

M-696

Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the Maywood Site, New Jersey



**US Army Corps
of Engineers®**



FUSRAP Project
Job 14501

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FUSRAP TECHNICAL MEMORANDUM

TO: Michael Redmon
FROM: Andrea George
DATE: 8/09/95
SUBJECT: Results of Maywood vicinity property data gap characterization

Prepared By <i>Andrea George</i>	Team Lead Approval <i>Melvin Kusan</i>	Project Engineer Approval <i>[Signature]</i>	Project Manager Approval <i>[Signature]</i>
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Introduction

Purpose

The purpose of the data gap characterization effort for the Maywood residential vicinity properties was two-fold. First, data available on many of the properties were such that it was unknown whether the contamination extended beneath a house or structure. This information is important for planning and designing the remedial action and for efficient relocation of the homeowners. In an attempt to be cost-efficient and to inconvenience the homeowners as little as possible, split samples from boreholes drilled within residences were provided to the Independent Verification Contractor (Oak Ridge National Laboratory).

The second purpose of this effort was to provide information to fill gaps in the existing data. Twenty-eight of the properties have separate characterization reports. Much of the data that exist on the residential vicinity properties is limited to downhole gamma radiation readings. Seven properties have isotope-specific soil sample results to depth and were not included in this sampling. The remainder of the properties have soil samples only to a depth of 1 ft. Twenty-four properties were sampled to eliminate data gaps including properties on Long Valley Road, Branca Court, Redstone Lane, Hancock Street, Trudy Drive, Avenue E, Columbia and Garibaldi Avenues, and Brook Street. Property owners at 14 Long Valley and 200 Brookdale would not sign access agreements so their properties could not be included in this characterization.

There is no direct correlation established between downhole gamma radiation readings and the 5 pCi/g soil criteria. The Lodi area has relatively high naturally-occurring potassium-40 levels (10-20 pCi/g) that tend to override the influence of low levels of thorium-232 on downhole gamma radiation readings. The downhole gamma readings in several areas on the residential vicinity properties, particularly on the Long Valley Road properties and in Lodi Park, were higher than normal background but not high enough to definitively state whether the areas exceeded criteria. In addition, there was no geologic evidence to indicate that the area contained contaminated stream bed sediments or fill materials. These areas were conservatively considered contaminated in the past. At this time a criteria of 15 pCi/g was in place. Due to the difficulty in establishing a correlation between gamma radiation readings and the present criteria of 5 pCi/g and due to the high cost of transportation and disposal of this material, further information was needed to determine the presence of contamination. Thus, soil samples were also collected in these areas as part of the data gap characterization effort.

Selection of Sampling Points

Sampling points to characterize beneath a house were selected based upon the area most likely to be contaminated and the flooring situation inside the home. Limitations to selection of sampling points were as follows:

- * Boreholes were not placed in carpeted or linoleum areas because of the cost to replace the flooring, liability issues, and disturbance of the homeowner.
- * Homeowners at 6 Branca, 11 Branca, 62 Trudy, and 4 Hancock would not allow boreholes to be drilled inside their homes.
- * Many of the homes have suspected asbestos tile over a large portion of the bottom floor.
- * There was a high occurrence of refusal of the hand augers due to large rocks in the fill material present on most of the properties.

Because of these limitations, many boreholes were drilled adjacent to a foundation instead of actually inside the home. The data from these boreholes is comparable to data from boreholes inside the house as long as the borehole was drilled to the depth determined from historical data as the most likely to contain contamination. This allowed for the location of a borehole to be moved in the event of a refusal without drilling another hole in the slab of a foundation. The total number of boreholes planned for this effort was 68. This was reduced to 51 in the field due to inaccessibility and refusals. The boreholes that were drilled are well placed and of sufficient depth to provide more accurate conclusions as to the presence of contamination below a house.

Sampling points in open areas were selected to fill gaps in the existing data. On the Long Valley properties, boreholes were dispersed throughout the subsurface arm of contamination that was thought to exist along the middle of the properties. A contingency was established that if the soil sample analysis showed no subsurface contamination in these boreholes then additional boreholes would be added between the suspected arm of contamination and the back of the properties (an area of known contamination). Three additional boreholes were placed in areas determined by a geologist as the most likely to have been part of the flood plain of Lodi Brook for a total of 10 boreholes in this area.

Previous data at 11 Redstone Lane indicated that there were stream bed sediments throughout the property. Generally in the Lodi area, stream bed sediments correlate with elevated gamma readings. However, only one borehole had elevated subsurface gamma radiation readings. In order to resolve the conflicting data, three sampling points were located at 11 Redstone Lane.

Lodi Park also had an arm of suspected contamination that was based on slightly elevated gamma readings and the inferred location of the stream bed. Three boreholes were located in this arm to provide soil samples for isotopic analysis. Again, a contingency was established that if sample analysis showed no subsurface contamination in these boreholes then additional boreholes would be added in surrounding areas determined by the geologist as the most likely to have been part of the flood plain of Lodi Brook. Two additional boreholes were drilled offset to the planned boreholes. A total of 5 boreholes were installed in this area.

All boreholes drilled on the vicinity properties, including the ones from this effort, are shown on the attached maps in Appendix C. Also shown are the revised contaminant boundaries. The boundaries

were revised based upon the soil sampling data resulting from this effort and a better understanding of the soil concentration to downhole gamma radiation reading correlation on a property by property basis.

Selection of Analytical Methods

The surface areas of the properties were surveyed using a SPA-3 meter to reveal elevated gamma radiation areas. After soil samples were collected from the boreholes, gamma radiation readings were taken every 6 in. using a BHP-1 collimated NaI detector.

Selected soil samples were sent to a dedicated gamma spectroscopy lab at the Wayne site (WISS). The WISS lab provided a two-day turn around of the soil analyses which allowed contingencies based on these results to be implemented in the field.

Methodology

Field Methods

Field methods are outlined in Work Instruction #95-078. The work instruction has been amended by Field Change Notices #138-66 to #138-73. Before any sampling was performed, each property that had an access agreement in place at the time underwent a walk-over survey to locate any surface contamination. Samples were taken every 6 in. with an orchard hand auger, and the boreholes were logged by a geologist and by a gamma radiation probe. The sample from the depth with the highest gamma reading was sent for analysis by gamma spectroscopy. Certain other samples were analyzed by the gamma spec based on suspected depths of contamination from previous data or based on the geologic profile of the borehole. All samples collected were archived.

Boreholes within a residence were drilled using a concrete corer with an 8 in. bit. The first borehole drilled within a residence was in the area determined by historical information as the most probable location of contamination. If gamma readings from any borehole were at or near 100,000 cpm, then no other boreholes were drilled in the residence. This elevated gamma reading would definitively indicate the presence of contamination.

Quality Control

Quality control measures implemented during this effort include a Quality Assurance Assessment (QAA #138A-12) and a Quality Assurance Plan (QAP #138A-12-00). The only area of significant concern that was identified was the verification of the location of utilities. The site superintendent located all onsite utilities by using the One-Call system and a pipe locator.

To verify that data from the WISS gamma spec system was of acceptable quality, 10 of the 62 samples analyzed at the WISS lab were sent to the TMA lab in Oak Ridge and analyzed by the same procedure.

Results

A summary of the results from the vicinity property characterization are given in the appendices. Data packages that support this summary are referenced in an interoffice memorandum (George, 1995). Appendix A contains Table A-1 showing the downhole gamma logging results and Table A-2 which provides the soil sample results. The cleanup criteria for the Maywood Phase I vicinity properties is 5 pCi/g for thorium-232 and radium-226 combined. The criteria for total uranium is 100 pCi/g which yields a uranium-238 criteria of 50 pCi/g. Background in the Maywood/Lodi area is 1 pCi/g for thorium-232, 1 pCi/g for radium-226, and 3 pCi/g for uranium-238. A sample is considered contaminated if the sum of the ratio of the contaminant concentrations to the cleanup criteria is greater than one. The following equation was used to calculate the sum of the ratios where X is the thorium-232 concentration in the sample, Y is the radium-226 concentration, and Z is the uranium-238 concentration:

$$\frac{X-1}{5} + \frac{Y-1}{5} + \frac{Z-3}{50} \geq 1$$

Appendix B presents the geologic logs for each of the boreholes. Appendix C contains a separate figure for each property that was sampled during this effort (Figures 1-24) and compilation maps that

show the contamination boundaries established before this sampling effort (Figure 25) and after the data gap characterization (Figure 26). Table 1 is a summary of the results from this sampling campaign.

The average relative percent difference between the results reported for the ten samples sent to the TMA lab and the results from the field lab for thorium-232 is 9% as shown in Table 2. This error is well within the acceptable variance between instruments. As the thorium-232 concentration in the sample increased, the error between the two readings decreased. Thus, the soil sample results obtained from the field lab are reasonably accurate and provide a high level of confidence. The relative percent difference was calculated by the following method:

$$\frac{|S_1 - S_2|}{(S_1 + S_2) / 2}$$

where: S_1 = Field lab result (pCi/g),

S_2 = TMA lab result (pCi/g).

Summary and Conclusions

The primary purpose of this investigation was to determine which houses are underlain by contamination. Table 3 indicates which of the 37 Phase I vicinity properties have the greatest potential to require excavation under the foundations and subsequent underpinning.

The secondary purpose of this data gap sampling was to determine if an arm of contamination ran through the middle of the Long Valley properties and if an arm of contamination existed between Lodi Park and 9 Hancock. Based on the results presented, it can be concluded that the arms of contamination that were previously thought to exist on the Long Valley Road properties and in Lodi Park are not present because the boreholes in these areas did not contain subsurface contamination.

The areas of contamination shown on the attached maps were developed from historical information including previous walk-over surveys, downhole gamma and geologic profiles, and limited soil

sampling results supplemented by the soil concentrations, gamma profiles, and geologic information obtained in this sampling effort.

There are several areas on the vicinity properties in which discrepancies in the data continue to exist. At 4 Branca Court, borehole #15R was found to be uncontaminated (Figure 8 in Appendix C). However, the data on 6 Branca, 2 Branca, and 17 Redstone indicate that this area should be contaminated. This finding is typical of the results expected when working in areas of highly variable low-level contamination. More boreholes could not be drilled because of refusals. Since it is unknown exactly what the pattern of contamination is in this area, it was conservatively assumed that the area is contaminated even though the borehole was not. This area will require further investigation prior to remedial action in order to ensure that contamination is present beneath the residence.

A similar situation is present at 6 Branca. As shown on Figure 9, borehole #19R was not contaminated even though borehole #482R from a previous characterization was contaminated. Borehole #482R was only approximately 3 ft from the location of borehole #19R. Unfortunately, refusal was encountered at 3.5 ft on borehole #19R which is probably not deep enough to penetrate the contamination lens in this area. The homeowner would not allow any more boreholes to be drilled. Again, since the surrounding data indicate that this area should be contaminated, it was conservatively assumed to be. This area will also require further investigation prior to remedial action in order to ensure that contamination is present beneath the residence.

The same argument applies at 11 Branca Court (Figure 10). Borehole #22R was uncontaminated while borehole #507R from a previous characterization was contaminated. Boreholes #397R and #24R indicate that the contamination spans the entire distance beneath the residence. The homeowner would not allow any holes to be drilled inside his home so the boreholes were placed in the only available areas surrounding the foundation. A borehole could not be drilled on the west side of the steps because of a large bush. The contamination pattern under the house is still unknown but low levels of contamination are thought to exist under at least a portion of the house.

Borehole #26R at 11 Redstone Lane is uncontaminated even though it is in an area of surface contamination. The surface soil sample was not analyzed because the gamma reading at 0.5 ft did not

indicate contamination and because this property was sampled to determine if subsurface contamination existed. As was designated in the work instruction, the sample from the 3 ft depth interval was sent for isotopic analysis. As shown on Figure 11, the surface contamination was determined by historical and recent walk-over radiation surveys.

Figure 15 shows the area of contamination at 7 Hancock Street. The back of the home is shown as being underlain by the contamination while the main section is not. This is because the main section of the house has a basement that has a depth of approximately 5 ft below grade, but the back portion of the house is an addition that is slab-on-grade construction. Thus, the addition may need underpinning while the rest of the house does not. This area would require further investigation prior to remedial action in order to ensure that low levels of contamination are present beneath the residence.

The contaminated area in the back of 5 Hancock and 7 Hancock is not connected to any other contaminated areas because the data did not support a connection and the property owner indicated that material had been brought from the Maywood Chemical Works to fill in the rear of the properties. Geologic information confirmed that it is fill material, not stream sediments, that is contaminated in this area.

The property at 60 Trudy Drive has several data discrepancies. As shown on Figure 20, borehole #57R was drilled in the basement of the house and was free of contamination. However, borehole #550R from a previous characterization was drilled in the middle of the front of the house which is only approximately 7 ft from #57R and was contaminated at 7-8 ft below grade. Gamma logs from other boreholes on the property also indicate that contamination should be under the foundation of the house and carport. It is assumed at this time, however, that the house will not have to be underpinned since there is one negative data point beneath the residence. It is possible that subsurface contamination will be found to extend beneath the house during remediation.

