10	7.3E-10
U-238	Y	1.00	1.6E-08	1.6E-08
TH-234	Y	1.00	1.6E-08	1.6E-08
PA-234	Y	1.00	2.0E-11	2.0E-11
U-234	Y	1.00	1.7E-08	1.7E-08
TH-230	Y	1.00	1.7E-08	1.7E-08
RA-226	W	1.00	5.0E-09	5.0E-09
PO-218	W	1.00	5.0E-09	5.0E-09
PB-214	D	1.00	5.0E-09	5.0E-09
BI-214	W	1.00	5.0E-09	5.0E-09
PO-214	W	1.00	5.0E-09	5.0E-09
PB-210	D	1.00	5.0E-09	5.0E-09
BI-210	W	1.00	5.0E-09	5.0E-09
PO-210	W	1.00	5.0E-09	5.0E-09
RA-228	W	1.00	4.0E-08	4.0E-08

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

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SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 2461.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

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SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.49E-06	1.02E-05
BREAST	1.22E-06	8.61E-06
R MAR	1.45E-04	9.35E-04
LUNGS	1.98E-03	1.27E-02
THYROID	1.17E-06	8.14E-06
ENDOST	1.81E-03	1.16E-02
RMNDR	5.02E-06	3.56E-05
EFFEC	3.11E-04	2.00E-03

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	5.59E-08	4.00E-06
INHALATION	3.11E-04	1.99E-03
AIR IMMERSION	5.68E-10	1.79E-09
GROUND SURFACE	3.85E-08	3.81E-07
INTERNAL	3.11E-04	2.00E-03
EXTERNAL	3.90E-08	3.83E-07
TOTAL	3.11E-04	2.00E-03

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SUMMARY
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NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	4.28E-06	2.75E-05
AC-228	3.17E-08	1.72E-07
BI-211	4.56E-12	3.47E-12
BI-212	1.23E-08	3.83E-08
FR-223	2.44E-13	4.32E-13
PA-234M	6.68E-13	4.65E-13
PA-231	3.24E-06	2.09E-05
PB-211	6.29E-11	1.49E-10
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	6.17E-08	3.57E-07
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	5.58E-08	3.59E-07
RA-224	1.28E-06	8.11E-06
TH-232	1.31E-04	8.43E-04
TH-228	9.23E-05	5.92E-04
TH-231	6.80E-12	4.23E-11
TH-227	7.79E-08	4.98E-07
TL-208	2.22E-10	1.82E-10
U-235	8.36E-07	5.44E-06
TL-207	5.20E-14	4.76E-14
U-238	1.68E-05	1.08E-04
TH-234	5.22E-09	3.59E-08
PA-234	5.84E-13	3.63E-12
U-234	2.02E-05	1.30E-04
TH-230	3.85E-05	2.47E-04
RA-226	4.19E-07	2.87E-06
PO-218	1.73E-12	1.41E-12
PB-214	4.94E-11	9.88E-11
BI-214	6.28E-11	1.06E-10
PO-214	0.00E+00	0.00E+00
PB-210	6.51E-07	4.88E-06
BI-210	9.04E-09	5.74E-08
PO-210	4.05E-07	2.79E-06
RA-228	9.00E-07	6.46E-06
TOTAL	3.11E-04	2.00E-03

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	2.3E-04	2.9E-05	8.6E-06	3.6E-06	2.1E-06	1.4E-06	6.5E-07
NNW	8.7E-05	1.1E-05	3.2E-06	1.4E-06	7.9E-07	5.4E-07	2.4E-07
NW	5.0E-05	6.3E-06	1.8E-06	7.7E-07	4.5E-07	3.1E-07	1.4E-07
WNW	4.2E-05	5.3E-06	1.5E-06	6.5E-07	3.8E-07	2.6E-07	1.2E-07
W	7.7E-05	9.9E-06	2.9E-06	1.2E-06	7.0E-07	4.8E-07	2.1E-07
WSW	9.2E-05	1.2E-05	3.5E-06	1.4E-06	8.4E-07	5.7E-07	2.6E-07
SW	1.3E-04	1.6E-05	4.7E-06	2.0E-06	1.2E-06	7.9E-07	3.6E-07
SSW	1.7E-04	2.1E-05	6.2E-06	2.6E-06	1.5E-06	1.0E-06	4.7E-07
S	3.1E-04	3.9E-05	1.1E-05	4.7E-06	2.8E-06	1.9E-06	8.6E-07
SSE	1.8E-04	2.3E-05	6.7E-06	2.8E-06	1.7E-06	1.1E-06	5.2E-07
SE	1.6E-04	2.1E-05	6.1E-06	2.6E-06	1.5E-06	1.0E-06	4.7E-07
ESE	1.2E-04	1.5E-05	4.5E-06	1.9E-06	1.1E-06	7.6E-07	3.5E-07
E	1.6E-04	2.0E-05	6.0E-06	2.5E-06	1.5E-06	1.0E-06	4.6E-07
ENE	1.3E-04	1.7E-05	4.9E-06	2.0E-06	1.2E-06	8.2E-07	3.8E-07
NE	2.4E-04	3.0E-05	8.8E-06	3.7E-06	2.2E-06	1.5E-06	6.7E-07
NNE	2.2E-04	2.8E-05	8.1E-06	3.4E-06	2.0E-06	1.4E-06	6.2E-07

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	2.4E-07	1.1E-07	6.9E-08	4.8E-08	3.4E-08	2.3E-08	1.8E-08
NNW	8.9E-08	4.0E-08	2.5E-08	1.7E-08	1.2E-08	8.3E-09	6.6E-09
NW	5.0E-08	2.3E-08	1.4E-08	9.6E-09	6.9E-09	4.7E-09	3.7E-09
WNW	4.1E-08	1.8E-08	1.1E-08	7.8E-09	5.6E-09	3.9E-09	3.1E-09
W	7.6E-08	3.4E-08	2.0E-08	1.4E-08	9.9E-09	6.8E-09	5.4E-09
WSW	9.1E-08	4.0E-08	2.5E-08	1.7E-08	1.2E-08	8.0E-09	6.3E-09
SW	1.3E-07	5.8E-08	3.6E-08	2.4E-08	1.7E-08	1.2E-08	9.2E-09
SSW	1.7E-07	7.7E-08	4.8E-08	3.3E-08	2.4E-08	1.6E-08	1.3E-08
S	3.2E-07	1.4E-07	9.0E-08	6.2E-08	4.4E-08	2.9E-08	2.3E-08
SSE	1.9E-07	8.9E-08	5.6E-08	3.9E-08	0.0E+00	0.0E+00	0.0E+00
SE	1.7E-07	8.2E-08	5.2E-08	3.6E-08	2.6E-08	0.0E+00	0.0E+00
ESE	1.3E-07	6.1E-08	3.8E-08	2.7E-08	2.0E-08	1.4E-08	1.1E-08
E	1.7E-07	7.9E-08	5.0E-08	3.5E-08	2.5E-08	1.7E-08	1.4E-08
ENE	1.4E-07	6.5E-08	4.1E-08	2.9E-08	2.1E-08	1.4E-08	1.2E-08
NE	2.5E-07	1.1E-07	7.2E-08	5.0E-08	3.6E-08	2.4E-08	1.9E-08
NNE	2.3E-07	1.0E-07	6.6E-08	4.6E-08	3.3E-08	2.1E-08	1.7E-08

COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

Direction	Distance (m) 250	750	1500	2500	3500	4500	7500
N	1.7E-05	6.4E-06	7.4E-06	5.2E-06	4.3E-06	3.7E-06	1.4E-05
NNW	6.4E-06	2.4E-06	2.8E-06	2.0E-06	1.6E-06	1.4E-06	5.3E-06
NW	3.6E-06	1.4E-06	1.6E-06	1.1E-06	9.1E-07	8.0E-07	3.0E-06
WNW	3.0E-06	1.2E-06	1.3E-06	9.4E-07	7.6E-07	6.7E-07	2.3E-06
W	5.6E-06	2.2E-06	2.5E-06	1.8E-06	1.4E-06	1.2E-06	3.7E-06
WSW	6.7E-06	2.6E-06	3.0E-06	2.1E-06	1.7E-06	1.5E-06	4.5E-06
SW	9.3E-06	3.5E-06	4.1E-06	2.9E-06	2.3E-06	2.0E-06	6.3E-06
SSW	1.2E-05	4.6E-06	5.4E-06	3.8E-06	3.1E-06	2.7E-06	1.0E-05
S	2.3E-05	8.4E-06	9.8E-06	6.8E-06	5.6E-06	4.9E-06	1.9E-05
SSE	1.3E-05	5.0E-06	5.8E-06	4.1E-06	3.3E-06	2.9E-06	1.5E-05
SE	1.2E-05	4.5E-06	5.3E-06	3.7E-06	3.0E-06	2.7E-06	1.0E-05
ESE	8.9E-06	3.4E-06	3.9E-06	2.8E-06	2.3E-06	2.0E-06	7.6E-06
E	1.2E-05	4.5E-06	5.2E-06	3.6E-06	3.0E-06	2.6E-06	1.0E-05
ENE	9.6E-06	3.6E-06	4.2E-06	3.0E-06	2.4E-06	2.1E-06	8.2E-06
NE	1.8E-05	6.6E-06	7.6E-06	5.4E-06	4.4E-06	3.8E-06	1.5E-05
NNE	1.6E-05	6.1E-06	7.0E-06	4.9E-06	4.0E-06	3.5E-06	1.3E-05