The other discrepancy that exists at 60 Trudy is that the walk-over survey that was performed during this effort did not detect any of the surface contamination that was determined to be present from historical data. The only areas of surface contamination that were detected during the recent walk-over are two small spots of surface contamination north of the house as shown on the figure.

To be conservative, all areas of surface contamination detected during previous characterizations and this effort have been indicated on the figure. Another walk-over survey will be performed prior to remedial action.

During remediation, it is highly likely that hot spot criteria will be applied and hazard assessments will be developed for certain areas of the vicinity properties. The hot spot criteria allows areas under 25 m² to exceed the cleanup criteria by a factor of $(100/A)^{0.5}$ where A is the area in which concentrations of the contaminants are elevated. A hazard assessment allows the use of supplemental criteria in situations where the dose to the public is very low and the cost to excavate the contamination or the likelihood of significant damage to irreplaceable objects is high. An example of where the hot spot criteria or a hazard assessment might be applied on the vicinity properties is in the case of subsurface contamination existing beneath a large tree. The size of the root system of the tree will determine whether the hot spot criteria can be applied or whether a hazard assessment will need to be performed. Table 4 indicates which properties have the potential for application of the hot spot criteria or a hazard assessment. These possibilities will be explored further prior to remedial action.

References

George, A., 1995. Memorandum dated May 3, 1995 from A. George to file. Subject: Data packages for Maywood VP basement characterization. CCN #129378.

Table 1. Contaminated and Uncontaminated Boreholes by Property.

Property Name	Contaminated Boreholes	Uncontaminated Boreholes
16 Long Valley		02R, 72R
18 Long Valley		03R, 04R
20 Long Valley	05R, 73R	
22 Long Valley		06R, 74R
24 Long Valley		07R, 08R
26 Long Valley	09R	10R
2 Branca	12R	
4 Branca		15R
6 Branca		18R, 19R*
11 Branca	24R	22R, 23R
11 Redstone		25R, 26R
17 Redstone	30RA	28R, 29R, 31R
Lodi Park		32RA, 33R, 34R, 75R, 76R
5 Hancock	37R	35R
7 Hancock	38R	41R
10 Hancock	45R	
8 Hancock	46R	
6 Hancock	51R, 52R	
4 Hancock		53R*, 55R*
60 Trudy		56R, 57R
112 Avenue E		60R, 62R
106 Columbia	65R	63R*
99 Garibaldi		66R, 67R
Fire Station 2	70R	69R*, 71R*

* Due to refusal, borehole was probably not deep enough to penetrate contamination lens.

Table 2. Comparison of Thorium-232 Results from Field Lab and TMA Lab.

Sample ID	Field Lab Result, S_1 (pCi/g)	TMA Lab Result, S_2 (pCi/g)	Relative Percent Difference
MIS134	3.55	3.41	4.0
MIS247	2.35	2.38	1.3
MIS361	9.94	9.14	8.4
MIS283	1.00	0.82	19.8
MIS397	5.79	5.57	3.9
MIS338	24.81	25.18	1.5
MIS008	0.98	0.86	13.0
MIS016	1.16	1.17	0.86
MIS125	1.11	1.03	7.5
MIS109	0.30	0.40	28.6
		Average	8.9

Table 3. Vicinity Properties with Potential for Underpinning.

Property Name	Substructure Contamination	No substructure contamination
14 Long Valley		X
16 Long Valley		X
18 Long Valley		X
20 Long Valley		X
22 Long Valley		X
24 Long Valley		X
26 Long Valley		X
2 Branca	X	
4 Branca	X	
6 Branca	X	
7 Branca		X
11 Branca	X	
11 Redstone		X
17 Redstone		X
4 Hancock	X	
5 Hancock		X
6 Hancock	X	
7 Hancock		X
8 Hancock	X	
10 Hancock	X	
60 Trudy		X
62 Trudy		X
79 Avenue B		X
90 Avenue C		X
108 Avenue E		X
112 Avenue E		X
113 Avenue E		X
106 Columbia	X	

Table 3. (continued)

Property Name	Substructure Contamination	No Substructure Contamination
99 Garibaldi	X ^a	
136 West Central	X	
200 Brookdale		X
Fire Station 2	X	

^a The garage at 99 Garibaldi is underlain by contamination, not the house.

Table 4. Vicinity Properties with Potential for Implementation of Hot Spot Criteria or Hazard Assessments.

Property Name	Potential for Hot Spots or Hazard Assessments ^a
14 Long Valley	X ^{b,c}
16 Long Valley	X ^{b,c}
18 Long Valley	X ^{b,c}
20 Long Valley	X ^c
22 Long Valley	X ^{b,c}
24 Long Valley	X ^{b,c}
26 Long Valley	X ^c
2 Branca	X ^{c,d}
4 Branca	
6 Branca	X ^d
7 Branca	
11 Branca	X ^c
11 Redstone	X ^c
17 Redstone	
4 Hancock	
5 Hancock	
6 Hancock	
7 Hancock	
8 Hancock	
10 Hancock	X ^c
60 Trudy	X ^c
62 Trudy	X ^b
79 Avenue B	X
90 Avenue C	X ^d
108 Avenue E	X
112 Avenue E	X

Table 4. (continued)

Property Name	Potential for Hot Spots or Hazard Assessments ^a
113 Avenue E	X
106 Columbia	X ^{c,d}
99 Garibaldi	X ^e
136 West Central	X ^{b,c}
200 Brookdale	X ^b
Fire Station 2	
Lodi Park	X ^c
Firemen's Memorial Park	X ^c
Kennedy Park	
I-80 ROW	

^a Application of hot spot criteria or hazard assessment will be determined at a future date.

^b Surface soil samples are needed in order to apply hot spot criteria.

^c Hot spot criteria or hazard assessment has potential to be applied to large trees.

^d Hazard assessment or hot spot criteria has potential to be applied because contamination extends beneath a sidewalk or road.

^e Hazard assessment has potential to be applied to a garage.

APPENDIX A
DATA SUMMARY TABLES

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
16 Long Valley	02R	N 749770 E 2163739	0.5	8979
			1	9757
			1.5	9773
			2.0	10583(a)
	72R	N 749780 E 2163807	0.5	11150
			1.0	13382
			1.5	13221
			2.0	12232
			2.5	12206
			3.0	11348
18 Long Valley	03R	N 749745 E 2163755	0.5	16983
			1.0	16514
			1.5	11422
			2.0	10286
			2.5	10045
			3.0	9880
	04R	N 749720 E 2163770	0.5	10409
			1.0	10583
			1.5	8896
			2.0	9203(a)
20 Long Valley	05R	N 749681 E 2163780	0.5	59644
			1.0	41330
			1.5	22522
			2.0	14884
			2.5	11708
			3.0	11216
	73R	N 749698 E 2163807	0.5	47838
			1.0	28894
			1.5	15146
			2.0	11086
			2.5	10192
22 Long Valley	06R	N 749630 E 2163792	0.5	17869
			1.0	20980
			1.5	20419
			2.0	13514
			2.5	12296
			3.0	14538
			3.5	10831(a)
	74R	N 749631 E 2163829	0.5	17062
			1.0	28310

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			1.5	19124
			2.0	14158
			2.5	10846
			3.0	9650
24 Long Valley	07R	N 749603	0.5	10283
		E 2163789	1.0	11361
			1.5	11020
			2.0	11240
			2.5	11650
			3.0	13020
			3.5	16084
			4.0	25755
			4.5	18000
			5.0	12804
			5.5	12804
			6.0	12040
	08R	N 749539	0.5	9338
		E 2163773	1.0	11368
			1.5	11974
			2.0	12334
			2.5	14152
			3.0	21406
			3.5	29722
			4.0	23306
			4.5	18350
26 Long Valley	09R	N 749518	0.5	44380
		E 2163670	1.0	21980
			1.5	13354
			2.0	11026
			2.5	11636
			3.0	12262
			3.5	12872
			4.0	12738
			4.5	12876
			5.0	12094
			5.5	11192
			6.0	10486
			6.5	11288(a)
	10R	N 749500	0.5	9796
		E 2163703	1.0	11304
			1.5	13232
			2.0	14102
			2.5	14076
			3.0	13470

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			3.5	13274
			4.0	13060
			4.5	9812
			5.0	8458
			5.5	8830
			6.0	8686(a)
2 Branca	12R	N 749352	0.5	9148
		E 2163752	1.0	11232
			1.5	11902
			2.0	12338
			2.5	11986
			3.0	12138
			3.5	13332
			4.0	14428
			4.5	34472
			5.0	62802
			5.5	20880
			6.0	12744
			6.5	12070
4 Branca	15R	N 749405	0.5	9914
		E 2163775	1.0	12962
			1.5	14084
			2.0	13200
			2.5	12228
			3.0	11670
			3.5	11262
			4.0	10950
			4.5	11800
			5.0	17602
			5.5	32844(a)
6 Branca	18R	N 749470	0.5	9041
		E 2163771	1.0	12044
			1.5	12346
			2.0	13421
			2.5	14561
			3.0	16481
			3.5	21301
			4.0	24591
			4.5	16852
			5.0	14282
	19R	N 749465	0.5	10574
		E 2163802	1.0	13235
			1.5	13156
			2.0	13510

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			2.5	14405
			3.0	16180
			3.5	16640
11 Branca	22R	N 749538	0.5	11066
		E 2163917	1.0	11270
			1.5	11820
			2.0	11963
			2.5	12470
			3.0	13680
			3.5	15502
			4.0	19396
			4.5	23999
			5.0	25180
			5.5	25882(a)
	23R	N 749560	0.5	10000
		E 2163892	1.0	11620
			1.5	13200
			2.0	12900
			2.5	13160
			3.0	14320
			3.5	16950
			4.0	14700
			4.5	12036
	24R	N 749577	0.5	9050
		E 2163905	1.0	11370
			1.5	12500
			2.0	14600
			2.5	26706
			3.0	44498
			3.5	54032
			4.0	61893
			4.5	26072
			5.0	16936
			5.5	11622
			6.0	10102
11 Redstone	25R	N 749203	0.5	11242
		E 2163771	1.0	13242
			1.5	13825
			2.0	14126
			2.5	15968
			3.0	16096
			3.5	18237
			4.0	23905
			4.5	16801

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			5.0	14052
			5.5	11091(a)
	26R	N 749226	0.5	21989
		E 2163780	1.0	11835
			1.5	11343
			2.0	10811
			2.5	10409
			3.0	11034
17 Redstone	28R	N 749275	0.5	11668
		E 2163701	1.0	11126
			1.5	10298
			2.0	10224
			2.5	10440
			3.0	9860
	29R	N 749289	0.5	11394
		E 2163692	1.0	14020
			1.5	11558
			2.0	11772
			2.5	9432
			3.0	9362
	30RA	N 749303	0.5	14029
		E 2163730	1.0	13360
			1.5	14176
			2.0	14329
			2.5	16244
			3.0	24482
			3.5	51283
			4.0	63770
			4.5	57256
			5.0	13300
			5.5	10537
			6.0	10355
			6.5	10102
			7.0	8936(a)
	31R	N 749310	0.5	12970
		E 2163710	1.0	17054
			1.5	12376
			2.0	10166
			2.5	9522
			3.0	9382
Lodi Park	32RA	N 749065	0.5	10428
		E 2163577	1.0	13710

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			1.5	27266
			2.0	33942
			2.5	20036
			3.0	13372
			3.5	10670
			4.0	9868
			4.5	10112
	33R	N 749035	0.5	11911
		E 2163549	1.0	13620
			1.5	16947
			2.0	15357
			2.5	13059
			3.0	11380
	34R	N 749002	0.5	11198
		E 2163527	1.0	14058
			1.5	14608
			2.0	12202
			2.5	10862
			3.0	9903
			3.5	10130
			4.0	9873
			4.5	10231
			5.0	10387
			5.5	10572
			6.0	10411
			6.5	10014(a)
	75R	N 749033	0.5	9643
		E 2163579	1.0	10436
			1.5	12075
			2.0	10097
			2.5	10870
			3.0	10582
			3.5	10472(a)
	76R	N 749035	0.5	12006
		E 2163490	1.0	12983
			1.5	16390
			2.0	16215
			2.5	14230
			3.0	11465
			3.5	9935
5 Hancock	35R	N 748892	0.5	14880
		E 2163457	1.0	26077
			1.5	50674

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			2.0	27535
			2.5	18829
			3.0	13092
			3.5	10915
			4.0	10673
			4.5	11098
			5.0	9730
			5.5	9390
			6.0	10133(a)
	37R	N 748916	0.5	14102
		E 2163455	1.0	17587
			1.5	25857
			2.0	39186(a)
7 Hancock	38R	N 748943	0.5	11998
		E 2163446	1.0	14016
			1.5	14746
			2.0	17506
			2.5	30740
			3.0	46162
			3.5	29952
			4.0	23626
			4.5	21954
			5.0	14502
			5.5	11288
			6.0	11504
	41R	N 748951	0.5	15443
		E 2163483	1.0	19572
			1.5	19787
			2.0	17626
			2.5	10700
			3.0	9167
10 Hancock	45R	N 748881	0.5	17969
		E 2163629	1.0	21331
			1.5	21219
			2.0	20461
			2.5	22655
			3.0	38582
			3.5	89124
8 Hancock	46R	N 748848	0.5	14904
		E 2163621	1.0	20104
			1.5	20250
			2.0	20662
			2.5	21686