Direction	Distance (m) 15000	25000	35000	45000	55000	65000	75000
N	2.0E-05	7.2E-06	5.3E-06	1.6E-06	1.1E-06	8.2E-07	6.3E-07
NNW	7.7E-06	4.4E-06	1.0E-06	4.8E-07	4.2E-07	3.4E-07	2.9E-07
NW	4.1E-06	1.9E-06	1.6E-06	1.3E-06	3.6E-07	1.3E-07	1.3E-07
WNW	2.5E-06	1.3E-06	1.1E-06	3.7E-07	1.3E-07	1.0E-07	8.3E-08
W	5.3E-06	3.1E-06	1.1E-06	9.0E-07	5.1E-07	3.0E-07	1.8E-07
WSW	1.1E-05	7.3E-06	1.5E-06	1.1E-06	9.0E-07	5.2E-06	2.0E-07
SW	1.7E-05	1.4E-05	9.2E-06	3.9E-06	2.1E-06	9.9E-07	1.3E-06
SSW	2.6E-05	2.1E-05	1.5E-05	7.6E-06	3.9E-06	3.1E-06	5.3E-06
S	8.1E-05	5.5E-05	2.8E-05	1.8E-06	2.3E-06	3.1E-06	2.2E-06
SSE	1.1E-04	9.4E-05	6.8E-05	1.6E-06	0.0E+00	0.0E+00	0.0E+00
SE	1.5E-04	6.0E-05	4.3E-05	1.4E-05	1.0E-06	0.0E+00	0.0E+00
ESE	1.2E-04	3.2E-05	1.2E-05	8.9E-06	5.9E-06	1.5E-06	6.2E-07
E	1.1E-04	2.5E-05	3.1E-06	5.5E-06	2.1E-06	1.7E-06	1.5E-06
ENE	1.3E-05	5.4E-06	3.6E-06	1.9E-06	1.2E-06	1.0E-06	9.4E-07
NE	1.8E-05	7.1E-06	8.1E-06	7.1E-06	6.3E-06	3.2E-06	2.9E-06
NNE	1.6E-05	3.4E-06	5.8E-06	6.2E-06	2.7E-06	8.8E-07	7.5E-07

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Individual Assessment
Feb 26, 2002 09:04 am

```
      Facility:  Maywood Interim Storage Site - Fall Loadout
       Address:  100 W. Hunter Avenue
          City:  Maywood
         State:  NJ          Zip:  07607-

Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001

      Comments:  Stone & Webster, Inc. for
                 U.S. Army Corps of Engineers
```