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			3.0	45302
			3.5	38540(a)
6 Hancock	51R	N 748820 E 2163579	0.5	9060
			1.0	9880
			1.5	10182
			2.0	9952
			2.5	10378
			3.0	10102
			3.5	12542
			4.0	17416
			4.5	21056
			5.0	21740
			5.5	22988
			6.0	25662
			6.5	38094
			7.0	121936
			7.5	215448
	52R	N 748795 E 2163565	0.5	10398
			1.0	9789
			1.5	10212
			2.0	11423
			2.5	10461
			3.0	11503
			3.5	12019
			4.0	12483
			4.5	13902
			5.0	18537
			5.5	21302
			6.0	21913
			6.5	21928
			7.0	27293
			7.5	90030
			8.0	39359
4 Hancock	53R	N 748780 E 2163568	0.5	8731
			1.0	10545
			1.5	10668
			2.0	10639
			2.5	10001
			3.0	9851
	55R	N 748745 E 2163552	0.5	11535
			1.0	11776
			1.5	11584
			2.0	11299
			2.5	10119

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
			3.0	10296(a)
60 Trudy	56R	N 748617 E 2163460	0.5	12606
			1.0	13780
			1.5	14270
			2.0	13717
			2.5	13531
			3.0	14037
			3.5	14247
			4.0	13302
			4.6	13068
			5.0	13216
			5.5	14584
			6.0	16798
			6.5	16330
			7.0	15331
			7.5	14286
	57R	N 748623 E 2163444	0.5	13870
			1.0	14618
			1.5	14142
			2.0	15152
			2.5	14678(a)
112 Ave E	60R	N 748305 E 2163043	0.5	10232
			1.0	10919
			1.5	10435
			2.0	10412
			2.5	11443
			3.0	10622
	62R	N 748283 E 2163036	0.5	10242
			1.0	10667
			1.5	9854
			2.0	9926(a)
106 Columbia	63R	N 747308 E 2162492	0.5	12620
			1.0	13962
			1.5	14076
			2.0	13732
			2.5	12946(a)
	65R	N 747283 E 2162473	0.5	72456
			1.0	111656
			1.5	95034
			2.0	56242
			2.5	61362
			3.0	45676

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
99 Garibaldi	66R	N 747224 E 2162421	0.5	10708
			1.0	13458
			1.5	14304
			2.0	14434
			2.5	13654
			3.0	13868
			3.5	13670
			4.0	13042
			4.5	11060
			5.0	8060
			5.5	7600
	67R	N 747203 E 2162405	0.5	13790
			1.0	15076
			1.5	13922
			2.0	12969
			2.5	11651
			3.0	9489
			3.5	9231
			4.0	9023
			4.5	8523
			5.0	8311
			5.5	7752
Fire Station 2	69R	N 746990 E 2162335	0.5	9616
			1.0	12001
			1.5	13762
			2.0	14424
			2.5	9133
			3.0	7179
			3.5	6464
			4.0	6248
	70R	N 747006 E 2162347	0.5	10979
			1.0	10978
			1.5	12856
			2.0	8780
			2.5	6864
			3.0	6948
			3.5	8870
			4.0	20690
			4.5	78130
			5.0	148520
			5.5	13500(a)

Table A-1.
Downhole Gamma Logging Results.

Property	Borehole	Coordinates	Depth (ft.)	Gamma (cpm)
	71R	N 747020	0.5	10292
		E 2162359	1.0	9725
			1.5	9555
			2.0	11195
			2.5	10129
			3.0	7624
			3.5	8392
			4.0	8487(a)
(a) Downhole gamma log aborted because the hole either caved in or filled with water.				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
16 Long Valley	02R	N 749770 E 2163739	MIS036	0 - 0.5				
			MIS037	0.5 - 1.0				
			MIS038	1.0 - 1.5				
			MIS039	1.5 - 2.0				
			MIS040	2.0 - 2.5	0.7	0.5	1.5	-0.2
			MIS041	2.5 - 3.0				
	72R	N 749780 E 2163807	MIS314	0 - 0.5				
			MIS315	0.5 - 1.0				
			MIS316	1.0 - 1.5	0.9	0.8	1.5	-0.1
			MIS317	1.5 - 2.0				
			MIS318	2.0 - 2.5				
			MIS319	2.5 - 3.0				
18 Long Valley	03R	N 749745 E 2163755	MIS048	0 - 0.5				
			MIS049	0.5 - 1.0	1.0	0.7	2.0	-0.1
			MIS050	1.0 - 1.5				
			MIS051	1.5 - 2.0				
			MIS052	2.0 - 2.5				
	04R	N 749720 E 2163770	MIS042	0 - 0.5				
			MIS043	0.5 - 1.0	1.6	1.7	6.1	0.3
			MIS044	1.0 - 1.5				
			MIS045	1.5 - 2.0				
			MIS046	2.0 - 2.5				
			MIS047	2.5 - 3.0				
20 Long Valley	05R	N 749681 E 2163780	MIS144	0 - 0.5				
			MIS145	0.5 - 1.0	4.7	2.2	9.8	1.1
			MIS146	1.0 - 1.5				
			MIS147	1.5 - 2.0				
			MIS148	2.0 - 2.5				
			MIS149	2.5 - 3.0				
	73R	N 749698 E 2163807	MIS320	0 - 0.5				
			MIS321	0.5 - 1.0	3.9	1.4	2.7	0.6
			MIS322	1.0 - 1.5	1.6	0.6	1.5	0.0
			MIS323	1.5 - 2.0				
			MIS324	2.0 - 3.0				
22 Long Valley	06R	N 749630 E 2163792	MIS136	0 - 0.5				
			MIS137	0.5 - 1.0				
			MIS138	1.0 - 1.5	0.6	0.7	1.5	-0.2
			MIS139	1.5 - 2.0				
			MIS140	2.0 - 2.5				
			MIS141	2.5 - 3.0				
			MIS142	3.0 - 3.5				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
			MIS143	3.5 - 4.0				
	74R	N 749631	MIS325	0 - 0.5				
		E 2163829	MIS326	0.5 - 1.0				
			MIS327	1.0 - 1.5	2.5	1.6	8.1	0.5
			MIS328	1.5 - 2.0				
			MIS329	2.0 - 2.5				
			MIS330	2.5 - 3.0				
24 Long Valley	07R	N 749603	MIS087	0 - 0.5				
		E 2163789	MIS088	0.5 - 1.0				
			MIS089	1.0 - 1.5				
			MIS090	1.5 - 2.0				
			MIS091	2.0 - 2.5				
			MIS092	2.5 - 3.5				
			MIS093	3.5 - 4.5	1.3	1.1	6.0	0.1
			MIS094	4.5 - 5.0				
			MIS095	5.0 - 5.5				
			MIS096	5.5 - 6.0				
	08R	N 749539	MIS097	0 - 0.5				
		E 2163773	MIS098	0.5 - 1.0				
			MIS099	1.0 - 1.5				
			MIS130	1.5 - 2.0				
			MIS131	2.0 - 2.5				
			MIS132	2.5 - 3.0				
			MIS133	3.0 - 3.5	3.1	0.8	2.0	0.3
			MIS134	3.5 - 4.0	3.5	1.1	6.3	0.6
			MIS135	4.0 - 4.5				
26 Long Valley	09R	N 749518	MIS246	0 - 0.5				
		E 2163670	MIS247	0.5 - 1.0	2.4	0.7	1.8	0.2
			MIS248	1.0 - 1.5				
			MIS249	1.5 - 2.0				
			MIS250	2.0 - 2.5				
			MIS251	2.5 - 3.0				
			MIS252	3.0 - 3.5				
			MIS253	3.5 - 4.0				
			MIS254	4.0 - 4.5				
			MIS255	4.5 - 5.0				
			MIS256	5.0 - 5.5				
			MIS257	5.5 - 6.0				
			MIS258	6.0 - 6.5				
			MIS259	6.5 - 7.0				
	10R	N 749500	MIS260	0 - 0.5				
		E 2163703	MIS261	0.5 - 1.0				
			MIS262	1.0 - 1.5				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
			MIS263	1.5 - 2.0				
			MIS264	2.0 - 2.5	1.2	0.7	1.7	-0.1
			MIS265	2.5 - 3.0				
			MIS266	3.0 - 3.5				
			MIS267	3.5 - 4.0				
			MIS268	4.0 - 4.5				
			MIS269	4.5 - 5.0				
			MIS270	5.0 - 5.5				
			MIS271	5.5 - 6.0				
			MIS272	6.0 - 6.5				
			MIS273	6.5 - 7.0				
2 Branca	12R	N 749352	MIS352	0 - 0.5				
		E 2163752	MIS353	0.5 - 1.0				
			MIS354	1.0 - 1.5				
			MIS355	1.5 - 2.0				
			MIS356	2.0 - 2.5				
			MIS357	2.5 - 3.0				
			MIS358	3.0 - 3.5				
			MIS359	3.5 - 4.0				
			MIS360	4.0 - 4.5				
			MIS361	4.5 - 5.5	9.9	1.3	7.4	1.9
			MIS362	5.5 - 6.0				
			MIS363	6.0 - 6.5				
4 Branca	15R	N 749405	MIS150	0 - 0.5				
		E 2163775	MIS151	0.5 - 1.0				
			MIS152	1.0 - 1.5				
			MIS153	1.5 - 2.0				
			MIS154	2.0 - 2.5				
			MIS155	2.5 - 3.0				
			MIS156	3.0 - 3.5				
			MIS157	3.5 - 4.0				
			MIS158	4.0 - 5.0				
			MIS159	5.0 - 5.5				
			MIS160	5.5 - 6.0	1.9	0.8	3.2	0.2
			MIS161	6.0 - 6.5	2.1	0.8	2.0	0.2
6 Branca	18R	N 749470	MIS162	0 - 0.5				
		E 2163771	MIS163	0.5 - 1.0				
			MIS164	1.0 - 1.5				
			MIS165	1.5 - 2.0				
			MIS166	2.0 - 2.5				
			MIS167	2.5 - 3.0				
			MIS168	3.0 - 3.5				
			MIS169	3.5 - 4.0	3.9	1.1	2.9	0.6
			MIS170	4.0 - 4.5	1.9	1.1	7.5	0.3
			MIS171	4.5 - 5.0				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
	19R	N 749465	MIS172	0 - 0.5				
		E 2163802	MIS173	0.5 - 1.0				
			MIS174	1.0 - 1.5				
			MIS175	1.5 - 2.0				
			MIS176	2.0 - 2.5				
			MIS177	2.5 - 3.0				
			MIS178	3.0 - 3.5	1.3	0.8	2.7	0.0
11 Branca	22R	N 749538	MIS075	0 - 0.5				
		E 2163917	MIS076	0.5 - 1.0				
			MIS077	1.0 - 1.5				
			MIS078	1.5 - 2.0				
			MIS079	2.0 - 2.5				
			MIS080	2.5 - 3.0				
			MIS081	3.0 - 3.5				
			MIS082	3.5 - 4.0				
			MIS083	4.0 - 4.5				
			MIS084	4.5 - 5.0				
			MIS085	5.0 - 5.5	3.4	0.8	2.2	0.4
			MIS086	5.5 - 6.0	3.5	0.7	6.6	0.5
	23R	N 749560	MIS065	0 - 0.5				
		E 2163892	MIS066	0.5 - 1.0				
			MIS067	1.0 - 1.5				
			MIS068	1.5 - 2.0				
			MIS069	2.0 - 2.5				
			MIS070	2.5 - 3.0				
			MIS071	3.0 - 3.5				
			MIS072	3.5 - 4.0				
			MIS073	4.0 - 4.5	1.8	0.8	1.7	0.1
			MIS074	4.5 - 5.0				
	24R	N 749577	MIS053	0 - 0.5				
		E 2163905	MIS054	0.5 - 1.0				
			MIS055	1.0 - 1.5				
			MIS056	1.5 - 2.0				
			MIS057	2.0 - 2.5				
			MIS058	2.5 - 3.0				
			MIS059	3.0 - 4.0	10.1	1.4	3.7	1.9
			MIS060	4.0 - 4.5				
			MIS061	4.5 - 5.0				
			MIS062	5.0 - 5.5				
			MIS063	5.5 - 6.0				
			MIS064	6.0 - 6.5				
11 Redstone	25R	N 749203	MIS179	0 - 0.5				
		E 2163771	MIS180	0.5 - 1.0				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
			MIS181	1.0 - 1.5				
			MIS182	1.5 - 2.0				
			MIS183	2.0 - 2.5				
			MIS184	2.5 - 3.0				
			MIS185	3.0 - 3.5				
			MIS186	3.5 - 4.0	1.8	1.9	0.3	0.3
			MIS187	4.0 - 4.5	4.6	1.7	3.0	0.9
			MIS188	4.5 - 5.0				
			MIS189	5.0 - 5.5				
			MIS190	5.5 - 6.0				
			MIS191	6.0 - 6.5	0.8	0.6	1.9	-0.1
	26R	N 749226	MIS198	0 - 0.5				
		E 2163780	MIS199	0.5 - 1.0				
			MIS200	1.0 - 1.5				
			MIS201	1.5 - 2.0				
			MIS202	2.0 - 2.5				
			MIS203	2.5 - 3.0				
			MIS204	3.0 - 3.5	0.8	0.6	1.7	-0.1
17 Redstone	28R	N 749275	MIS227	0 - 0.5				
		E 2163701	MIS228	0.5 - 1.0	0.5	0.4	1.1	-0.3
			MIS229	1.0 - 1.5				
			MIS230	1.5 - 2.0				
			MIS231	2.0 - 2.5				
			MIS232	2.5 - 3.0				
	29R	N 749289	MIS205	0 - 0.5				
		E 2163692	MIS206	0.5 - 1.0	1.0	0.7	2.1	-0.1
			MIS207	1.0 - 1.5				
			MIS208	1.5 - 2.0				
			MIS209	2.0 - 2.5				
			MIS210	2.5 - 3.0				
	30RA	N 749303	MIS211	0 - 0.5				
		E 2163730	MIS212	0.5 - 1.0				
			MIS213	1.0 - 1.5				
			MIS214	1.5 - 2.0				
			MIS215	2.0 - 2.5				
			MIS216	2.5 - 3.0				
			MIS217	3.0 - 3.5				
			MIS218	3.5 - 4.0				
			MIS219	4.0 - 4.5	16.1	1.5	4.6	3.2
			MIS220	4.5 - 5.0				
			MIS221	5.0 - 5.5				
			MIS222	5.5 - 6.0				
			MIS223	6.0 - 6.5				
			MIS224	6.5 - 7.0				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
			MIS225	7.0 - 7.5				
			MIS226	7.5 - 8.0				
	31R	N 749310	MIS192	0 - 0.5				
		E 2163710	MIS193	0.5 - 1.0				
			MIS194	1.0 - 1.5	0.7	0.7	1.4	-0.2
			MIS195	1.5 - 2.0				
			MIS196	2.0 - 2.5				
			MIS197	2.5 - 3.0				
Lodi Park	32RA	N 749065	MIS294	0 - 0.5				
		E 2163577	MIS295	0.5 - 1.0				
			MIS296	1.0 - 1.5				
			MIS297	1.5 - 2.0	3.0	0.8	2.2	0.3
			MIS298	2.0 - 2.5				
			MIS299	2.5 - 3.0				
			MIS300	3.0 - 3.5				
			MIS301	3.5 - 4.0				
			MIS302	4.0 - 4.5				
	33R	N 749035	MIS274	0 - 0.5				
		E 2163549	MIS275	0.5 - 1.0				
			MIS276	1.0 - 1.5				
			MIS277	1.5 - 2.0	0.9	0.7	1.6	-0.1
			MIS278	2.0 - 2.5				
			MIS279	2.5 - 3.0				
	34R	N 749002	MIS280	0 - 0.5				
		E 2163527	MIS281	0.5 - 1.0				
			MIS282	1.0 - 1.5				
			MIS283	1.5 - 2.0	1.0	0.6	1.5	-0.1
			MIS284	2.0 - 2.5				
			MIS285	2.5 - 3.0				
			MIS286	3.0 - 3.5				
			MIS287	3.5 - 4.0				
			MIS288	4.0 - 4.5				
			MIS289	4.5 - 5.0				
			MIS290	5.0 - 5.5				
			MIS291	5.5 - 6.0				
			MIS292	6.0 - 6.5				
			MIS293	6.5 - 7.0				
	75R	N 749033	MIS442	0 - 0.5				
		E 2163579	MIS443	0.5 - 1.0				
			MIS444	1.0 - 1.5				
			MIS445	1.5 - 2.0	1.1	0.7	2.0	-0.1
			MIS446	2.0 - 2.5				
			MIS447	2.5 - 3.0				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
			MIS448	3.0 - 3.5				
			MIS449	3.5 - 4.0				
	76R	N 749035	MIS431	0 - 0.5				
		E 2163490	MIS432	0.5 - 1.0				
			MIS433	1.0 - 1.5				
			MIS434	1.5 - 2.0	1.9	0.8	2.1	0.1
			MIS435	2.0 - 2.5				
			MIS436	2.5 - 3.0				
			MIS437	3.0 - 3.5				
			MIS438	3.5 - 4.0				
			MIS439	4.0 - 4.5				
			MIS440	4.5 - 5.0				
			MIS441	5.0 - 5.5				
5 Hancock	35R	N 748892	MIS339	0 - 0.5				
		E 2163457	MIS340	0.5 - 1.0				
			MIS341	1.0 - 1.5	1.3	0.8	1.7	0.0
			MIS342	1.5 - 2.0	4.7	1.0	2.5	0.7
			MIS343	2.0 - 2.5				
			MIS344	2.5 - 3.0				
			MIS345	3.0 - 3.5				
			MIS346	3.5 - 4.0				
			MIS347	4.0 - 4.5				
			MIS348	4.5 - 5.0				
			MIS349	5.0 - 5.5				
			MIS350	5.5 - 6.0				
			MIS351	6.0 - 6.5				
	37R	N 748916	MIS364	0 - 0.5				
		E 2163455	MIS365	0.5 - 1.0				
			MIS366	1.0 - 1.5				
			MIS367	1.5 - 2.0				
			MIS368	2.0 - 2.5	6.2	1.2	3.3	1.1
7 Hancock	38R	N 748943	MIS392	0 - 0.5				
		E 2163446	MIS393	0.5 - 1.0				
			MIS394	1.0 - 1.5				
			MIS395	1.5 - 2.0				
			MIS396	2.0 - 2.5				
			MIS397	2.5 - 3.0	5.8	1.6	2.4	1.1
			MIS398	3.0 - 3.5				
			MIS399	3.5 - 4.0				
			MIS400	4.0 - 4.5				
			MIS401	4.5 - 5.0				
			MIS402	5.0 - 5.5				
			MIS403	5.5 - 6.0				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
	41R	N 748951	MIS419	0 - 0.5				
		E 2163483	MIS420	0.5 - 1.0				
			MIS421	1.0 - 1.5	2.2	2.2	1.8	0.5
			MIS422	1.5 - 2.0				
			MIS423	2.0 - 2.5				
			MIS424	2.5 - 3.0				
10 Hancock	45R	N 748881	MIS331	0 - 0.5				
		E 2163623	MIS332	0.5 - 1.0				
			MIS333	1.0 - 1.5				
			MIS334	1.5 - 2.0				
			MIS335	2.0 - 2.5				
			MIS336	2.5 - 3.0				
			MIS337	3.0 - 3.5				
			MIS338	3.5 - 4.0	24.8	2.6	4.6	5.1
8 Hancock	46R	N 748848	MIS369	0 - 0.5				
		E 2163621	MIS370	0.5 - 1.0				
			MIS371	1.0 - 1.5				
			MIS372	1.5 - 2.0				
			MIS373	2.0 - 2.5				
			MIS374	2.5 - 3.0				
			MIS375	3.0 - 3.5	6.8	2.4	3.1	1.5
			MIS376	3.5 - 4.0	2.2	1.6	2.2	0.3
6 Hancock	51R	N 748820	MIS377	0 - 0.5				
		E 2163579	MIS378	0.5 - 1.0				
			MIS379	1.0 - 1.5				
			MIS380	1.5 - 2.0				
			MIS381	2.0 - 2.5				
			MIS382	2.5 - 3.0				
			MIS383	3.0 - 3.5				
			MIS384	3.5 - 4.0				
			MIS385	4.0 - 4.5				
			MIS386	4.5 - 5.0				
			MIS387	5.0 - 5.5				
			MIS388	5.5 - 6.0				
			MIS389	6.0 - 6.5				
			MIS390	6.5 - 7.0				
			MIS391	7.0 - 7.5	18.6	1.6	4.2	3.7
	52R	N 748795	MIS404	0 - 0.5				
		E 2163565	MIS405	0.5 - 1.0				
			MIS406	1.0 - 1.5				
			MIS407	1.5 - 2.0				
			MIS408	2.0 - 2.5				
			MIS409	2.5 - 3.0				
			MIS410	3.0 - 3.5				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios		
			MIS411	3.5 - 4.0						
			MIS412	4.0 - 4.5						
			MIS413	4.5 - 5.0						
			MIS414	5.0 - 5.5						
			MIS415	5.5 - 6.0						
			MIS416	6.0 - 6.5						
			MIS417	6.5 - 7.0	21.0	2.7	4.0	4.3		
			MIS418	7.0 - 7.5	3.5	1.3	1.6	0.5		
			MIS419	7.5 - 8.5						
4 Hancock	53R	N 748780 E 2163568	MIS233	0 - 0.5						
			MIS234	0.5 - 1.0						
			MIS235	1.0 - 1.5						
			MIS236	1.5 - 2.0						
	MIS237	2.0 - 2.5								
	MIS238	2.5 - 3.0			0.8	0.5	1.4	-0.2		
	55R	N 748745 E 2163552	MIS239	0 - 0.5						
			MIS240	0.5 - 1.0						
MIS241			1.0 - 1.5							
MIS242			1.5 - 2.0							
MIS243			2.0 - 2.5							
MIS244			2.5 - 3.0							
MIS245	3.0 - 3.5			0.6	0.4	1.2	-0.2			
60 Trudy	56R	N 748617 E 2163460	MIS450	0 - 0.5						
			MIS451	0.5 - 1.0						
			MIS452	1.0 - 1.5						
			MIS453	1.5 - 2.0						
			MIS454	2.0 - 2.5						
			MIS455	2.5 - 3.0						
			MIS456	3.0 - 3.5						
			MIS457	3.5 - 4.0						
			MIS458	4.0 - 4.5						
			MIS459	4.5 - 5.0						
			MIS460	5.0 - 5.5						
			MIS461	5.5 - 6.0						
			MIS462	6.0 - 6.5			1.2	0.7	1.4	0.0
			MIS463	6.5 - 7.0						
MIS464	7.0 - 7.5									
57R	N 748623 E 2163444	MIS425	0 - 0.5							
		MIS426	0.5 - 1.0							
		MIS427	1.0 - 1.5							
		MIS428	1.5 - 2.0							
		MIS429	2.0 - 2.5			1.2	0.6	1.7	-0.1	
		MIS430	2.5 - 3.0							

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios
112 Ave E	60R	N 748305 E 2163043	MIS001	0 - 0.5				
			MIS002	0.5 - 1.0				
			MIS003	1.0 - 1.5				
			MIS004	1.5 - 2.0				
			MIS005	2.0 - 2.5	0.7	0.5	1.4	-0.2
			MIS006	2.5 - 3.0				
	62R	N 748283 E 2163036	MIS007	0 - 0.5	1.0	1.0	1.9	0.0
			MIS008	0.5 - 1.0	1.0	0.7	1.7	-0.1
			MIS009	1.0 - 1.5				
			MIS010	1.5 - 2.0				
			MIS011	2.0 - 2.5				
			MIS012	2.5 - 3.0				
106 Columbia	63R	N 747308 E 2162492	MIS308	0 - 0.5				
			MIS309	0.5 - 1.0				
			MIS310	1.0 - 1.5				
			MIS311	1.5 - 2.0				
			MIS312	2.0 - 2.5				
			MIS313	2.5 - 3.0				
	65R	N 747283 E 2162473	MIS303	0 - 0.5				
			MIS304	0.5 - 1.0				
			MIS305	1.0 - 1.5	27.4	2.1	9.4	5.6
			MIS306	1.5 - 2.0				
			MIS307	2.0 - 3.0				
99 Garibaldi	66R	N 747224 E 2162421	MIS013	0 - 0.5				
			MIS014	0.5 - 1.0				
			MIS015	1.0 - 1.5				
			MIS016	1.5 - 2.0	1.2	0.8	1.7	0.0
			MIS017	2.0 - 3.0				
			MIS018	3.0 - 3.5				
			MIS019	3.5 - 4.0				
			MIS020	4.0 - 4.5				
			MIS021	4.5 - 5.0				
			MIS022	5.0 - 5.5				
	67R	N 747203 E 2162405	MIS024	0 - 0.5				
			MIS025	0.5 - 1.0				
			MIS026	1.0 - 1.5	1.3	0.8	1.9	0.0
			MIS027	1.5 - 2.0				
			MIS028	2.0 - 2.5				
			MIS029	2.5 - 3.0				
			MIS030	3.0 - 3.5				
			MIS031	3.5 - 4.0				
			MIS032	4.0 - 4.5				

Table A-2.
Soil Sample Results.