Effective Dose Equivalent (mrem/year)
1.15E-04

```
At This Location:    135 Meters South

    Dataset Name:  MISS Fall Load
    Dataset Date:  Feb  26, 2002  09:03 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 135 Meters South
Lifetime Fatal Cancer Risk: 1.32E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	8.23E-07
BREAST	7.80E-07
R MAR	5.38E-05
LUNGS	7.24E-04
THYROID	7.65E-07
ENDOST	6.69E-04
RMNDR	3.81E-06
EFFEC	1.15E-04

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SYNOPSIS
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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	3.8E-11	3.8E-11
AC-228	Y	1.00	5.4E-09	5.4E-09
BI-211	W	1.00	3.8E-11	3.8E-11
BI-212	W	1.00	5.4E-09	5.4E-09
FR-223	D	1.00	5.2E-13	5.2E-13
PA-234M	Y	1.00	8.1E-10	8.1E-10
PA-231	Y	1.00	3.8E-11	3.8E-11
PB-211	D	1.00	3.8E-11	3.8E-11
PO-211	-	0.00	1.0E-13	1.0E-13
PO-216	W	1.00	5.4E-09	5.4E-09
PB-212	D	1.00	5.4E-09	5.4E-09
PO-212	W	1.00	3.4E-09	3.4E-09
PO-215	W	1.00	3.8E-11	3.8E-11
RA-223	W	1.00	3.8E-11	3.8E-11
RA-224	W	1.00	5.4E-09	5.4E-09
TH-232	Y	1.00	5.4E-09	5.4E-09
TH-228	Y	1.00	5.4E-09	5.4E-09
TH-231	Y	1.00	3.8E-11	3.8E-11
TH-227	Y	1.00	3.7E-11	3.7E-11
TL-208	D	1.00	1.9E-09	1.9E-09
U-235	Y	1.00	3.8E-11	3.8E-11
TL-207	D	1.00	3.8E-11	3.8E-11
U-238	Y	1.00	8.1E-10	8.1E-10
TH-234	Y	1.00	8.1E-10	8.1E-10
PA-234	Y	1.00	1.1E-12	1.1E-12
U-234	Y	1.00	8.6E-10	8.6E-10
TH-230	Y	1.00	8.6E-10	8.6E-10
RA-226	W	1.00	1.3E-09	1.3E-09
PO-218	W	1.00	1.3E-09	1.3E-09
PB-214	D	1.00	1.3E-09	1.3E-09
BI-214	W	1.00	1.3E-09	1.3E-09
PO-214	W	1.00	1.3E-09	1.3E-09
PB-210	D	1.00	1.3E-09	1.3E-09
BI-210	W	1.00	1.3E-09	1.3E-09
PO-210	W	1.00	1.3E-09	1.3E-09
RA-228	W	1.00	5.4E-09	5.4E-09

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	87 OF113

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SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 179.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

135	145	155	160	165	185	190	215	225	235
250	255	270							

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ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	8.23E-07
BREAST	7.80E-07
R MAR	5.38E-05
LUNGS	7.24E-04
THYROID	7.65E-07
ENDOST	6.69E-04
RMNDR	3.81E-06
EFFEC	1.15E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	1.59E-06
INHALATION	1.13E-04
AIR IMMERSION	2.83E-10
GROUND SURFACE	1.16E-08
INTERNAL	1.15E-04
EXTERNAL	1.19E-08
TOTAL	1.15E-04

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SUMMARY
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NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	7.23E-07
AC-228	1.38E-08
BI-211	9.44E-13
BI-212	5.39E-09
FR-223	4.15E-14
PA-234M	1.60E-13
PA-231	5.52E-07
PB-211	1.06E-11
PO-211	1.28E-31
PO-216	0.00E+00
PB-212	2.68E-08
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	9.72E-09
RA-224	5.60E-07
TH-232	5.73E-05
TH-228	4.02E-05
TH-231	1.13E-12
TH-227	1.30E-08
TL-208	1.13E-10
U-235	1.42E-07
TL-207	9.60E-15
U-238	2.85E-06
TH-234	1.24E-09
PA-234	9.68E-14
U-234	3.42E-06
TH-230	6.41E-06
RA-226	4.68E-07
PO-218	1.64E-12
PB-214	4.08E-11
BI-214	5.21E-11
PO-214	0.00E+00
PB-210	1.07E-06
BI-210	7.34E-09
PO-210	4.81E-07
RA-228	6.72E-07
TOTAL	1.15E-04

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	135	145	155	160	165	185	190
N	8.6E-05	7.5E-05	6.6E-05	6.3E-05	5.9E-05	4.8E-05	4.6E-05
NNW	3.3E-05	2.9E-05	2.6E-05	2.4E-05	2.3E-05	1.9E-05	1.8E-05
NW	1.9E-05	1.7E-05	1.5E-05	1.4E-05	1.4E-05	1.1E-05	1.1E-05
WNW	1.6E-05	1.4E-05	1.3E-05	1.2E-05	1.2E-05	9.5E-06	9.1E-06
W	2.9E-05	2.5E-05	2.3E-05	2.1E-05	2.0E-05	1.7E-05	1.6E-05
WSW	3.4E-05	3.0E-05	2.7E-05	2.5E-05	2.4E-05	2.0E-05	1.9E-05
SW	4.7E-05	4.2E-05	3.7E-05	3.5E-05	3.3E-05	2.7E-05	2.6E-05
SSW	6.2E-05	5.4E-05	4.8E-05	4.5E-05	4.3E-05	3.5E-05	3.3E-05
S	1.1E-04	1.0E-04	8.9E-05	8.4E-05	7.9E-05	6.4E-05	6.1E-05
SSE	6.7E-05	5.9E-05	5.2E-05	4.9E-05	4.7E-05	3.8E-05	3.6E-05
SE	6.0E-05	5.2E-05	4.6E-05	4.4E-05	4.1E-05	3.4E-05	3.2E-05
ESE	4.5E-05	4.0E-05	3.5E-05	3.3E-05	3.1E-05	2.6E-05	2.4E-05
E	6.0E-05	5.3E-05	4.7E-05	4.4E-05	4.2E-05	3.4E-05	3.2E-05
ENE	4.9E-05	4.3E-05	3.8E-05	3.6E-05	3.4E-05	2.7E-05	2.6E-05
NE	9.0E-05	7.9E-05	6.9E-05	6.5E-05	6.2E-05	5.0E-05	4.8E-05
NNE	8.3E-05	7.2E-05	6.4E-05	6.0E-05	5.7E-05	4.6E-05	4.4E-05

	Distance (m)					
Direction	215	225	235	250	255	270
N	3.6E-05	3.4E-05	3.1E-05	2.8E-05	2.7E-05	2.4E-05
NNW	1.4E-05	1.3E-05	1.2E-05	1.1E-05	1.1E-05	9.8E-06
NW	8.7E-06	8.1E-06	7.6E-06	6.9E-06	6.7E-06	6.1E-06
WNW	7.5E-06	7.0E-06	6.5E-06	6.0E-06	5.8E-06	5.3E-06
W	1.3E-05	1.2E-05	1.1E-05	1.0E-05	9.7E-06	8.8E-06
WSW	1.5E-05	1.4E-05	1.3E-05	1.2E-05	1.1E-05	1.0E-05
SW	2.1E-05	1.9E-05	1.8E-05	1.6E-05	1.5E-05	1.4E-05
SSW	2.6E-05	2.4E-05	2.3E-05	2.0E-05	2.0E-05	1.8E-05
S	4.8E-05	4.4E-05	4.1E-05	3.7E-05	3.5E-05	3.2E-05
SSE	2.9E-05	2.7E-05	2.5E-05	2.2E-05	2.1E-05	1.9E-05
SE	2.6E-05	2.4E-05	2.2E-05	2.0E-05	1.9E-05	1.7E-05
ESE	2.0E-05	1.8E-05	1.7E-05	1.5E-05	1.5E-05	1.3E-05
E	2.6E-05	2.4E-05	2.2E-05	2.0E-05	1.9E-05	1.7E-05
ENE	2.1E-05	1.9E-05	1.8E-05	1.6E-05	1.6E-05	1.4E-05
NE	3.8E-05	3.5E-05	3.2E-05	2.9E-05	2.8E-05	2.5E-05
NNE	3.5E-05	3.2E-05	3.0E-05	2.7E-05	2.6E-05	2.3E-05

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Population Assessment
Feb 26, 2002 09:04 am

Facility: Maywood Interim Storage Site - Fall Loadout
Address: 100 W. Hunter Avenue
City: Maywood
State: NJ   Zip: 07607-

Source Category: Particulate Emission w radon daughters
Source Type: Area
Emission Year: 2001

Comments: Stone & Webster, Inc. for
U.S. Army Corps of Engineers

Effective Dose Equivalent
(mrem/year)

3.53E-05

At This Location: 250 Meters South

Dataset Name: MISS Fall Pop.
Dataset Date: Feb 26, 2002 09:04 am
Wind File: C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
Population File: C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO. 08575.0207	DISCIPLINE E(B)	CALCULATION NO. 04	REVISION NUMBER 0	PAGE 92 OF113

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SYNOPSIS
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MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 4.09E-10

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.77E-07	1.23E-06
BREAST	1.65E-07	1.17E-06
R MAR	1.62E-05	1.04E-04
LUNGS	2.25E-04	1.44E-03
THYROID	1.61E-07	1.12E-06
ENDOST	2.01E-04	1.30E-03
RMNDR	6.88E-07	4.94E-06
EFFEC	3.53E-05	2.27E-04

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	3.71E-08	3.71E-08

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SYNOPSIS
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RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	3.8E-11	3.8E-11
AC-228	Y	1.00	5.4E-09	5.4E-09
BI-211	W	1.00	3.8E-11	3.8E-11
BI-212	W	1.00	5.4E-09	5.4E-09
FR-223	D	1.00	5.2E-13	5.2E-13
PA-234M	Y	1.00	8.1E-10	8.1E-10
PA-231	Y	1.00	3.8E-11	3.8E-11
PB-211	D	1.00	3.8E-11	3.8E-11
PO-211	-	0.00	1.0E-13	1.0E-13
PO-216	W	1.00	5.4E-09	5.4E-09
PB-212	D	1.00	5.4E-09	5.4E-09
PO-212	W	1.00	3.4E-09	3.4E-09
PO-215	W	1.00	3.8E-11	3.8E-11
RA-223	W	1.00	3.8E-11	3.8E-11
RA-224	W	1.00	5.4E-09	5.4E-09
TH-232	Y	1.00	5.4E-09	5.4E-09
TH-228	Y	1.00	5.4E-09	5.4E-09
TH-231	Y	1.00	3.8E-11	3.8E-11
TH-227	Y	1.00	3.7E-11	3.7E-11
TL-208	D	1.00	1.9E-09	1.9E-09
U-235	Y	1.00	3.8E-11	3.8E-11
TL-207	D	1.00	3.8E-11	3.8E-11
U-238	Y	1.00	8.1E-10	8.1E-10
TH-234	Y	1.00	8.1E-10	8.1E-10
PA-234	Y	1.00	1.1E-12	1.1E-12
U-234	Y	1.00	8.6E-10	8.6E-10
TH-230	Y	1.00	8.6E-10	8.6E-10
RA-226	W	1.00	1.3E-09	1.3E-09
PO-218	W	1.00	1.3E-09	1.3E-09
PB-214	D	1.00	1.3E-09	1.3E-09
BI-214	W	1.00	1.3E-09	1.3E-09
PO-214	W	1.00	1.3E-09	1.3E-09
PB-210	D	1.00	1.3E-09	1.3E-09
BI-210	W	1.00	1.3E-09	1.3E-09
PO-210	W	1.00	1.3E-09	1.3E-09
RA-228	W	1.00	5.4E-09	5.4E-09

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 179.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

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SUMMARY
Page 1

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.77E-07	1.23E-06
BREAST	1.65E-07	1.17E-06
R MAR	1.62E-05	1.04E-04
LUNGS	2.25E-04	1.44E-03
THYROID	1.61E-07	1.12E-06
ENDOST	2.01E-04	1.30E-03
RMNDR	6.88E-07	4.94E-06
EFFEC	3.53E-05	2.27E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	7.90E-09	5.63E-07
INHALATION	3.53E-05	2.26E-04
AIR IMMERSION	8.24E-11	2.51E-10
GROUND SURFACE	3.67E-09	3.63E-08
INTERNAL	3.53E-05	2.27E-04
EXTERNAL	3.75E-09	3.66E-08
TOTAL	3.53E-05	2.27E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	2.22E-07	1.42E-06
AC-228	4.29E-09	2.33E-08
BI-211	2.36E-13	1.79E-13
BI-212	1.66E-09	5.19E-09
FR-223	1.26E-14	2.23E-14
PA-234M	3.46E-14	2.40E-14
PA-231	1.68E-07	1.08E-06
PB-211	3.25E-12	7.71E-12
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	8.35E-09	4.83E-08
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	2.89E-09	1.86E-08
RA-224	1.74E-07	1.10E-06
TH-232	1.78E-05	1.14E-04
TH-228	1.25E-05	8.01E-05
TH-231	3.52E-13	2.19E-12
TH-227	4.03E-09	2.58E-08
TL-208	3.01E-11	2.46E-11
U-235	4.32E-08	2.81E-07
TL-207	2.69E-15	2.46E-15
U-238	8.68E-07	5.58E-06
TH-234	2.70E-10	1.86E-09
PA-234	3.02E-14	1.88E-13
U-234	1.04E-06	6.71E-06
TH-230	1.99E-06	1.27E-05
RA-226	1.06E-07	7.24E-07
PO-218	4.35E-13	3.56E-13
PB-214	1.25E-11	2.49E-11
BI-214	1.58E-11	2.67E-11
PO-214	0.00E+00	0.00E+00
PB-210	1.64E-07	1.23E-06
BI-210	2.28E-09	1.45E-08
PO-210	1.02E-07	7.04E-07
RA-228	1.22E-07	8.74E-07
TOTAL	3.53E-05	2.27E-04

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SUMMARY
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INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	2.6E-05	3.3E-06	9.7E-07	4.1E-07	2.4E-07	1.6E-07	7.4E-08
NNW	9.9E-06	1.2E-06	3.6E-07	1.5E-07	8.9E-08	6.1E-08	2.8E-08
NW	5.6E-06	7.2E-07	2.1E-07	8.8E-08	5.1E-08	3.5E-08	1.6E-08
WNW	4.7E-06	6.0E-07	1.8E-07	7.4E-08	4.3E-08	2.9E-08	1.3E-08
W	8.7E-06	1.1E-06	3.3E-07	1.4E-07	7.9E-08	5.4E-08	2.4E-08
WSW	1.0E-05	1.3E-06	3.9E-07	1.6E-07	9.5E-08	6.5E-08	2.9E-08
SW	1.4E-05	1.8E-06	5.4E-07	2.3E-07	1.3E-07	8.9E-08	4.0E-08
SSW	1.9E-05	2.4E-06	7.0E-07	2.9E-07	1.7E-07	1.2E-07	5.3E-08
S	3.5E-05	4.4E-06	1.3E-06	5.4E-07	3.1E-07	2.1E-07	9.7E-08
SSE	2.1E-05	2.6E-06	7.6E-07	3.2E-07	1.9E-07	1.3E-07	5.9E-08
SE	1.8E-05	2.3E-06	6.9E-07	2.9E-07	1.7E-07	1.2E-07	5.3E-08
ESE	1.4E-05	1.8E-06	5.2E-07	2.2E-07	1.3E-07	8.7E-08	4.0E-08
E	1.8E-05	2.3E-06	6.8E-07	2.8E-07	1.7E-07	1.1E-07	5.2E-08
ENE	1.5E-05	1.9E-06	5.5E-07	2.3E-07	1.4E-07	9.3E-08	4.3E-08
NE	2.8E-05	3.4E-06	1.0E-06	4.2E-07	2.4E-07	1.7E-07	7.6E-08
NNE	2.5E-05	3.1E-06	9.2E-07	3.8E-07	2.2E-07	1.5E-07	7.0E-08

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	2.7E-08	1.3E-08	7.9E-09	5.4E-09	3.9E-09	2.6E-09	2.1E-09
NNW	1.0E-08	4.6E-09	2.8E-09	2.0E-09	1.4E-09	9.5E-10	7.5E-10
NW	5.7E-09	2.6E-09	1.6E-09	1.1E-09	7.8E-10	5.4E-10	4.3E-10
WNW	4.7E-09	2.1E-09	1.3E-09	8.8E-10	6.3E-10	4.4E-10	3.5E-10
W	8.6E-09	3.8E-09	2.3E-09	1.6E-09	1.1E-09	7.7E-10	6.1E-10
WSW	1.0E-08	4.6E-09	2.8E-09	1.9E-09	1.3E-09	9.2E-10	7.2E-10
SW	1.5E-08	6.5E-09	4.0E-09	2.8E-09	2.0E-09	1.3E-09	1.0E-09
SSW	1.9E-08	8.8E-09	5.5E-09	3.8E-09	2.7E-09	1.8E-09	1.4E-09
S	3.6E-08	1.6E-08	1.0E-08	7.0E-09	5.0E-09	3.2E-09	2.6E-09
SSE	2.2E-08	1.0E-08	6.3E-09	4.4E-09	0.0E+00	0.0E+00	0.0E+00
SE	2.0E-08	9.3E-09	5.9E-09	4.1E-09	3.0E-09	0.0E+00	0.0E+00
ESE	1.5E-08	6.9E-09	4.4E-09	3.1E-09	2.2E-09	1.6E-09	1.3E-09
E	1.9E-08	9.0E-09	5.7E-09	4.0E-09	2.9E-09	2.0E-09	1.6E-09
ENE	1.6E-08	7.4E-09	4.7E-09	3.3E-09	2.4E-09	1.6E-09	1.3E-09
NE	2.9E-08	1.3E-08	8.2E-09	5.7E-09	4.1E-09	2.7E-09	2.1E-09
NNE	2.6E-08	1.2E-08	7.5E-09	5.2E-09	3.7E-09	2.4E-09	1.9E-09

COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	1.9E-06	7.2E-07	8.4E-07	5.9E-07	4.8E-07	4.2E-07	1.6E-06
NNW	7.2E-07	2.7E-07	3.2E-07	2.2E-07	1.8E-07	1.6E-07	6.0E-07
NW	4.1E-07	1.6E-07	1.8E-07	1.3E-07	1.0E-07	9.0E-08	3.4E-07
WNW	3.4E-07	1.3E-07	1.5E-07	1.1E-07	8.6E-08	7.5E-08	2.6E-07
W	6.4E-07	2.4E-07	2.8E-07	2.0E-07	1.6E-07	1.4E-07	4.2E-07
WSW	7.6E-07	2.9E-07	3.4E-07	2.4E-07	1.9E-07	1.7E-07	5.1E-07
SW	1.1E-06	4.0E-07	4.7E-07	3.3E-07	2.7E-07	2.3E-07	7.1E-07
SSW	1.4E-06	5.2E-07	6.1E-07	4.3E-07	3.5E-07	3.0E-07	1.2E-06
S	2.6E-06	9.6E-07	1.1E-06	7.8E-07	6.3E-07	5.6E-07	2.1E-06
SSE	1.5E-06	5.7E-07	6.6E-07	4.7E-07	3.8E-07	3.3E-07	1.6E-06
SE	1.3E-06	5.1E-07	6.0E-07	4.2E-07	3.4E-07	3.0E-07	1.2E-06
ESE	1.0E-06	3.8E-07	4.5E-07	3.1E-07	2.6E-07	2.3E-07	8.7E-07
E	1.3E-06	5.0E-07	5.9E-07	4.1E-07	3.4E-07	3.0E-07	1.1E-06
ENE	1.1E-06	4.1E-07	4.8E-07	3.4E-07	2.7E-07	2.4E-07	9.2E-07
NE	2.0E-06	7.5E-07	8.7E-07	6.1E-07	5.0E-07	4.4E-07	1.7E-06
NNE	1.8E-06	6.9E-07	8.0E-07	5.6E-07	4.6E-07	4.0E-07	1.5E-06

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	2.2E-06	8.2E-07	6.0E-07	1.8E-07	1.2E-07	9.3E-08	7.1E-08
NNW	8.8E-07	4.9E-07	1.2E-07	5.5E-08	4.8E-08	3.8E-08	3.3E-08
NW	4.6E-07	2.2E-07	1.8E-07	1.5E-07	4.1E-08	1.5E-08	1.5E-08
WNW	2.9E-07	1.5E-07	1.3E-07	4.2E-08	1.4E-08	1.2E-08	9.6E-09
W	6.0E-07	3.5E-07	1.2E-07	1.0E-07	5.8E-08	3.4E-08	2.0E-08
WSW	1.3E-06	8.3E-07	1.7E-07	1.2E-07	1.0E-07	5.9E-07	2.3E-08
SW	1.9E-06	1.6E-06	1.0E-06	4.4E-07	2.4E-07	1.1E-07	1.4E-07
SSW	3.0E-06	2.4E-06	1.7E-06	8.6E-07	4.5E-07	3.5E-07	6.0E-07
S	9.2E-06	6.3E-06	3.2E-06	2.1E-07	2.6E-07	3.5E-07	2.5E-07
SSE	1.3E-05	1.1E-05	7.7E-06	1.8E-07	0.0E+00	0.0E+00	0.0E+00
SE	1.7E-05	6.8E-06	4.9E-06	1.6E-06	1.1E-07	0.0E+00	0.0E+00
ESE	1.3E-05	3.6E-06	1.3E-06	1.0E-06	6.7E-07	1.8E-07	7.0E-08
E	1.2E-05	2.8E-06	3.5E-07	6.3E-07	2.3E-07	1.9E-07	1.8E-07
ENE	1.5E-06	6.1E-07	4.1E-07	2.1E-07	1.4E-07	1.2E-07	1.1E-07
NE	2.0E-06	8.1E-07	9.1E-07	8.0E-07	7.1E-07	3.7E-07	3.3E-07
NNE	1.9E-06	3.9E-07	6.6E-07	7.1E-07	3.1E-07	1.0E-07	8.5E-08

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Individual Assessment
Feb 26, 2002 08:52 am