Property	Borehole	Coordinates	Sample	Depth (ft.)	Th-232	Ra-226 (pCi/g)	U-238	Sum of Ratios	
			MIS033	4.5 - 5.0					
			MIS034	5.0 - 5.5					
			MIS035	5.5 - 6.0					
Fire Station 2	69R	N 746990 E 2162335	MIS122	0 - 0.5					
			MIS123	0.5 - 1.0					
			MIS124	1.0 - 1.5					
			MIS125	1.5 - 2.0	1.1	0.5	1.8	-0.1	
			MIS126	2.0 - 2.5					
			MIS127	2.5 - 3.0					
			MIS128	3.0 - 3.5					
			MIS129	3.5 - 4.0					
	70R	N 747006 E 2162347	MIS110	0 - 0.5					
			MIS111	0.5 - 1.0					
			MIS112	1.0 - 1.5					
			MIS113	1.5 - 2.0					
			MIS114	2.0 - 2.5					
			MIS115	2.5 - 3.0					
			MIS116	3.0 - 3.5					
			MIS117	3.5 - 4.0					
			MIS118	4.0 - 4.5					
			MIS119	4.5 - 5.0					
			MIS120	5.0 - 5.5	21.4	1.9	11.6	4.4	
MIS121	5.5 - 6.0								
	71R	N 747020 E 2162359	MIS100	0 - 0.5					
			MIS101	0.5 - 1.0					
			MIS102	1.0 - 1.5					
			MIS103	1.5 - 2.0					
			MIS104	2.0 - 2.5	0.7	0.5	1.5	-0.2	
			MIS105	2.5 - 3.0					
			MIS106	3.0 - 3.5					
			MIS107	3.5 - 4.0					
			MIS108	4.0 - 4.5					
MIS109	4.5 - 5.0	0.3	0.3	1.2	-0.3				
(a) Downhole gamma log aborted because the hole either caved in or filled with water.									
Note: Shaded areas represent samples in which U-238 was not detected. The number reported is the MDA for U-238.									

APPENDIX B
GEOLOGIC LOGS



GEOLOGIC LOG

PROJECT and JOB NUMBER
FUSRAP 14501-100-138

HOLE NO.
02R
 SHEET NO. 1 OF 1

DRILLER
Gold Seal

SITE and LOCATION
MISS; 16 Long Valley Rd, Lodi, NJ

BEGUN
03-09-95

DRILLING EQUIPMENT
Hand Auger

HOLE SIZE
3.25"

COORDINATES
N 749,770 E 2,163,739

COMPLETED
03-09-95

SAMPLING EQUIPMENT
none

GROUND ELEVATION

LOGGED BY
P. Linley

TOTAL DEPTH
2.8

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics	Description and Classification	Remarks
				0.0		0.0 - 1.3 ft: CLAYEY SILT (ML) ; Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2) changing to Moderate brown (5YR4/4-3/4) at 1.0', very fine- to fine-grained, semi- to unconsolidated, subangular to subrounded, moderately sorted, abundant rootlets to 1.0', wet.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Static groundwater at 0.5'.
				1.3		1.3 - 2.5 ft: SILTY SAND (SM) ; Light brown (5YR5/6), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, minor gravel, saturated.	
				2.5		2.5 - 2.8 ft: GRAVELLY SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4) to Light brown (5YR5/6), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, - 15% gravel up to 1" in size, saturated.	Auger refusal at 2.8', hole backfilled with cuttings and sand.
						TOTAL DEPTH = 2.8 FT.	
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION
MISS; 16 Long Valley Rd, Lodi, NJ

HOLE NO.
02R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

03R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 18 Long Valley Rd, Lodi, NJ

BEGUN

03-09-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,745 E 2,163,755

GROUND ELEVATION

COMPLETED

03-09-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

2.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 2.5		<p>0.0 - 2.5 ft: SILTY SAND (SM); Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, abundant rootlets to 0.5', moist.</p> <p>at 1.0 ft: color change to Moderate brown (5YR4/4-3/4) with some Grayish brown (5YR3/2) to Dusky brown (5YR2/2) with Light Brown (5YR5/6), sand fraction increasing with depth.</p> <p>at 1.5 ft: silt content decreasing with depth.</p> <p>at 2.0 ft: color change to Moderate brown (5YR4/4-3/4) to Light brown (5YR5/6) to Grayish brown (4YR3/4) with Pale yellowish brown (10YR6/2) stringers.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 1.0'.</p>
						TOTAL DEPTH = 2.5 FT.	<p>Hole backfilled with cuttings and sand.</p>
<p>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</p>						<p>DESCRIPTION and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>	HOLE NO. 03R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

04R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 18 Long Valley Rd, Lodi, NJ

BEGUN

03-09-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,720 E 2,163,770

GROUND ELEVATION

COMPLETED

03-09-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 1.0		0.0 - 1.0 ft: CLAYEY SILT (ML) ; Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2), very fine-grained, semi- to unconsolidated, subangular to subrounded, moderately sorted, abundant rootlets. wet.	Hole advanced to depth with 3.25" OD hand auger.
				1.0 - 1.5		1.0 - 1.5 ft: SANDY CLAYEY SILT (ML) ; Moderate yellowish brown (5YR4/4-3/4) to Grayish brown (5YR3/2) to Dusky brown (5YR2/2), very fine- to fine-grained, semi- to unconsolidated, moderate to poorly sorted, subangular to subrounded grains, sand fraction increasing with depth.	Hole sampled and gamma-logged by TMA/Eberline Corp. Static groundwater at 0.5'.
				1.5 - 3.0		1.5 - 3.0 ft: SILTY SAND (SM) ; Moderate yellowish brown (10YR5/4) to Pale yellowish brown (10YR6/2) to Light brown (5YR5/6), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, wet.	
TOTAL DEPTH = 3.0 FT.							Hole backfilled with cuttings and sand.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 18 Long Valley Rd, Lodi, NJ

HOLE NO.

04R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

05R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 20 Long Valley Rd, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,681 E 2,163,780

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
					[Hatched pattern]	<p>0.0 - 1.5 ft: SILTY CLAY (CL); Black (N1) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderate to well sorted, abundant rootlets to 1.0', wet.</p> <p>at 1.0 ft: with some Medium dark gray (N4).</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Location had ~2" of standing water.</p>
				2	[Dotted pattern]	<p>1.5 - 2.0 ft: SAND (SP); Grayish orange (10YR7/4) to Moderate yellowish brown (10YR5/4) to Pale yellowish brown (10YR6/2), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, wet.</p>	
					[Hatched pattern]	<p>2.0 - 2.5 ft: CLAY (CL); Dark gray (N3) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderate to well sorted, saturated.</p>	
					[Dotted pattern]	<p>2.5 - 3.0 ft: SAND (SW); Light brown (5YR5/6) to Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4-3/4), fine- to coarse-grained, poorly sorted, unconsolidated, subrounded to subangular grains, minor clay and silt, wet.</p>	
TOTAL DEPTH = 3.0 FT.							<p>Hole backfilled with cuttings and clean fill.</p>

Description and classification by visual examination of cuttings.
Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 20 Long Valley Rd, Lodi, NJ

HOLE NO.

05R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

06R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 22 Long Valley Rd, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,630 E 2,163,792

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4) to Dusky brown (5YR2/2) to Dusky yellow brown, (10YR2/2), very fine- to fine-grained, unconsolidated, poorly sorted, subrounded to subangular grains, gravel up to 1/2" in size, moist.</p> <p>0.5 - 1.0 ft: CLAYEY SILT (ML); Dusky brown (5YR2/2), very fine-grained, unconsolidated, moderate sorting, ~5% gravel up to 1" in size, moist.</p> <p>1.0 - 1.5 ft: SILTY CLAY (CL); Dark gray (N3) to Grayish black (N2) with some Moderate brown (5YR4/4) mottling, very fine- to fine-grained, semiconsolidated, moderate sorting, subangular to subrounded.</p> <p>1.5 - 2.5 ft: SAND (SP); Moderate yellowish brown (10YR5/4) to Pale yellowish brown (10YR6/2) to Pale brown (5YR5/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, at 2ft wet to saturated.</p> <p>2.5 - 3.2 ft: SILTY CLAY (CL); Light bluish gray (5B7/1) to Medium bluish grayish (5B5/1) mottled with Dark yellowish orange (10YR6/6), very fine-grained, semiconsolidated, moderate to well sorting, subangular to subrounded, saturated.</p> <p>3.2 - 4.0 ft: SILTY SAND (SM); Light bluish gray (5B7/1) to Medium bluish grayish (5B5/1) changing to Light brown (5YR5/6) to Moderate brown (5YR4/4-3/4) at 3.5', very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, saturated.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 2.5'.</p>
						TOTAL DEPTH = 4.0 FT.	Hole backfilled with cutting and clean fill.
							<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 22 Long Valley Rd, Lodi, NJ

HOLE NO.

06R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

07R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 24 Long Valley Rd, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,600 E 2,163,792

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.2

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p>
				2		<p>1.5 - 4.5 ft: SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), with Dusky brown (5YR2/2) and Light brown (5YR5/6) below 2.5', very fine- to fine-grained, moderately sorted, subrounded to subangular grains, unconsolidated, minor gravel up to 1" in size, minor clay, wet at 4ft.</p>	
				4			Static groundwater at 4.0'.
						<p>4.5 - 5.0 ft: SILTY CLAY (CL); Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2) to Medium dark gray (N4), very fine-grained, semi- to unconsolidated, moderate sorting, subangular to subrounded grains, wet.</p>	
						<p>5.0 - 5.5 ft: CLAYEY SAND (SC); Medium light gray (N6) mottled with Dark yellowish orange (10YR6/6) to Grayish brown (5YR3/2), very fine- to fine-grained, moderate to poorly sorted, subrounded to subangular grains, semi- to unconsolidated, wet.</p>	
				6		<p>5.5 - 6.0 ft: SILTY CLAY (CL); Light bluish gray (5B7/1) to Medium bluish grayish (5B5/1) mottled with Dark yellowish orange (10YR6/6), very fine-grained, semiconsolidated, moderate sorting, subangular to subrounded grains, very moist.</p>	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 6.2 FT.							<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>
<p>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</p>						SITE and LOCATION	HOLE NO.
						MISS; 24 Long Valley Rd, Lodi, NJ	07R

Template: HA, 4/93 update 05/31/95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

08R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 24 Long Valley Rd, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,539 E 2,163,773

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
				0.0 - 3.0		0.0 - 3.0 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 4" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				3.0 - 3.4		3.0 - 3.4 ft: SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, unconsolidated, moderate to poorly sorted, subrounded to subangular grains, minor gravel up to 3" in size, wet.	Static groundwater at 3.0'.
				3.4 - 3.5		3.4 - 3.5 ft: SILTY CLAY (CL); Dark yellowish orange (10YR6/6) to Light bluish gray (5B7/1), very fine-grained, semiconsolidated, moderate to well sorted, wet.	
				3.5 - 4.0		3.5 - 4.0 ft: SILT (ML); Brownish black (5YR2/1), very fine-grained, semi- to unconsolidated, moderate to well sorted, minor clay, with gravel below 4.0', moist.	
				4.0 - 4.5		4.0 - 4.5 ft: GRAVELLY CLAYEY SILT (GM/GC); Brownish black (5YR2/1) to Grayish black (N2), very fine grained, semi- to unconsolidated, moderate to poorly sorted, wet.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 4.5 FT.							
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 24 Long Valley Rd, Lodi, NJ	08R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

09R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 26 Long Valley Rd, Lodi, NJ

BEGUN

03-16-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,518 E 2,163,670

GROUND ELEVATION

COMPLETED

03-16-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

7.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY CLAYEY SILT (ML); Moderate brown (5YR3/4) to Grayish brown (5YR3/2) to Dusky brown (5YR2/2), very fine-grained to gravel, poorly sorted, unconsolidated, subangular to subrounded grains, moist.</p> <p>0.5 - 2.0 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4) to Dark reddish brown (10R3/4), very fine- to medium-grained, poorly sorted, unconsolidated, subrounded to subangular grains, gravel up to 3" in size, moist.</p>	Hole advanced to depth with 3.25" OD hand auger.
				2		2.0 - 3.5 ft: CLAYEY SAND (SC) ; Dark reddish brown (10R3/4) to Moderate brown (5YR3/4-4/4), very fine- to medium-grained, poorly sorted, unconsolidated, subrounded to subangular grains, minor gravel up to 1" in size, moist to wet.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				4		3.5 - 4.5 ft: SILTY SAND (SM) ; Dark reddish brown (10R3/4) to Moderate brown (5YR3/4-4/4), very fine- to fine-grained, moderate to poorly sorted, subangular to subrounded grains, unconsolidated, minor gravel up to 1" in size, wet.	Static groundwater at 3.5'.
				6		4.5 - 5.5 ft: GRAVELLY SILTY SAND (SM) ; Dark reddish brown (10R3/4) to Moderate brown (5YR4/4) to Grayish black (N2) to Brownish black (5YR2/1), very fine- to fine-grained, poorly sorted, unconsolidated, subrounded to subangular grains, minor gravel up to 3" in size, wet.	
						5.5 - 7.0 ft: SILTY SAND (SM) ; Dark reddish brown (10R3/4) to Moderate brown (5YR3/4), very fine- to fine-grained, moderately sorted, unconsolidated, subrounded to subangular grains, ~10% gravel up to 3" in size, saturated.	
						TOTAL DEPTH = 7.0 FT.	Hole backfilled with cuttings and clean fill.
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 26 Long Valley Rd, Lodi, NJ	09R

Description and classification by visual examination of cuttings.

Colors from "Rock-Color Chart" (GSA, 1948).