```
     Facility:  Maywood Interim Storage Site - I80 Unloading
      Address:  100 W. Hunter Avenue
         City:  Maywood
        State:  NJ          Zip:  07607-

Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001

     Comments:  Stone & Webster, Inc. for
                U.S. Army Corps of Engineers
```

Effective Dose Equivalent
(mrem/year)

9.69E-06

```
At This Location:    135 Meters South

    Dataset Name:  MISS I80 Loadout
    Dataset Date:  Feb  26, 2002  08:47 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
```

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	100 OF113

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SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 135 Meters South
Lifetime Fatal Cancer Risk: 1.10E-10

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	6.40E-08
BREAST	5.47E-08
R MAR	4.62E-06
LUNGS	6.08E-05
THYROID	5.32E-08
ENDOST	5.75E-05
RMNDR	2.84E-07
EFFEC	9.69E-06

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
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SYNOPSIS
Page 2

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	7.3E-12	7.3E-12
AC-228	Y	1.00	3.7E-10	3.7E-10
BI-211	W	1.00	7.3E-12	7.3E-12
BI-212	W	1.00	3.7E-10	3.7E-10
FR-223	D	1.00	1.0E-13	1.0E-13
PA-234M	Y	1.00	1.5E-10	1.5E-10
PA-231	Y	1.00	7.3E-12	7.3E-12
PB-211	D	1.00	7.3E-12	7.3E-12
PO-211	-	0.00	2.0E-14	2.0E-14
PO-216	W	1.00	3.7E-10	3.7E-10
PB-212	D	1.00	3.7E-10	3.7E-10
PO-212	W	1.00	2.4E-10	2.4E-10
PO-215	W	1.00	7.3E-12	7.3E-12
RA-223	W	1.00	7.3E-12	7.3E-12
RA-224	W	1.00	3.7E-10	3.7E-10
TH-232	Y	1.00	3.7E-10	3.7E-10
TH-228	Y	1.00	3.7E-10	3.7E-10
TH-231	Y	1.00	7.3E-12	7.3E-12
TH-227	Y	1.00	7.2E-12	7.2E-12
TL-208	D	1.00	1.3E-10	1.3E-10
U-235	Y	1.00	7.3E-12	7.3E-12
TL-207	D	1.00	7.2E-12	7.2E-12
U-238	Y	1.00	1.5E-10	1.5E-10
TH-234	Y	1.00	1.5E-10	1.5E-10
PA-234	Y	1.00	2.0E-13	2.0E-13
U-234	Y	1.00	1.7E-10	1.7E-10
TH-230	Y	1.00	1.7E-10	1.7E-10
RA-226	W	1.00	6.6E-11	6.6E-11
PO-218	W	1.00	6.6E-11	6.6E-11
PB-214	D	1.00	6.6E-11	6.6E-11
BI-214	W	1.00	6.6E-11	6.6E-11
PO-214	W	1.00	6.6E-11	6.6E-11
PB-210	D	1.00	6.6E-11	6.6E-11
BI-210	W	1.00	6.6E-11	6.6E-11
PO-210	W	1.00	6.6E-11	6.6E-11
RA-228	W	1.00	3.7E-10	3.7E-10

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 93.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

135	145	155	160	165	185	190	215	225	235
250	255	270							

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO.	DISCIPLINE	CALCULATION NO.	REVISION NUMBER	PAGE
08575.0207	E(B)	04	0	103 OF113

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SUMMARY
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ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	6.40E-08
BREAST	5.47E-08
R MAR	4.62E-06
LUNGS	6.08E-05
THYROID	5.32E-08
ENDOST	5.75E-05
RMNDR	2.84E-07
EFFEC	9.69E-06

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	1.20E-07
INHALATION	9.57E-06
AIR IMMERSION	1.90E-11
GROUND SURFACE	1.26E-09
INTERNAL	9.69E-06
EXTERNAL	1.28E-09
TOTAL	9.69E-06

CALCULATION IDENTIFICATION NUMBER				
JOB ORDER NO. 08575.0207	DISCIPLINE E(B)	CALCULATION NO. 04	REVISION NUMBER 0	PAGE 104 OF113

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NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
AC-227	1.39E-07
AC-228	9.61E-10
BI-211	1.81E-13
BI-212	3.75E-10
FR-223	7.95E-15
PA-234M	3.06E-14
PA-231	1.06E-07
PB-211	2.03E-12
PO-211	2.46E-32
PO-216	0.00E+00
PB-212	1.87E-09
PO-212	0.00E+00
PO-215	0.00E+00
RA-223	1.86E-09
RA-224	3.90E-08
TH-232	3.99E-06
TH-228	2.79E-06
TH-231	2.17E-13
TH-227	2.49E-09
TL-208	7.91E-12
U-235	2.72E-08
TL-207	1.84E-15
U-238	5.47E-07
TH-234	2.39E-10
PA-234	1.85E-14
U-234	6.58E-07
TH-230	1.23E-06
RA-226	2.43E-08
PO-218	8.51E-14
PB-214	2.12E-12
BI-214	2.71E-12
PO-214	0.00E+00
PB-210	5.56E-08
BI-210	3.81E-10
PO-210	2.50E-08
RA-228	4.68E-08
TOTAL	9.69E-06

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SUMMARY
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INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	135	145	155	160	165	185	190
N	7.2E-06	6.3E-06	5.6E-06	5.3E-06	5.0E-06	4.0E-06	3.8E-06
NNW	2.8E-06	2.4E-06	2.1E-06	2.0E-06	1.9E-06	1.6E-06	1.5E-06
NW	1.6E-06	1.4E-06	1.3E-06	1.2E-06	1.1E-06	9.3E-07	8.9E-07
WNW	1.4E-06	1.2E-06	1.1E-06	1.0E-06	9.6E-07	7.9E-07	7.6E-07
W	2.4E-06	2.1E-06	1.9E-06	1.8E-06	1.7E-06	1.4E-06	1.3E-06
WSW	2.9E-06	2.5E-06	2.3E-06	2.1E-06	2.0E-06	1.6E-06	1.6E-06
SW	4.0E-06	3.5E-06	3.1E-06	2.9E-06	2.8E-06	2.3E-06	2.1E-06
SSW	5.2E-06	4.6E-06	4.0E-06	3.8E-06	3.6E-06	2.9E-06	2.8E-06
S	9.7E-06	8.5E-06	7.5E-06	7.0E-06	6.7E-06	5.4E-06	5.1E-06
SSE	5.7E-06	5.0E-06	4.4E-06	4.1E-06	3.9E-06	3.2E-06	3.0E-06
SE	5.0E-06	4.4E-06	3.9E-06	3.7E-06	3.5E-06	2.8E-06	2.7E-06
ESE	3.8E-06	3.3E-06	2.9E-06	2.8E-06	2.6E-06	2.1E-06	2.0E-06
E	5.1E-06	4.4E-06	3.9E-06	3.7E-06	3.5E-06	2.8E-06	2.7E-06
ENE	4.1E-06	3.6E-06	3.2E-06	3.0E-06	2.8E-06	2.3E-06	2.2E-06
NE	7.6E-06	6.6E-06	5.9E-06	5.5E-06	5.2E-06	4.2E-06	4.0E-06
NNE	7.0E-06	6.1E-06	5.4E-06	5.1E-06	4.8E-06	3.9E-06	3.7E-06

	Distance (m)					
Direction	215	225	235	250	255	270
N	3.1E-06	2.8E-06	2.6E-06	2.3E-06	2.2E-06	2.0E-06
NNW	1.2E-06	1.1E-06	1.0E-06	9.3E-07	9.0E-07	8.2E-07
NW	7.3E-07	6.8E-07	6.3E-07	5.7E-07	5.5E-07	5.1E-07
WNW	6.2E-07	5.8E-07	5.4E-07	4.9E-07	4.8E-07	4.4E-07
W	1.1E-06	9.9E-07	9.2E-07	8.3E-07	8.1E-07	7.3E-07
WSW	1.3E-06	1.2E-06	1.1E-06	9.8E-07	9.5E-07	8.6E-07
SW	1.7E-06	1.6E-06	1.5E-06	1.3E-06	1.3E-06	1.2E-06
SSW	2.2E-06	2.0E-06	1.9E-06	1.7E-06	1.6E-06	1.5E-06
S	4.1E-06	3.7E-06	3.5E-06	3.1E-06	3.0E-06	2.7E-06
SSE	2.4E-06	2.2E-06	2.1E-06	1.8E-06	1.8E-06	1.6E-06
SE	2.2E-06	2.0E-06	1.8E-06	1.7E-06	1.6E-06	1.4E-06
ESE	1.6E-06	1.5E-06	1.4E-06	1.3E-06	1.2E-06	1.1E-06
E	2.2E-06	2.0E-06	1.8E-06	1.6E-06	1.6E-06	1.4E-06
ENE	1.8E-06	1.6E-06	1.5E-06	1.4E-06	1.3E-06	1.2E-06
NE	3.2E-06	2.9E-06	2.7E-06	2.4E-06	2.3E-06	2.1E-06
NNE	2.9E-06	2.7E-06	2.5E-06	2.2E-06	2.2E-06	1.9E-06

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S   R E P O R T

Non-Radon Population Assessment
Feb 26, 2002 08:52 am