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

10R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 26 Long Valley Rd, Lodi, NJ

BEGUN

03-16-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,500 E 2,163,703

GROUND ELEVATION

COMPLETED

03-16-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

7.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY SILT (ML); Moderate brown (5YR4/4-3/4) to Grayish brown (5YR3/2), very fine- to fine-grained, unconsolidated, poorly sorted, subangular to subrounded grains, moist.</p> <p>0.5 - 1.0 ft: SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4) to Dusky brown (5YR2/2), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, moist.</p> <p>1.0 - 3.5 ft: GRAVELLY SILTY SAND (SM); Dark reddish brown (10R3/4) to Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4) to Dark yellowish orange (10YR6/6), very fine- to medium fine-grained, moderate to poorly sorted, unconsolidated, subrounded to subangular grains, gravel up to 3" in size, moist.</p> <p>3.5 - 4.0 ft: SILT (ML); Light brown (5YR5/6), very fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, moist.</p> <p>4.0 - 4.5 ft: CLAYEY SILT (ML); Grayish black (N2) to Brownish Black (5YR2/1), very fine grained, unconsolidated, moderately sorted, subangular to subrounded grains, moist.</p> <p>4.5 - 7.0 ft: SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Dark yellowish orange (10YR6/6) to Pale yellowish brown (10YR6/2), very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, wet to saturated.</p> <p>at 6.5 ft: color change to Moderate reddish brown (10YR4/6).</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 4.5'.</p> <p>Hole backfilled with cuttings and clean fill.</p>
TOTAL DEPTH = 7.0 FT.							<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 26 Long Valley Rd, Lodi, NJ

HOLE NO.

10R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

12R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 2 Branca Ct, Lodi, NJ

BEGUN

03-18-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,371 E 2,163,762

GROUND ELEVATION

COMPLETED

03-18-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0		0.0 - 3.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 4.5" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				3.5		3.5 - 4.5 ft: SAND (SP); Moderate yellowish brown (10YR5/4) to Pale yellowish brown (10YR6/2), medium-grained, moderately sorted, subangular to subrounded grains, unconsolidated, minor gravel up to 1-1/2" in size, moist to wet.	
				4.5		4.5 - 5.0 ft: SILT (ML); Black (N1), very fine-grained, un- to semiconsolidated, moderately sorted, subangular to subrounded grains, wet.	
				5.0		5.0 - 6.3 ft: CLAYEY SAND (SC); Dark gray (N3) to Medium dark gray (N4), very fine- to fine-grained, moderate to poorly sorted, subangular to subrounded grains, unconsolidated, wet.	Static groundwater at 5.0'
				6.3		6.3 - 6.5 ft: CLAY (CL); Light bluish gray (5B7/1) to Medium bluish grayish (5B5/1) to Pale blue (5B6/2) mottled with Dark yellowish orange (10YR6/6), very fine- grained, semiconsolidated, moderately sorted, wet.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 6.5 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 2 Branca Ct, Lodi, NJ	12R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

14R

SHEET NO. 1 OF 1

MILLER

Gold Seal

SITE and LOCATION

MISS; 2 Branca Ct, Lodi, NJ

BEGUN

03-18-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,391 E 2,163,773

GROUND ELEVATION

COMPLETED

03-18-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

1.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
						0.0 - 0.5 ft: CONCRETE.	Concrete cut with coredrill.
						0.5 - 1.0 ft: GRAVELLY SILTY SAND (SM).	Hole advanced to depth with 3.25" OD hand auger.
						TOTAL DEPTH = 1.0 FT.	Auger refusal at 1.0'. Hole backfilled with cuttings and concrete repaired.
							Hole not surveyed.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 2 Branca Ct, Lodi, NJ

HOLE NO.

14R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

15R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 4 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,404 E 2,163,770

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: SILTY SAND (SM) ; Moderate brown (5YR3/4-4/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor gravel up to 3/8" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 5.5 ft: GRAVELLY SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
						at 1.5 ft: color change to Moderate reddish brown (10R4/6), minor clay.	
				2		at 1.5 ft: color change to Moderate brown (5YR4/4-3/4).	
						at 2.5 ft: color change to Grayish brown (5YR3/2) to Dusky brown (5YR2/2), moist to wet.	
				4			Static groundwater at 4.0'.
						at 5.0 ft: color change to Grayish black (N2).	
				6		5.5 - 6.5 ft: SILTY SAND (SM) ; Moderate olive brown (5Y4/4) to Grayish black (N2) to Moderate brown (5YR4/4), very fine- to fine-grained, moderately well sorted, unconsolidated, subangular to subrounded grains, minor gravel, wet.	Hole backfilled with cuttings and clean fill.
						TOTAL DEPTH = 6.5 FT.	Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 4 Branca Ct, Lodi, NJ	15R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

16R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 4 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,408 E 2,163,791

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

1.8

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics *sample/recovery	Description and Classification	Remarks
						0.0 - 1.8 ft: FILL.	Hole advanced to depth with 3.25" OD hand auger.
						TOTAL DEPTH = 1.8 FT.	Auger refusal, encountered concrete rubble and timbers at 1.8 ft. Hole backfilled with cuttings and clean fill.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 4 Branca Ct, Lodi, NJ

HOLE NO.

16R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

17R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 4 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,415 E 2,163,787

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

0.9

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.9 ft: CONCRETE; over gravel.	Concrete cut with coredrill. Hole advanced to depth with 3.25" OD hand auger.
						TOTAL DEPTH = 0.9 FT.	Auger refusal at 0.9'. Hole backfilled with cuttings and concrete repaired.
							Hole not surveyed.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 4 Branca Ct, Lodi, NJ

HOLE NO.

17R

Lodi, NJ 08035 03-13-95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

18R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 6 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,470 E 2,163,772

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

5.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 3.0		0.0 - 3.0 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly to moderately sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				2.0		at 2.0 ft: color change to Dusky brown (5YR2/2)	
				2.8		at 2.8 ft: color change to Grayish black (N2) to Black (N1).	
				3.0 - 3.5		3.0 - 3.5 ft: GRAVELLY CLAYEY SILT (ML); Grayish black (N2) to Black (N1) with Dark reddish brown (10R3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, with asphalt clast, moist.	
				3.5 - 4.0		3.5 - 4.0 ft: CLAYEY SILT (ML); Brownish black (5YR2/1) to Dusky yellowish brown (10YR2/2) to Dusky brown (5YR2/2) with Dark reddish brown (10R3/4), very fine- to fine-grained, semi- to unconsolidated, moderately sorted, ~10% subangular to subrounded grains, moist.	
				4.0 - 5.0		4.0 - 5.0 ft: SILTY SAND (SM); Dark reddish brown (10R3/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Groundwater was not encountered.
				TOTAL DEPTH = 5.0 FT.			Hole backfilled with cuttings and clean fill.
						Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).	
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 6 Branca Ct, Lodi, NJ	18R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

19R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 6 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,465 E 2,163,803

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 2.5		<p>0.0 - 2.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Dusky brown (5YR2/2) with Moderate brown (5YR4/4-3/4), very fine- to fine- grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 4.5" in size, moist.</p> <p>at 1.5 ft: mottled with Very pale orange (10YR8/2), Grayish orange (10YR7/4), and Pale yellowish brown (10YR6/2), and Dark yellowish orange (10YR6/6).</p> <p>at 2.0 ft: with minor clay.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Groundwater was not encountered.</p>
				2.5 - 3.5		<p>2.5 - 3.5 ft: GRAVELLY CLAYEY SILT (ML); Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2-1/2" in size, moist.</p>	
TOTAL DEPTH = 3.5 FT.							Hole backfilled with cuttings and clean fill.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 6 Branca Ct, Lodi, NJ

HOLE NO.

19R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

20R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 6 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,113 E 2,163,778

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

1.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics	sample/recovery	Description and Classification	Remarks
							0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Dusky brown (5YR2/2), very fine- to fine-grained, unconsolidated, poorly sorted, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
							TOTAL DEPTH = 1.5 FT.	Three attempts made, auger refusal at maximum depth of 1.5'. Hole backfilled with cuttings and clean fill. Hole not surveyed.
								Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.							SITE and LOCATION	HOLE NO.
							MISS; 6 Branca Ct, Lodi, NJ	20R

Formular 11A 4/95 number 03-31-95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

21R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 6 Branca Ct, Lodi, NJ

BEGUN

03-13-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,507 E 2,163,808

GROUND ELEVATION

COMPLETED

03-13-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

1.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Dusky brown (5YR2/2), very fine- to fine-grained, unconsolidated, poorly sorted, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
						TOTAL DEPTH = 1.5 FT.	Three attempts made, auger refusal at maximum depth of 1.5'. Hole backfilled with cuttings and clean fill. Hole not surveyed.
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 6 Branca Ct, Lodi, NJ	21R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

22R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Branca Ct, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,538 E 2,163,917

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics	Description and Classification	Remarks
				0		<p>0.0 - 4.3 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.</p> <p>at 2.0 ft: color as above with Light brown (5YR5/6).</p> <p>at 3.0 ft: color as above with Moderate reddish brown (10R4/6).</p> <p>at 3.5 ft: increased clay content.</p> <p>4.3 - 4.5 ft: SILTY CLAY (ML); Black (N1) to Grayish black (N2) with Medium light gray (N6) stringers, very fine-grained, moderately sorted, un- to semiconsolidated, subangular to subrounded grains, ~5% sand, moist.</p> <p>4.5 - 6.0 ft: SILTY SAND (SM); Brownish black (5YR2/1) to Grayish black (N2), very fine- to fine-grained, semi- to unconsolidated, moderately sorted, subangular to subrounded grains, wet at 6.0 ft.</p> <p>TOTAL DEPTH = 6.0 FT.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Groundwater was not encountered.</p> <p>Hole backfilled with cuttings and clean fill.</p> <p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>
<p>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</p>						<p>SITE and LOCATION</p> <p>MISS; 11 Branca Ct, Lodi, NJ</p>	<p>HOLE NO.</p> <p>22R</p>



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

23R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Branca Ct, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,560 E 2,163,892

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

5.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.0 ft: SILTY SAND (SM) ; Moderate brown (5YR3/4-4/4) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor gravel up to 1-1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		1.0 - 4.0 ft: GRAVELLY SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2-1/2" in size, moist.	Groundwater was not encountered.
						at 3.0 ft: color as above with Moderate reddish brown (10R4/6).	
						at 3.5 ft: sand content increasing with depth.	Hole not surveyed.
				4		4.0 - 5.0 ft: GRAVELLY SAND (SW) ; Grayish brown (5YR3/2) to Moderate brown (5YR3/4-4/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1/2" in size, moist.	
						TOTAL DEPTH = 5.0 FT.	Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	
						MISS; 11 Branca Ct, Lodi, NJ	
						HOLE NO.	
						23R	



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

24R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Branca Ct, Lodi, NJ

BEGUN

03-10-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,577 E 2,163,905

GROUND ELEVATION

COMPLETED

03-10-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: GRAVELLY SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 1.5 ft: SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
				2		1.5 - 2.0 ft: CLAYEY SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, minor gravel, moist.	
						2.0 - 2.5 ft: SILTY SAND (SM) ; Dark gray (N3) to Brownish gray (5YR4/1) with Olive gray (5Y4/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole not surveyed.
						2.5 - 3.0 ft: SILT (ML) ; Black (N1) to Grayish black (N2) with Pale yellowish brown (10YR6/2) and Very pale orange (10YR8/2) laminae, very fine- to fine-grained, unconsolidated, moderately sorted, subangular to subrounded grains, laminae friable - fibrous, moist.	
				4		3.0 - 4.0 ft: SILTY CLAY (CL) ; Brownish black (5YR2/1) to Olive gray (5Y4/1), very fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
						4.0 - 5.0 ft: CLAY (CL) ; Medium gray (N5) to Medium bluish grayish (5B5/1) mottled with Dark yellowish orange (10YR6/6), very fine-grained, moderate to well sorted, semiconsolidated, subangular to subrounded grains, moist.	
				6		5.0 - 6.5 ft: SILTY SAND (SM) ; Medium gray (N5) to Medium bluish grayish (5B5/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor clay, wet.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 6.5 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 11 Branca Ct, Lodi, NJ	24R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

25R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Redstone Ln, Lodi, NJ

BEGUN

03-14-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,203 E 2,163,771

GROUND ELEVATION

COMPLETED

03-14-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 2.0 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR4/4-3/4) to Grayish brown (5YR3/2) to Dusky brown (5YR2/2), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3.5" in size, moist.</p> <p>at 1.5 ft: piece of wire.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p>
				2		<p>2.0 - 2.5 ft: SILTY SAND (SM); Grayish black (N2), Dark yellowish brown (10YR4/2), Pale yellowish brown (10YR6/2), and Moderate yellowish brown (10YR5/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, ~8% clay, moist.</p>	
						<p>2.5 - 3.0 ft: CLAYEY SAND (SC); Black (N1) to Grayish black (N2) with Medium bluish grayish (5B5/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.</p>	
						<p>3.0 - 3.5 ft: SILTY SAND (SM); Black (N1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.</p>	
				3.5		<p>3.5 - 4.0 ft: SAND (SP); Black (N1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, gravel up to 4" in size, wet.</p>	Static groundwater at 3.5'.
				4		<p>4.0 - 4.5 ft: CLAYEY SILT (ML); Black (N1), very fine- to fine-grained, unconsolidated, subangular to subrounded grains, moderately sorted, wet.</p>	
						<p>4.5 - 5.0 ft: SILTY CLAY (CL); Black (N1), very fine-grained, un- to semiconsolidated, moderate sorting, subangular to subrounded, wet.</p>	
						<p>5.0 - 5.5 ft: CLAY (CL); Medium gray (N5) to Medium bluish grayish (5B5/1), very fine- to fine grained, semiconsolidated, moderate to well sorted, moist.</p>	
				6		<p>5.5 - 6.0 ft: SILTY SAND (SM); Medium gray (N5) to Medium bluish grayish (5B5/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor clay, wet.</p>	Hole backfilled with cuttings and clean fill.
						<p>6.0 - 6.5 ft: SAND (SP); Dusky yellowish brown (10YR2/2) to Brownish black (5YR2/1) to Brownish gray (5YR4/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.</p>	Description and classification by visual examination of cuttings.
						TOTAL DEPTH = 6.5 FT.	Colors from "Rock-Color Chart" (GSA, 1948).
<p>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</p>						SITE and LOCATION	HOLE NO.
						MISS; 11 Redstone Ln, Lodi, NJ	25R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

26R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Redstone Ln, Lodi, NJ

BEGUN

03-14-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,226 E 2,163,780

GROUND ELEVATION

COMPLETED

03-14-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 4.0		<p>0.0 - 4.0 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2), Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2), very fine to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.</p> <p>at 1.0 ft: color change to Brownish black (5YR2/1).</p> <p>at 1.5 ft: color as above with Black (N1) to Grayish black (N2) to Brownish black (5YR2/1).</p> <p>at 3.5 ft: color as above with Very light gray (N8), with glass fragments.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Groundwater was not encountered.</p>
				4.0		TOTAL DEPTH = 4.0 FT.	Hole backfilled with cuttings and clean fill.