```
     Facility:  Maywood Interim Storage Site - I80 Unloading
      Address:  100 W. Hunter Avenue
         City:  Maywood
        State:  NJ          Zip:  07607-

Source Category:  Particulate Emission w radon daughters
    Source Type:  Area
  Emission Year:  2001

     Comments:  Stone & Webster, Inc. for
                U.S. Army Corps of Engineers
```

Effective Dose Equivalent
(mrem/year)

2.98E-06

```
At This Location:    250 Meters South

    Dataset Name:  MISS I80 Pop.
    Dataset Date:  Feb  26, 2002  08:49 am
       Wind File:  C:\DATA\CAP88PC2\WNDFILES\TET1358.WND
 Population File:  C:\DATA\CAP88PC2\POPFILES\MAYWOO~1.POP
```

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 250 Meters South
Lifetime Fatal Cancer Risk: 3.40E-11

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.47E-08	1.01E-07
BREAST	1.20E-08	8.51E-08
R MAR	1.39E-06	8.98E-06
LUNGS	1.89E-05	1.21E-04
THYROID	1.15E-08	8.05E-08
ENDOST	1.73E-05	1.12E-04
RMNDR	5.27E-08	3.77E-07
EFFEC	2.98E-06	1.92E-05

FREQUENCY DISTRIBUTION OF LIFETIME FATAL CANCER RISKS

Risk Range	# of People	# of People in This Risk Range or Higher	Deaths/Year in This Risk Range	Deaths/Year in This Risk Range or Higher
1.0E+00 TO 1.0E-01	0	0	0.00E+00	0.00E+00
1.0E-01 TO 1.0E-02	0	0	0.00E+00	0.00E+00
1.0E-02 TO 1.0E-03	0	0	0.00E+00	0.00E+00
1.0E-03 TO 1.0E-04	0	0	0.00E+00	0.00E+00
1.0E-04 TO 1.0E-05	0	0	0.00E+00	0.00E+00
1.0E-05 TO 1.0E-06	0	0	0.00E+00	0.00E+00
LESS THAN 1.0E-06	19444635	19444635	3.08E-09	3.08E-09

Feb 26, 2002 08:52 am

SYNOPSIS
Page 2

RADIONUCLIDE EMISSIONS DURING THE YEAR 2001

Nuclide	Class	Size	Source #1 Ci/y	TOTAL Ci/y
AC-227	Y	1.00	7.3E-12	7.3E-12
AC-228	Y	1.00	3.7E-10	3.7E-10
BI-211	W	1.00	7.3E-12	7.3E-12
BI-212	W	1.00	3.7E-10	3.7E-10
FR-223	D	1.00	1.0E-13	1.0E-13
PA-234M	Y	1.00	1.5E-10	1.5E-10
PA-231	Y	1.00	7.3E-12	7.3E-12
PB-211	D	1.00	7.3E-12	7.3E-12
PO-211	-	0.00	2.0E-14	2.0E-14
PO-216	W	1.00	3.7E-10	3.7E-10
PB-212	D	1.00	3.7E-10	3.7E-10
PO-212	W	1.00	2.4E-10	2.4E-10
PO-215	W	1.00	7.3E-12	7.3E-12
RA-223	W	1.00	7.3E-12	7.3E-12
RA-224	W	1.00	3.7E-10	3.7E-10
TH-232	Y	1.00	3.7E-10	3.7E-10
TH-228	Y	1.00	3.7E-10	3.7E-10
TH-231	Y	1.00	7.3E-12	7.3E-12
TH-227	Y	1.00	7.2E-12	7.2E-12
TL-208	D	1.00	1.3E-10	1.3E-10
U-235	Y	1.00	7.3E-12	7.3E-12
TL-207	D	1.00	7.2E-12	7.2E-12
U-238	Y	1.00	1.5E-10	1.5E-10
TH-234	Y	1.00	1.5E-10	1.5E-10
PA-234	Y	1.00	2.0E-13	2.0E-13
U-234	Y	1.00	1.7E-10	1.7E-10
TH-230	Y	1.00	1.7E-10	1.7E-10
RA-226	W	1.00	6.6E-11	6.6E-11
PO-218	W	1.00	6.6E-11	6.6E-11
PB-214	D	1.00	6.6E-11	6.6E-11
BI-214	W	1.00	6.6E-11	6.6E-11
PO-214	W	1.00	6.6E-11	6.6E-11
PB-210	D	1.00	6.6E-11	6.6E-11
BI-210	W	1.00	6.6E-11	6.6E-11
PO-210	W	1.00	6.6E-11	6.6E-11
RA-228	W	1.00	3.7E-10	3.7E-10

SITE INFORMATION

Temperature: 13 degrees C
Precipitation: 85 cm/y
Mixing Height: 1000 m

SOURCE INFORMATION

Source Number: 1

Source Height (m): 0.
Area (sq m): 93.

Plume Rise Pasquill Cat:	A	B	C	D	E	F	G
Zero:	0.	0.	0.	0.	0.	0.	0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.076	0.000	0.008
Fraction From Assessment Area:	0.924	1.000	0.992
Fraction Imported:	0.000	0.000	0.000

Beef Cattle Density: 4.25E-02
Milk Cattle Density: 3.29E-02
Land Fraction Cultivated
for Vegetable Crops: 1.82E-02

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ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)	Collective Population (person-rem/y)
GONADS	1.47E-08	1.01E-07
BREAST	1.20E-08	8.51E-08
R MAR	1.39E-06	8.98E-06
LUNGS	1.89E-05	1.21E-04
THYROID	1.15E-08	8.05E-08
ENDOST	1.73E-05	1.12E-04
RMNDR	5.27E-08	3.77E-07
EFFEC	2.98E-06	1.92E-05

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)	Collective Population (person-rem/y)
INGESTION	5.97E-10	4.27E-08
INHALATION	2.98E-06	1.91E-05
AIR IMMERSION	5.54E-12	1.72E-11
GROUND SURFACE	3.99E-10	3.96E-09
INTERNAL	2.98E-06	1.91E-05
EXTERNAL	4.05E-10	3.97E-09
TOTAL	2.98E-06	1.91E-05

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclides	Selected Individual (mrem/y)	Collective Population (person-rem/y)
AC-227	4.25E-08	2.73E-07
AC-228	2.99E-10	1.62E-09
BI-211	4.53E-14	3.44E-14
BI-212	1.16E-10	3.61E-10
FR-223	2.42E-15	4.27E-15
PA-234M	6.64E-15	4.62E-15
PA-231	3.22E-08	2.07E-07
PB-211	6.24E-13	1.48E-12
PO-211	0.00E+00	0.00E+00
PO-216	0.00E+00	0.00E+00
PB-212	5.81E-10	3.36E-09
PO-212	0.00E+00	0.00E+00
PO-215	0.00E+00	0.00E+00
RA-223	5.54E-10	3.56E-09
RA-224	1.21E-08	7.64E-08
TH-232	1.24E-06	7.94E-06
TH-228	8.69E-07	5.57E-06
TH-231	6.74E-14	4.20E-13
TH-227	7.73E-10	4.94E-09
TL-208	2.10E-12	1.72E-12
U-235	8.29E-09	5.40E-08
TL-207	5.16E-16	4.72E-16
U-238	1.67E-07	1.07E-06
TH-234	5.19E-11	3.57E-10
PA-234	5.78E-15	3.60E-14
U-234	2.01E-07	1.29E-06
TH-230	3.82E-07	2.45E-06
RA-226	5.47E-09	3.76E-08
PO-218	2.26E-14	1.85E-14
PB-214	6.46E-13	1.29E-12
BI-214	8.21E-13	1.38E-12
PO-214	0.00E+00	0.00E+00
PB-210	8.52E-09	6.38E-08
BI-210	1.18E-10	7.51E-10
PO-210	5.29E-09	3.65E-08
RA-228	8.48E-09	6.08E-08
TOTAL	2.98E-06	1.91E-05

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INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

Direction	Distance (m) 250	750	1500	2500	3500	4500	7500
N	2.2E-06	2.8E-07	8.2E-08	3.4E-08	2.0E-08	1.4E-08	6.3E-09
NNW	8.3E-07	1.1E-07	3.1E-08	1.3E-08	7.5E-09	5.1E-09	2.3E-09
NW	4.8E-07	6.1E-08	1.8E-08	7.4E-09	4.3E-09	2.9E-09	1.3E-09
WNW	4.0E-07	5.1E-08	1.5E-08	6.2E-09	3.6E-09	2.4E-09	1.1E-09
W	7.4E-07	9.5E-08	2.8E-08	1.2E-08	6.7E-09	4.6E-09	2.1E-09
WSW	8.8E-07	1.1E-07	3.3E-08	1.4E-08	8.0E-09	5.5E-09	2.5E-09
SW	1.2E-06	1.6E-07	4.5E-08	1.9E-08	1.1E-08	7.5E-09	3.4E-09
SSW	1.6E-06	2.0E-07	5.9E-08	2.5E-08	1.4E-08	9.9E-09	4.5E-09
S	3.0E-06	3.7E-07	1.1E-07	4.5E-08	2.6E-08	1.8E-08	8.2E-09
SSE	1.7E-06	2.2E-07	6.4E-08	2.7E-08	1.6E-08	1.1E-08	5.0E-09
SE	1.6E-06	2.0E-07	5.8E-08	2.5E-08	1.4E-08	9.8E-09	4.5E-09
ESE	1.2E-06	1.5E-07	4.4E-08	1.8E-08	1.1E-08	7.3E-09	3.4E-09
E	1.6E-06	2.0E-07	5.7E-08	2.4E-08	1.4E-08	9.6E-09	4.4E-09
ENE	1.3E-06	1.6E-07	4.7E-08	2.0E-08	1.1E-08	7.8E-09	3.6E-09
NE	2.3E-06	2.9E-07	8.4E-08	3.5E-08	2.1E-08	1.4E-08	6.5E-09
NNE	2.1E-06	2.7E-07	7.7E-08	3.3E-08	1.9E-08	1.3E-08	5.9E-09

Direction	Distance (m) 15000	25000	35000	45000	55000	65000	75000
N	2.3E-09	1.1E-09	6.6E-10	4.6E-10	3.3E-10	2.2E-10	1.8E-10
NNW	8.5E-10	3.8E-10	2.4E-10	1.6E-10	1.2E-10	8.0E-11	6.3E-11
NW	4.8E-10	2.2E-10	1.3E-10	9.2E-11	6.6E-11	4.5E-11	3.6E-11
WNW	4.0E-10	1.8E-10	1.1E-10	7.4E-11	5.3E-11	3.7E-11	3.0E-11
W	7.3E-10	3.2E-10	2.0E-10	1.3E-10	9.5E-11	6.5E-11	5.2E-11
WSW	8.8E-10	3.9E-10	2.3E-10	1.6E-10	1.1E-10	7.7E-11	6.1E-11
SW	1.2E-09	5.5E-10	3.4E-10	2.3E-10	1.7E-10	1.1E-10	8.8E-11
SSW	1.6E-09	7.4E-10	4.6E-10	3.2E-10	2.3E-10	1.5E-10	1.2E-10
S	3.0E-09	1.4E-09	8.6E-10	5.9E-10	4.2E-10	2.7E-10	2.2E-10
SSE	1.8E-09	8.5E-10	5.4E-10	3.7E-10	0.0E+00	0.0E+00	0.0E+00
SE	1.7E-09	7.8E-10	4.9E-10	3.5E-10	2.5E-10	0.0E+00	0.0E+00
ESE	1.3E-09	5.8E-10	3.7E-10	2.6E-10	1.9E-10	1.3E-10	1.1E-10
E	1.6E-09	7.6E-10	4.8E-10	3.3E-10	2.4E-10	1.6E-10	1.3E-10
ENE	1.3E-09	6.3E-10	4.0E-10	2.8E-10	2.0E-10	1.4E-10	1.1E-10
NE	2.4E-09	1.1E-09	6.9E-10	4.8E-10	3.4E-10	2.3E-10	1.8E-10
NNE	2.2E-09	1.0E-09	6.3E-10	4.4E-10	3.1E-10	2.0E-10	1.6E-10

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COLLECTIVE EFFECTIVE DOSE EQUIVALENT (person rem/y)
(All Radionuclides and Pathways)

	Distance (m)						
Direction	250	750	1500	2500	3500	4500	7500
N	1.6E-07	6.1E-08	7.1E-08	5.0E-08	4.1E-08	3.6E-08	1.4E-07
NNW	6.1E-08	2.3E-08	2.7E-08	1.9E-08	1.5E-08	1.3E-08	5.1E-08
NW	3.5E-08	1.3E-08	1.5E-08	1.1E-08	8.7E-09	7.6E-09	2.9E-08
WNW	2.9E-08	1.1E-08	1.3E-08	9.0E-09	7.3E-09	6.4E-09	2.2E-08
W	5.4E-08	2.1E-08	2.4E-08	1.7E-08	1.4E-08	1.2E-08	3.6E-08