Description and classification by visual examination of cuttings.
Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 11 Redstone Ln, Lodi, NJ

HOLE NO.

26R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

27R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 11 Redstone Ln, Lodi, NJ

BEGUN

03-14-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,277 E 2,163,815

GROUND ELEVATION

COMPLETED

03-14-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

0.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY SILTY SAND (SM); Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, moist.</p> <p>TOTAL DEPTH = 0.5 FT.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Auger refusal at 0.5'.</p> <p>Hole backfilled with cuttings and clean fill.</p>
							<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 11 Redstone Ln, Lodi, NJ

HOLE NO.

27R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

28R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 17 Redstone Ln, Lodi, NJ

BEGUN

03-15-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,274 E 2,163,710

GROUND ELEVATION

COMPLETED

03-15-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.7

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0		0.0 - 0.7 ft: CONCRETE; over gravel.	Concrete cut with corodrill.
				0.7		0.7 - 1.2 ft: GRAVELLY SILTY SAND (SM); Olive Black (5Y2/1) to Brownish black (5YR2/1), very fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	Hole advanced to depth with 3.25" OD hand auger.
				1.2		1.2 - 1.7 ft: SILTY SANDY GRAVEL (GS); Olive Black (5Y2/1) to Brownish black (5YR2/1), very fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, wet.	Hole sampled and gamma-logged by TMA/Eherline Corp.
				1.7		1.7 - 2.2 ft: GRAVELLY SANDY SILT (ML); Pale yellowish brown (10YR6/2) to Olive gray (5Y4/1), very fine- to fine-grained, moderately to poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3/4" in size, wet.	Static groundwater at 0.35'.
				2.2		2.2 - 2.7 ft: GRAVELLY SILT (ML); Dark yellowish orange (10YR6/6) to Medium gray (N5), very fine- to fine-grained, moderately to poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	
				2.7		2.7 - 3.7 ft: SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Dark yellowish brown (10YR4/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	
				3.7		TOTAL DEPTH = 3.7 FT.	Hole backfilled with cuttings and concrete repaired.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 17 Redstone Ln, Lodi, NJ

HOLE NO.

28R



GEOLOGIC LOG

PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 29R
SITE and LOCATION MISS; 17 Redstone Ln, Lodi, NJ		SHEET NO. 1 OF 1
DRILLING EQUIPMENT Hand Auger	HOLE SIZE 3.25"	BEGUN 03-14-95
COORDINATES N 749,289 E 2,163,692		COMPLETED 03-14-95
GROUND ELEVATION		TOTAL DEPTH 3.5
SAMPLING EQUIPMENT none		LOGGED BY P. Linley

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: CONCRETE ; over gravel.	Concrete cut with coredrill.
						0.5 - 1.0 ft: GRAVELLY SANDY CLAY (CL) ; Moderate brown (5YR4/4), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, wet.	Hole advanced to depth with 3.25" OD hand auger.
						1.0 - 1.5 ft: CLAY (CL) ; Medium light gray (N6) Light bluish gray (5B7/1) with Dark yellowish orange (10YR6/6) mottling, very fine-grained, semi- to unconsolidated, moderate sorting, wet.	Hole sampled and gamma-logged by TMA/Eberline Corp.
						1.5 - 2.5 ft: GRAVELLY SILTY SAND (SM) ; Pale yellowish brown (10YR6/2) to Light brownish gray (5YR6/1) to Brown gray (5YR4/1) to Moderate yellowish brown (10YR5/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	Static groundwater at 0.3'.
						2.5 - 3.5 ft: SILTY SAND (SM) ; Moderate yellowish brown (10YR5/4) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	
TOTAL DEPTH = 3.5 FT.							Hole backfilled with cuttings and concrete repaired.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1943).

Template: H.A. 4/95
 Update: 03-30-95

 GEOLOGIC LOG		PROJECT and JOB NUMBER <i>FUSRAP</i> 14501-100-138		HOLE NO. 30RA			
DRILLER Gold Seal		SITE and LOCATION MISS; 17 Redstone Ln, Lodi, NJ		SHEET NO. 1 OF 1			
DRILLING EQUIPMENT Hand Auger		HOLE SIZE 3.25"	COORDINATES N 749,307 E 2,165,731	GROUND ELEVATION 03-15-95			
SAMPLING EQUIPMENT none		LOGGED BY P. Linley		COMPLETED 03-15-95			
				TOTAL DEPTH 8.0			
Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
						0.0 - 1.0 ft: SILTY SAND (SM) ; Moderate brown (5YR4/4-3/4) to Grayish brown (5YR3/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger.
				2		1.0 - 2.5 ft: CLAYEY SILTY SAND (SM) ; Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
						2.5 - 3.0 ft: SILTY SAND (SM) ; Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
				4		3.0 - 3.5 ft: SAND (SP) ; Moderate brown (5YR3/4-4/4) to Moderate yellowish brown (10YR5/4), very fine- to medium fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
						3.5 - 4.0 ft: CLAYEY SILTY SAND (SM) ; Dusky yellowish brown (10YR2/2), Dusky brown (5YR2/2), Dark reddish brown (10R3/4), Light gray (N7) with Light bluish gray (5B7/1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
				6		4.0 - 4.5 ft: SILTY CLAY (CL) ; Olive gray (5Y4/1), Light bluish gray (5B7/1), Brownish black (5YR2/1), with Moderate yellowish brown (10YR3/4) mottling, very fine-grained, moderate sorting, semi- to unconsolidated, subangular to subrounded grains, moist; with Moderate reddish brown (10R4/6) silty sand stringers.	Static groundwater at 6.0'.
						4.5 - 5.0 ft: SILTY SAND (SM) ; Olive gray (5Y4/1) mottled with Medium gray (N5), Dark yellowish brown (10YR4/2) and Dark reddish brown (10R3/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
				8		5.0 - 5.5 ft: CLAYEY SILTY SAND (SM) ; Greenish gray (5GY6/1, 5GY6/1), mottled with Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, moist.	
						5.5 - 7.0 ft: SILT (ML) ; Olive gray (5Y4/1), Dusky yellow green (5GY5/2), Grayish orange (10YR7/4), and Moderate yellowish brown (10YR5/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	Hole backfilled with cuttings and clean fill.
						7.0 - 8.0 ft: SILTY SAND (SM) ; Moderate yellowish brown (10YR5/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	
						TOTAL DEPTH = 8.0 FT.	
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.		SITE and LOCATION MISS; 17 Redstone Ln, Lodi, NJ		HOLE NO. 30RA			

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GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

31R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 17 Redstone Ln, Lodi, NJ

BEGUN

03-14-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,310 E 2,163,710

GROUND ELEVATION

COMPLETED

03-14-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: CONCRETE ; over gravel.	Concrete cutter with coredrill.
						0.5 - 1.5 ft: SILTY CLAY (CL) ; Dark gray (N3) changing to Medium bluish grayish (5B5/1) with Dark yellowish orange (10YR6/6) stringers at 1.0', very fine-grained, unconsolidated, moderate sorting, subangular to subrounded grains, wet.	Hole advanced to depth with 3.25" OD hand auger.
						1.5 - 2.0 ft: SANDY SILTY CLAY (CL) ; Medium bluish grayish (5B5/1) with Dark yellowish orange (10YR6/6), very fine-grained, moderate to poorly sorted, un- to semiconsolidated, subangular to subrounded grains, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		2.0 - 3.5 ft: SILTY CLAY (CL) ; Moderate yellowish brown (10YR5/4), very fine-grained, moderate sorting, subangular to subrounded grains, unconsolidated, wet.	Static groundwater at 2.5'.
						TOTAL DEPTH = 3.5 FT.	Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 17 Redstone Ln, Lodi, NJ

HOLE NO.

31R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

32RA

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

BEGUN

03-16-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,065 E 2,163,577

GROUND ELEVATION

COMPLETED

03-16-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics	Description and Classification	Remarks
						<p>0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), with Dusky brown (5YR2/2), very fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2-1/2" in size, moist.</p> <p>1.5 - 2.0 ft: CLAYEY SILTY SAND (SM); Dusky brown (5YR2/2), very fine- to fine-grained, unconsolidated, moderate to poorly sorted, subrounded to subangular grains, with asphalt shingles and glass, minor gravel up to 3/4" in size, moist to very moist.</p> <p>2.0 - 2.5 ft: CLAYEY SILT (ML); Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, unconsolidated, moderate sorting, moist.</p> <p>2.5 - 3.0 ft: SILTY CLAYEY SAND (SC); Brownish gray (5YR4/1) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, moist.</p> <p>3.0 - 4.5 ft: SILTY SAND (SM); Light brown (5YR5/6) to Moderate yellowish brown (10YR5/4), with Dark yellowish orange (10YR6/6) hue, very fine- to medium fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, wet.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 3.0'.</p>
						TOTAL DEPTH = 4.5 FT.	<p>Auger refusal at 4.5'; hole backfilled with cuttings and clean fill.</p> <p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

HOLE NO.

32RA



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

33R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

BEGUN

03-16-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,035 E 2,163,549

GROUND ELEVATION

COMPLETED

03-16-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY CLAYEY SILT (ML); Grayish brown (5YR3/2), very fine- to fine-grained, unconsolidated, subangular to subrounded grains, poorly sorted, gravel up to 2" in size, moist.</p>	Hole advanced to depth with 3.25" OD hand auger.
						<p>0.5 - 2.0 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Dark reddish brown (10R3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2-1/2" in size, coal fragments throughout, moist.</p>	Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
						<p>2.0 - 2.5 ft: SILTY CLAY (CL); Brownish gray (5YR4/1) to Light brownish gray (5YR6/1) mottled with Dark yellowish orange (10YR6/6), Grayish black (N2) throughout, very fine-grained, semi- to unconsolidated, moderate sorting, moist.</p>	
						<p>2.5 - 3.0 ft: GRAVELLY SANDY CLAYEY SILT (ML); Medium dark gray (N4) to Dark reddish brown (10R3/4) to Grayish red (10R4/2) to Dark yellowish orange (10YR6/6) very fine- to fine grained, semi- to unconsolidated, poorly sorted, subangular to subrounded, mottled, minor gravel up to 1" in size.</p>	Hole backfilled with cuttings and clean fill.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

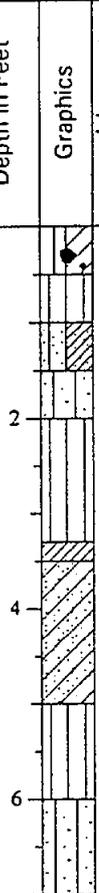
MISS; Lodi Park, Lodi, NJ

HOLE NO.

33R

Description and classification by visual examination of cuttings.

Colors from "Rock-Color Chart" (GSA, 1948).