WSW	6.4E-08	2.5E-08	2.9E-08	2.0E-08	1.6E-08	1.4E-08	4.3E-08
SW	8.9E-08	3.4E-08	3.9E-08	2.8E-08	2.2E-08	2.0E-08	6.0E-08
SSW	1.2E-07	4.4E-08	5.1E-08	3.6E-08	2.9E-08	2.6E-08	9.8E-08
S	2.2E-07	8.1E-08	9.4E-08	6.6E-08	5.3E-08	4.7E-08	1.8E-07
SSE	1.3E-07	4.8E-08	5.6E-08	3.9E-08	3.2E-08	2.8E-08	1.4E-07
SE	1.1E-07	4.3E-08	5.1E-08	3.6E-08	2.9E-08	2.6E-08	9.8E-08
ESE	8.5E-08	3.2E-08	3.8E-08	2.7E-08	2.2E-08	1.9E-08	7.3E-08
E	1.1E-07	4.3E-08	5.0E-08	3.5E-08	2.8E-08	2.5E-08	9.6E-08
ENE	9.2E-08	3.5E-08	4.0E-08	2.8E-08	2.3E-08	2.0E-08	7.8E-08
NE	1.7E-07	6.3E-08	7.3E-08	5.1E-08	4.2E-08	3.7E-08	1.4E-07
NNE	1.6E-07	5.8E-08	6.7E-08	4.7E-08	3.8E-08	3.4E-08	1.3E-07

	Distance (m)						
Direction	15000	25000	35000	45000	55000	65000	75000
N	1.9E-07	6.9E-08	5.1E-08	1.5E-08	1.0E-08	7.9E-09	6.0E-09
NNW	7.4E-08	4.2E-08	1.0E-08	4.6E-09	4.0E-09	3.2E-09	2.8E-09
NW	3.9E-08	1.8E-08	1.5E-08	1.3E-08	3.4E-09	1.3E-09	1.2E-09
WNW	2.4E-08	1.3E-08	1.1E-08	3.5E-09	1.2E-09	1.0E-09	8.0E-10
W	5.1E-08	2.9E-08	1.0E-08	8.6E-09	4.9E-09	2.9E-09	1.7E-09
WSW	1.1E-07	7.0E-08	1.4E-08	1.0E-08	8.6E-09	5.0E-08	2.0E-09
SW	1.6E-07	1.4E-07	8.8E-08	3.7E-08	2.0E-08	9.5E-09	1.2E-08
SSW	2.5E-07	2.0E-07	1.4E-07	7.3E-08	3.8E-08	3.0E-08	5.1E-08
S	7.8E-07	5.3E-07	2.7E-07	1.8E-08	2.2E-08	3.0E-08	2.2E-08
SSE	1.1E-06	9.0E-07	6.5E-07	1.5E-08	0.0E+00	0.0E+00	0.0E+00
SE	1.5E-06	5.8E-07	4.1E-07	1.4E-07	9.6E-09	0.0E+00	0.0E+00
ESE	1.1E-06	3.1E-07	1.1E-07	8.5E-08	5.7E-08	1.5E-08	5.9E-09
E	1.0E-06	2.4E-07	3.0E-08	5.3E-08	2.0E-08	1.6E-08	1.5E-08
ENE	1.2E-07	5.2E-08	3.4E-08	1.8E-08	1.2E-08	9.8E-09	9.0E-09
NE	1.7E-07	6.8E-08	7.7E-08	6.8E-08	6.0E-08	3.1E-08	2.8E-08
NNE	1.6E-07	3.3E-08	5.5E-08	6.0E-08	2.6E-08	8.5E-09	7.2E-09

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

	Month			Week	Vegetative Cover/Gravel TSP	Vegetative Cover/Gravel PM-10	Bare Soil TSP	Bare Soil PM-10
INPUT PARAMETERS:								
Particle Size Multiplier (k)					1	0.5	1	0.5
Number of Disturbances per Period		(Assumption)			1	1	1	1
Surface Area of Soil (m^2)		(Assumption)			44873	44873	5017	5017
Threshold Friction Velocity (m/s)		(Table 13.2.5-2)	Overburden		1.02	1.02	1.02	1.02
Anemometer Height (m)		(Teterboro LCD)			6.10	6.10	6.10	6.10
Roughness Height (m)		(Table 13.2.5-2)	Overburden		0.003	0.003	0.003	0.003
Fastest Mile Wind Speed (mph)		(Teterboro LCD)		Week				
	January			1-4	25	25	25	25
	February			1-4	31	31	31	31
	March			1-4	32	32	32	32
	April			1	18	18	18	18
	"			2	22	22	22	22
	"			3	23	23	23	23
	"			4	28	28	28	28
	May			1	31	31	31	31
	"			2	22	22	22	22
	"			3	24	24	24	24
	"			4	24	24	24	24
	June			1	23	23	23	23
	"			2	28	28	28	28
	"			3	28	28	28	28
	"			4	22	22	22	22

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

			Vegetative Cover/Gravel		Bare Soil	
	Month	Week	TSP	PM-10	TSP	PM-10
Fastest Mile Wind Speed (mph)	(Teterboro LCD)					
	July	1	26	26	26	26
	"	2	30	30	30	30
	"	3	17	17	17	17
	"	4	21	21	21	21
	"	5	20	20	20	20
	August	1	21	21	21	21
	"	2	24	24	24	24
	"	3	23	23	23	23
	"	4	26	26	26	26
	"	5	24	24	24	24
	September	1	28	28	28	28
	"	2	21	21	21	21
	"	3	26	26	26	26
	"	4	25	25	25	25
	October	1-4	29	29	29	29
	November	1-4	29	29	29	29
	December	1-4	28	28	28	28
	"					
	"					

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

			Vegetative Cover/Gravel		Bare Soil	
	Month	Week	TSP	PM-10	TSP	PM-10
INPUT PARAMETERS:	January	1-4	0.63	0.63	0.63	0.63
Friction Velocity (m/s)	February	1-4	0.78	0.78	0.78	0.78
	March	1-4	0.81	0.81	0.81	0.81
	April	1	0.45	0.45	0.45	0.45
	"	2	0.56	0.56	0.56	0.56
	"	3	0.58	0.58	0.58	0.58
	"	4	0.71	0.71	0.71	0.71
	May	1	0.78	0.78	0.78	0.78
	"	2	0.56	0.56	0.56	0.56
	"	3	0.61	0.61	0.61	0.61
	"	4	0.61	0.61	0.61	0.61
	June	1	0.58	0.58	0.58	0.58
	"	2	0.71	0.71	0.71	0.71
	"	3	0.71	0.71	0.71	0.71
	"	4	0.56	0.56	0.56	0.56
	July	1	0.66	0.66	0.66	0.66
	"	2	0.76	0.76	0.76	0.76
	"	3	0.43	0.43	0.43	0.43
	"	4	0.53	0.53	0.53	0.53
	"	5	0.50	0.50	0.50	0.50
	August	1	0.53	0.53	0.53	0.53
	"	2	0.61	0.61	0.61	0.61
	"	3	0.58	0.58	0.58	0.58
	"	4	0.66	0.66	0.66	0.66
	"	5	0.61	0.61	0.61	0.61

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

			Vegetative Cover/Gravel		Bare Soil	
	Month	Week	TSP	PM-10	TSP	PM-10
INPUT PARAMETERS:	September	1	0.71	0.71	0.71	0.71
Friction Velocity (m/s)	"	2	0.53	0.53	0.53	0.53
	"	3	0.66	0.66	0.66	0.66
	"	4	0.63	0.63	0.63	0.63
	October	1-4	0.73	0.73	0.73	0.73
	November	1-4	0.73	0.73	0.73	0.73
	December	1-4	0.71	0.71	0.71	0.71

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

	Month		Week	Vegetative Cover/Gravel			Bare Soil		
				TSP	PM-10		TSP	PM-10	
INPUT PARAMETERS:		Vegetative Cover	Bare Soil						
CONTROL EFFICIENCY (%)-		99	0						
EMISSION FACTOR -E (g/m^2):									
	January		1-4	0.00	0.00	-0.94	0.00	0.00	-0.94
	February		1-4	0.00	0.00	-2.66	0.00	0.00	-2.66
	March		1-4	0.00	0.00	-2.69	0.00	0.00	-2.69
	April		1	0.00	0.00	4.43	0.00	0.00	4.43
	"		2	0.00	0.00	0.92	0.00	0.00	0.92
	"		3	0.00	0.00	0.22	0.00	0.00	0.22
	"		4	0.00	0.00	-2.14	0.00	0.00	-2.14
	May		1	0.00	0.00	-2.66	0.00	0.00	-2.66
	"		2	0.00	0.00	0.92	0.00	0.00	0.92
	"		3	0.00	0.00	-0.40	0.00	0.00	-0.40
	"		4	0.00	0.00	-0.40	0.00	0.00	-0.40
	June		1	0.00	0.00	0.22	0.00	0.00	0.22
	"		2	0.00	0.00	-2.14	0.00	0.00	-2.14
	"		3	0.00	0.00	-2.14	0.00	0.00	-2.14
	"		4	0.00	0.00	0.92	0.00	0.00	0.92
	July		1	0.00	0.00	-1.41	0.00	0.00	-1.41
	"		2	0.00	0.00	-2.56	0.00	0.00	-2.56
	"		3	0.00	0.00	5.49	0.00	0.00	5.49
	"		4	0.00	0.00	1.68	0.00	0.00	1.68
	"		5	0.00	0.00	2.52	0.00	0.00	2.52
	August		1	0.00	0.00	1.68	0.00	0.00	1.68
	"		2	0.00	0.00	-0.40	0.00	0.00	-0.40
	"		3	0.00	0.00	0.22	0.00	0.00	0.22

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

IN-SITU SOIL WIND EROSION EMISSIONS
(AP-42, Chapter 13.2.5, "Industrial Wind Erosion", 01/95)

			Vegetative Cover/Gravel			Bare Soil		
	Month	Week	TSP	PM-10		TSP	PM-10	
EMISSION FACTOR -E (g/m^2):	"	4	0.00	0.00	-1.41	0.00	0.00	-1.41
	"	5	0.00	0.00	-0.40	0.00	0.00	-0.40
	September	1	0.00	0.00	-2.14	0.00	0.00	-2.14
	"	2	0.00	0.00	1.68	0.00	0.00	1.68
	"	3	0.00	0.00	-1.41	0.00	0.00	-1.41
	"	4	0.00	0.00	-0.94	0.00	0.00	-0.94
	October	1-4	0.00	0.00	-2.39	0.00	0.00	-2.39
	November	1-4	0.00	0.00	-2.39	0.00	0.00	-2.39
	December	1-4	0.00	0.00	-2.14	0.00	0.00	-2.14

ANNUAL EMISSIONS (grams/year):

	Vegetative Cover/Gravel	Bare Soil	otal Emissions
E (TSP) =	0.00	0.00	0.00
E (PM-10) =	0.00	0.00	0.00

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

RADIONUCLIDE SOURCE CONCENTRATIONS
AVERAGE DETECTED ACTIVITY (MEASURED)

INPUT PARAMETERS:	U238	U234	U235	Ra226	Th232
Activity Concentration (S) - pCi/g	27.5	N/A	N/A	4.3	24.8
Isotope Contribution to Total Uranium (P) - %	47.249	50.539	2.212	N/A	N/A

ANNUAL RADIOACTIVITY
EMISSION RATES (Ci/yr)

line	Radionuclides	Emissions (Ci/yr)
1	U238	0.00E+00
2	Th234	0.00E+00
3	Pa234m	0.00E+00
4	Pa234	0.00E+00
5	U234	0.00E+00
6	Th230	0.00E+00
7	Ra226	0.00E+00
8	Po218	0.00E+00
9	Pb214	0.00E+00
10	Bi214	0.00E+00
11	Po214	0.00E+00
12	Pb210	0.00E+00
13	Bi210	0.00E+00
14	Po210	0.00E+00
15	U235	0.00E+00
16	Th231	0.00E+00
17	Pa231	0.00E+00
18	Ac227	0.00E+00
19	Th227	0.00E+00

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001

RADIONUCLIDE SOURCE CONCENTRATIONS
AVERAGE DETECTED ACTIVITY (MEASURED)

ANNUAL RADIOACTIVITY
EMISSION RATES (Ci/yr)

line	Radionuclides	Emissions (Ci/yr)
20	Fr-223	0.00E+00
21	Ra223	0.00E+00
22	Po215	0.00E+00
23	Pb211	0.00E+00
24	Bi211	0.00E+00
25	Po211	0.00E+00
26	Tl207	0.00E+00
27	Th232	0.00E+00
28	Ra228	0.00E+00
29	Ac228	0.00E+00
30	Th228	0.00E+00
31	Ra224	0.00E+00
32	Po216	0.00E+00
33	Pb212	0.00E+00
34	Bi212	0.00E+00
35	Po212	0.00E+00
36	Tl208	0.00E+00

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
WATER LINE INSTALLATION EMISSIONS
(AP-42, Chapter 13.2.4, "Aggregate Handling and Storage Piles", 01/95)

EQUATION: E = k(0.0032)(U/5)^1.3/(M/2)^1.4

		Segment 1 Area		Segment 2 Area	
INPUT PARAMETERS:		TSP	PM-10	TSP	PM-10
Particle Size Multiplier (k)		0.74	0.35	0.74	0.35
Mean Wind Speed - U (mph)	(Teterboro, LCD)	7.0	7.0	7.0	7.0
Material Moisture Content - M (%)		12.0	12.0	12.0	12.0
Tons of Material Dropped	(3 x 83.3 tons)	250	250	1775	1775
	(3 x 591.7 tons)				

EMISSION FACTOR -E (lb/ton):	Segment 1 Area	Segment 2 Area
E (TSP) =	2.98E-04	2.98E-04
E (PM-10) =	1.41E-04	1.41E-04
CONTROL EFFICIENCY (%)-	0	0
ANNUAL EMISSIONS (grams/year):		
E (TSP) =	33.8	240.3
E (PM-10) =	16.0	113.7

RADIONUCLIDE SOURCE CONCENTRATIONS
AVERAGE DETECTED ACTIVITY (MEASURED)

INPUT PARAMETERS:		U238	U234	U235	Ra226	Th232
Activity Concentration (S) - pCi/g	(Segment 1)	155.8	N/A	N/A	50.1	611.9
Activity Concentration (S) - pCi/g	(Segment 2)	12.5	N/A	N/A	9.7	17.8
Isotope Contribution to Total Uranium (P) - %		47.249	50.539	2.212	N/A	N/A

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
WATER LINE INSTALLATION EMISSIONS

	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr)	Segment 1	Segment 2
line	Radionuclides	Emissions (Ci/yr)	Emissions (Ci/yr)
1	U238	2.49E-09	1.42E-09
2	Th234	2.49E-09	1.42E-09
3	Pa234m	2.49E-09	1.42E-09
4	Pa234	3.24E-12	1.85E-12
5	U234	2.67E-09	1.52E-09
6	Th230	2.67E-09	1.52E-09
7	Ra226	8.02E-10	1.10E-09
8	Po218	8.02E-10	1.10E-09
9	Pb214	8.02E-10	1.10E-09
10	Bi214	8.02E-10	1.10E-09
11	Po214	8.02E-10	1.10E-09
12	Pb210	8.02E-10	1.10E-09
13	Bi210	8.02E-10	1.10E-09
14	Po210	8.02E-10	1.10E-09
15	U235	1.17E-10	6.65E-11
16	Th231	1.17E-10	6.65E-11
17	Pa231	1.17E-10	6.65E-11
18	Ac227	1.17E-10	6.65E-11

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
WATER LINE INSTALLATION EMISSIONS

	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr) Radionuclides	Segment 1 Emissions (Ci/yr)	Segment 2 Emissions (Ci/yr)
19	Th227	1.15E-10	6.56E-11
20	Fr-223	1.61E-12	9.18E-13
21	Ra223	1.17E-10	6.65E-11
22	Po215	1.17E-10	6.65E-11
23	Pb211	1.17E-10	6.65E-11
24	Bi211	1.17E-10	6.65E-11
25	Po211	3.19E-13	1.82E-13
26	Tl207	1.16E-10	6.63E-11
27	Th232	9.79E-09	2.02E-09
28	Ra228	9.79E-09	2.02E-09
29	Ac228	9.79E-09	2.02E-09
30	Th228	9.79E-09	2.02E-09
31	Ra224	9.79E-09	2.02E-09
32	Po216	9.79E-09	2.02E-09
33	Pb212	9.79E-09	2.02E-09
34	Bi212	9.79E-09	2.02E-09
35	Po212	6.27E-09	1.30E-09
36	Tl208	3.52E-09	7.27E-10

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
I-80 SOIL EXCAVATION EMISSIONS
(AP-42, Chapter 13.2.4, "Aggregate Handling and Storage Piles", 01/95)

EQUATION: E = k(0.0032)(U/5)^1.3/(M/2)^1.4

INPUT PARAMETERS:		Loading to MISS TSP	Loading to MISS PM-10	Unloading at MISS TSP	Unloading at MISS PM-10
Particle Size Multiplier (k)		0.74	0.35	0.74	0.35
Mean Wind Speed - U (mph)	(Teterboro, LCD)	7.0	7.0	7.0	7.0
Material Moisture Content - M (%)		12.0	12.0	12.0	12.0
Tons of Material Dropped	(3 x 399 tons)	1197	1197	798	798
	(2 x 399 tons)				

EMISSION FACTOR -E (lb/ton):	Loading to MISS	Unloading at MISS
E (TSP) =	2.98E-04	2.98E-04
E (PM-10) =	1.41E-04	1.41E-04
CONTROL EFFICIENCY (%)-	0	0
ANNUAL EMISSIONS (grams/year):		
E (TSP) =	162.1	108.0
E (PM-10) =	76.7	51.1

RADIONUCLIDE SOURCE CONCENTRATIONS
AVERAGE DETECTED ACTIVITY (MEASURED)

INPUT PARAMETERS:	U238	U234	U235	Ra226	Th232
Activity Concentration (S) - pCi/g	3.0	N/A	N/A	1.3	7.3
Isotope Contribution to Total Uranium (P) - %	47.249	50.539	2.212	N/A	N/A

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
I-80 SOIL EXCAVATION EMISSIONS

line	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr) Radionuclides	Loading to MISS Emissions (Ci/yr)	Unloading at MISS Emissions (Ci/yr)
1	U238	2.32E-10	1.55E-10
2	Th234	2.32E-10	1.55E-10
3	Pa234m	2.32E-10	1.55E-10
4	Pa234	3.02E-13	2.01E-13
5	U234	2.48E-10	1.66E-10
6	Th230	2.48E-10	1.66E-10
7	Ra226	9.89E-11	6.59E-11
8	Po218	9.89E-11	6.59E-11
9	Pb214	9.89E-11	6.59E-11
10	Bi214	9.89E-11	6.59E-11
11	Po214	9.89E-11	6.59E-11
12	Pb210	9.89E-11	6.59E-11
13	Bi210	9.89E-11	6.59E-11
14	Po210	9.89E-11	6.59E-11
15	U235	1.09E-11	7.25E-12
16	Th231	1.09E-11	7.25E-12
17	Pa231	1.09E-11	7.25E-12
18	Ac227	1.09E-11	7.25E-12

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
I-80 SOIL EXCAVATION EMISSIONS
RADIONUCLIDE SOURCE CONCENTRATIONS

line	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr) Radionuclides	Loading to MISS Emissions (Ci/yr)	Unloading at MISS Emissions (Ci/yr)
19	Th227	1.07E-11	7.15E-12
20	Fr-223	1.50E-13	1.00E-13
21	Ra223	1.09E-11	7.25E-12
22	Po215	1.09E-11	7.25E-12
23	Pb211	1.09E-11	7.25E-12
24	Bi211	1.09E-11	7.25E-12
25	Po211	2.97E-14	1.98E-14
26	Tl207	1.08E-11	7.23E-12
27	Th232	5.60E-10	3.73E-10
28	Ra228	5.60E-10	3.73E-10
29	Ac228	5.60E-10	3.73E-10
30	Th228	5.60E-10	3.73E-10
31	Ra224	5.60E-10	3.73E-10
32	Po216	5.60E-10	3.73E-10
33	Pb212	5.60E-10	3.73E-10
34	Bi212	5.60E-10	3.73E-10
35	Po212	3.59E-10	2.39E-10
36	Tl208	2.01E-10	1.34E-10

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
SPRING/FALL SOIL LOAD-OUT EMISSIONS
(AP-42, Chapter 13.2.4, "Aggregate Handling and Storage Piles", 01/95)

EQUATION: E = k(0.0032)(U/5)^1.3/(M/2)^1.4

		Spring Load-out		Fall Load-out	
INPUT PARAMETERS:		TSP	PM-10	TSP	PM-10
Particle Size Multiplier (k)		0.74	0.35	0.74	0.35
Mean Wind Speed - U (mph)	(Teterboro, LCD)	7.0	7.0	7.0	7.0
Material Moisture Content - M (%)		12.0	12.0	12.0	12.0
Tons of Material Dropped	(Assumption)	39351	39351	2865	2865

EMISSION FACTOR -E (lb/ton):	Spring Load-out	Fall Load-out
E (TSP) =	2.98E-04	2.98E-04
E (PM-10) =	1.41E-04	1.41E-04
CONTROL EFFICIENCY (%)-	0	0
ANNUAL EMISSIONS (grams/year):		
E (TSP) =	5328.0	387.9
E (PM-10) =	2520.0	183.5

RADIONUCLIDE SOURCE CONCENTRATIONS
AVERAGE DETECTED ACTIVITY (MEASURED)

INPUT PARAMETERS:		U238	U234	U235	Ra226	Th232
Activity Concentration (S) - pCi/g	(Spring Load-out)	6.2	N/A	N/A	2.0	15.7
Activity Concentration (S) - pCi/g	(Fall Load-out)	4.4	N/A	N/A	6.9	29.2
Isotope Contribution to Total Uranium (P) - %		47.249	50.539	2.212	N/A	N/A

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
SPRING/FALL SOIL LOAD-OUT EMISSIONS
RADIONUCLIDE SOURCE CONCENTRATIONS

	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr)	Spring Load-out	Fall Load-out
line	Radionuclides	Emissions (Ci/yr)	Emissions (Ci/yr)
1	U238	1.56E-08	8.07E-10
2	Th234	1.56E-08	8.07E-10
3	Pa234m	1.56E-08	8.07E-10
4	Pa234	2.03E-11	1.05E-12
5	U234	1.67E-08	8.63E-10
6	Th230	1.67E-08	8.63E-10
7	Ra226	5.04E-09	1.27E-09
8	Po218	5.04E-09	1.27E-09
9	Pb214	5.04E-09	1.27E-09
10	Bi214	5.04E-09	1.27E-09
11	Po214	5.04E-09	1.27E-09
12	Pb210	5.04E-09	1.27E-09
13	Bi210	5.04E-09	1.27E-09
14	Po210	5.04E-09	1.27E-09
15	U235	7.31E-10	3.78E-11
16	Th231	7.31E-10	3.78E-11
17	Pa231	7.31E-10	3.78E-11
18	Ac227	7.31E-10	3.78E-11

ATTACHMENT A
RADIONUCLIDE SOURCE TERM EMISSIONS CALCULATIONS

MAYWOOD INTERIM STORAGE SITE - 2001
SPRING/FALL SOIL LOAD-OUT EMISSIONS

	ANNUAL RADIOACTIVITY EMISSION RATES (Ci/yr)	Spring Load-out	Fall Load-out
line	Radionuclides	Emissions (Ci/yr)	Emissions (Ci/yr)
19	Th227	7.21E-10	3.73E-11
20	Fr-223	1.01E-11	5.22E-13
21	Ra223	7.31E-10	3.78E-11
22	Po215	7.31E-10	3.78E-11
23	Pb211	7.31E-10	3.78E-11
24	Bi211	7.31E-10	3.78E-11
25	Po211	2.00E-12	1.03E-13
26	Tl207	7.29E-10	3.77E-11
27	Th232	3.96E-08	5.36E-09
28	Ra228	3.96E-08	5.36E-09
29	Ac228	3.96E-08	5.36E-09
30	Th228	3.96E-08	5.36E-09
31	Ra224	3.96E-08	5.36E-09
32	Po216	3.96E-08	5.36E-09
33	Pb212	3.96E-08	5.36E-09
34	Bi212	3.96E-08	5.36E-09
35	Po212	2.53E-08	3.43E-09
36	Tl208	1.42E-08	1.92E-09