 GEOLOGIC LOG		PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 34R			
DRILLER Gold Seal		SITE and LOCATION MISS; Lodi Park, Lodi, NJ		SHEET NO. 1 OF 1 BEGUN 03-16-95			
DRILLING EQUIPMENT Hand Auger		HOLE SIZE 3.25"	COORDINATES N 749,002 E 2,163,527	GROUND ELEVATION 03-16-95			
SAMPLING EQUIPMENT none		LOGGED BY P. Linley		TOTAL DEPTH 7.0			
Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
						<p>0.0 - 0.5 ft: GRAVELLY SILT (ML); Dusky yellowish brown (10YR2/2), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.</p> <p>0.5 - 1.0 ft: CLAYEY SILT (ML); Dusky yellowish brown (10YR2/2), very fine- to fine-grained, unconsolidated, moderately sorted, moist.</p> <p>1.0 - 1.5 ft: CLAYEY SILTY SAND (SM); Light brown (5YR5/6) to Moderate brown (5YR4/4), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, minor gravel up to 3/8" in size, moist.</p> <p>1.5 - 2.0 ft: SILTY SAND (SM); Moderate brown (5YR4/4-3/4) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.</p> <p>2.0 - 3.3 ft: SILT (ML); Olive Black (5Y2/1) to Dusky brown (5YR2/2) to Dusky yellowish brown (10YR2/2) to Brownish black (5YR2/1), very fine-grained, unconsolidated moderately sorted, moist to wet.</p> <p>3.3 - 3.5 ft: CLAY (CL); Dark yellowish orange (10YR6/6) to Dark reddish brown (10R3/4) to Brownish black (5YR2/1), very fine grained, moderately sorted, semi- to unconsolidated, moist.</p> <p>3.5 - 5.0 ft: CLAYEY SAND (SC); Brownish gray (5YR4/1) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, wet.</p> <p>5.0 - 6.0 ft: SILT (ML); Moderate yellowish brown (10YR5/4) to Dark yellowish orange (10YR6/6) to Light brown (5YR5/6), very fine-grained, unconsolidated, moderately sorted, minor clay fraction, wet.</p> <p>6.0 - 7.0 ft: SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Dark yellowish orange (10YR6/6) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 4.0'.</p>
TOTAL DEPTH = 7.0 FT.						Hole backfilled with cuttings and clean fill.	
<small>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</small>						SITE and LOCATION MISS; Lodi Park, Lodi, NJ	HOLE NO. 34R

template: IIA, 4/95 update 05.11.95

Description and classification by visual examination of cuttings.
 Colors from "Rock-Color Chart" (GSA, 1948).



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

35R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 5 Hancock St, Lodi, NJ

BEGUN

03-18-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,892 E 2,163,457

GROUND ELEVATION

COMPLETED

03-18-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.0 ft: SILTY SAND (SM) ; Moderate brown (5YR3/4) to Grayish brown (5YR3/2) changing to Moderate reddish brown (10R4/6), to Dark reddish brown (10R3/4) at 0.5', very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger.
						1.0 - 2.0 ft: GRAVELLY SILTY SAND (SM) ; Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4), very fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		2.0 - 2.5 ft: SAND (SP) ; Black (N1), medium fine-grained, unconsolidated, moderately sorted, subrounded grains (cinders), moist.	
						2.5 - 3.0 ft: GRAVELLY SAND (SW) ; Black (N1) with Moderate reddish brown (10R4/6) and Dark reddish brown (10R3/4), fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	
				4		3.0 - 4.5 ft: SAND (SW) ; Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4) with Black (N1), very fine- to medium-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor gravel up to 1-1/2" in size, moist.	
						4.5 - 6.0 ft: SILTY SAND (SM) ; Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4) changing to Dark yellowish orange (10YR6/6) and Moderate yellowish brown (10YR5/4) with Pale yellowish brown (10YR6/2) at 5.5', very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	Static groundwater at 4.5'.
				6		6.0 - 6.5 ft: SAND (SP) ; Moderate brown (5YR4/4) to Light brown (5YR5/6), fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet.	Hole backfilled with cuttings and clean fill.
						TOTAL DEPTH = 6.5 FT.	Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 5 Hancock St, Lodi, NJ	35R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

37R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 10 Hancock St, Lodi, NJ

BEGUN

03-18-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,916 E 2,163,455

GROUND ELEVATION

COMPLETED

03-18-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

2.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
					●	0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4) changing to Light brown (5YR5/6) with Grayish brown (5YR3/2) below 6", very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
				2	●	1.5 - 2.0 ft: SILTY SAND (SM); Light brown (5YR5/6) to Grayish brown (5YR3/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
					●	2.0 - 2.5 ft: GRAVELLY SILTY SAND (SM); Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	
						TOTAL DEPTH = 2.5 FT.	Auger refusal at 2.5'; hole backfilled with cuttings and clean fill.
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 10 Hancock St, Lodi, NJ	37R

Description and classification by visual examination of cuttings.

Colors from "Rock-Color Chart" (GSA, 1948).



GEOLOGIC LOG

PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 38R
SITE and LOCATION MISS; 7 Hancock St, Lodi, NJ		SHEET NO. 1 OF 1
DRILLER Gold Seal	COORDINATES N 748,943 E 2,163,446	BEGUN 03-20-95
DRILLING EQUIPMENT Hand Auger	GROUND ELEVATION	COMPLETED 03-20-95
HOLE SIZE 3.25"	LOGGED BY P. Linley	TOTAL DEPTH 6.0
SAMPLING EQUIPMENT none		

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.0 ft: SILTY SAND (SM) ; Moderate brown (5YR3/4-4/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, minor gravel fraction, gravel up to 1" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		1.0 - 2.0 ft: GRAVELLY SILTY SAND (SM) ; Moderate brown (5YR4/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2" in size, moist.	Groundwater was not encountered.
						2.0 - 2.5 ft: SAND (SP) ; Black (N1), fine-grained, moderately sorted, unconsolidated, subangular grains, moist to wet, (cinders).	
						2.5 - 3.5 ft: GRAVELLY SAND (SW) ; Moderate brown (5YR3/4) changing to Moderate reddish brown (10R4/6) to Dark reddish brown (10R3/4) at 3.0', with Black (N1) throughout, very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	
				4		3.5 - 4.0 ft: SAND (SP) ; Black (N1), fine-grained, moderately sorted, unconsolidated, subangular grains, with coke slag to 3" in size, moist, (cinders).	
						4.0 - 4.8 ft: GRAVELLY SAND (SW) ; Black (N1), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular grains, moist (cinders and coke slag). at 4.8 ft: SAND (SP) Pale yellow orange (10YR8/6), Gray orange (10YR7/4) and Dark yellow orange (10YR6/6), fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	
				6		5.0 - 6.0 ft: SILTY SAND (SM) ; Pale yellowish orange (10YR8/6), Grayish orange (10YR7/4), Dark yellowish orange (10YR6/6), and Moderate yellowish brown (10YR5/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 6.0 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.	SITE and LOCATION MISS; 7 Hancock St, Lodi, NJ	HOLE NO. 38R
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template: HA, 4/95 update 05/31/95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

41R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 7 Hancock St, Lodi, NJ

BEGUN

03-21-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,948 E 2,163,480

GROUND ELEVATION

COMPLETED

03-21-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 1.0		0.0 - 1.0 ft: CONCRETE.	Concrete cut with coredrill.
				1.0 - 2.5		1.0 - 2.5 ft: SAND (SW); Black (N1), fine- to coarse-grained, poorly sorted, unconsolidated, subangular grains, with glass and concrete fragments, moist (cinders).	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				2.5 - 4.0		2.5 - 4.0 ft: SILTY SAND (SM); Pale yellowish orange (10YR8/6), Grayish orange (10YR7/4), and Moderate yellowish brown (10YR5/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Static groundwater at 3.0'
TOTAL DEPTH = 4.0 FT.							Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 7 Hancock St, Lodi, NJ

HOLE NO.

41R



GEOLOGIC LOG

PROJECT and JOB NUMBER
FUSRAP 14501-100-138

HOLE NO.
45R
 SHEET NO. 1 OF 1

DRILLER
Gold Seal

SITE and LOCATION
MISS; 10 Hancock St, Lodi, NJ

BEGUN
03-18-95

DRILLING EQUIPMENT
Hand Auger

COORDINATES
N 748,879 E 2,163,626

COMPLETED
03-18-95

SAMPLING EQUIPMENT
none

LOGGED BY
P. Linley

TOTAL DEPTH
4.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 0.3		0.0 - 0.3 ft: CONCRETE.	Concrete cut with coredrill.
				0.3 - 4.2		0.3 - 4.2 ft: GRAVELLY SAND (SW); Black (N1), fine- to medium-grained, moderately sorted, unconsolidated, subangular grains, gravel up to 3/8" in size, moist to wet at 3.0' (cinders).	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				4.2 - 4.5		4.2 - 4.5 ft: CLAY (CL); Grayish black (N2), very fine-grained, semiconsolidated, moderate sorting, moist.	Static groundwater at 3.0'.
TOTAL DEPTH = 4.5 FT.							Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER,
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION
MISS; 10 Hancock St, Lodi, NJ

HOLE NO.
45R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

46R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 8 Hancock St, Lodi, NJ

BEGUN

03-20-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,846 E 2,163,624

GROUND ELEVATION

COMPLETED

03-20-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

5.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0		0.0 - 1.0 ft: CONCRETE.	Concrete cutter with coredrill. Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				1.0		1.0 - 3.9 ft: GRAVELLY SAND (SW); Black (N1), fine- to coarse-grained, poorly sorted, unconsolidated, subangular grains, gravel up to 3/4" in size, wet.	Static groundwater at 1.0'.
				2.0			
				3.0			
				4.0		3.9 - 5.0 ft: SILT (CL); Olive Black (5Y2/1) to Brownish black (5YR2/1) to Grayish black (N2), with ~10-15% gravelly sand (as above), very fine-grained, unconsolidated, moderately sorted, sand between 4.0-4.5', wet.	
				5.0		TOTAL DEPTH = 5.0 FT.	Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 8 Hancock St, Lodi, NJ

HOLE NO.

46R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

49R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 8 Hancock St, Lodi, NJ

BEGUN

03-20-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,838 E 2,163,590

GROUND ELEVATION

COMPLETED

03-20-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

2.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				2		0.0 - 2.0 ft: GRAVELLY SILTY SAND (SM), with large cobbles and concrete fragments (Fill).	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
						TOTAL DEPTH = 2.0 FT.	Auger refusal at 2.0'; hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 8 Hancock St, Lodi, NJ

HOLE NO.

49R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

51R

SHEET NO. 1 OF 1

SITE and LOCATION

MISS; 6 Hancock St, Lodi, NJ

BEGUN

03-20-95

COORDINATES

N 748,822 E 2,163,575

GROUND ELEVATION

COMPLETED

03-20-95

LOGGED BY

P. Linley

TOTAL DEPTH

7.5

Gold Seal

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

SAMPLING EQUIPMENT

none

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 3.5		0.0 - 3.5 ft: GRAVELLY SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4) with some Black (N1) below 3.0', very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				3.5 - 6.5		3.5 - 6.5 ft: GRAVELLY SAND (SW); Black (N1), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel to 1/4" in size, moist (cinders).	Static groundwater at 6.0'.
				6.5 - 7.0		6.5 - 7.0 ft: SILT (ML); Olive Black (5Y2/1) to Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderately sorted, wet.	
				7.0 - 7.5		7.0 - 7.5 ft: SANDY SILT (ML); Olive Black (5Y2/1) to Brownish black (5YR2/1) to Grayish black (N2), very fine- to fine-grained, semi- to unconsolidated, subrounded to subangular grains, moderately to poorly sorted, wet.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 7.5 FT.							

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 6 Hancock St, Lodi, NJ

HOLE NO.

51R

Description and classification by visual examination of cuttings.

Colors from "Rock-Color Chart" (GSA, 1948).



GEOLOGIC LOG

PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 52R
SITE and LOCATION MISS; 6 Hancock St, Lodi, NJ		SHEET NO. 1 OF 1 BEGUN 03-20-95
DRILLER Gold Seal	COORDINATES N 748,795 E 2,163,565	COMPLETED 03-20-95
DRILLING EQUIPMENT Hand Auger	HOLE SIZE 3.25"	TOTAL DEPTH 8.5
SAMPLING EQUIPMENT none	LOGGED BY P. Linley	

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
				0.0 - 0.5		0.0 - 0.5 ft: GRAVELLY SAND (SW); Pale yellowish brown (10YR6/2) to Moderate brown (5YR3/4), very fine- to medium fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger.
				0.5 - 1.0		0.5 - 1.0 ft: SAND (SW); Moderate yellowish brown (10YR5/4), very fine- to medium-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				1.0 - 4.5		1.0 - 4.5 ft: GRAVELLY SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Dark yellowish brown (10YR4/2) to Moderate brown (5YR3/4-4/4), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains gravel up to 2" in size, moist. Contains brick fragments to 3'.	
				3.5		at 3.5 ft: color change to Grayish brown (5YR3/2) to Dusky brown (5YR2/2).	
				4.5 - 5.0		4.5 - 5.0 ft: SAND (SP); Black (N1), fine- to medium-grained, moderately sorted, unconsolidated, subangular grains, moist (cinders).	
				5.0 - 5.5		5.0 - 5.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Dusky brown (5YR2/2) with Black (N1), very fine- to medium fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, with metal fragments, moist.	
				5.5 - 6.0		5.5 - 6.0 ft: SAND (SW); Black (N1), fine- to coarse-grained, poorly sorted, unconsolidated, subangular grains, moist. (cinders)	
				6.0 - 7.0		6.0 - 7.0 ft: GRAVELLY SAND (SW); Black (N1) with medium yellowish brown (10YR5/4), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, moist, cinders.	
				7.0 - 7.25		7.0 - 7.25 ft: SAND (SW); Black (N1), fine- to coarse-grained, poorly sorted, unconsolidated, subangular grains, wet.	
				7.25 - 7.5		7.25 - 7.5 ft: SILT (ML); Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderately sorted, moist to very moist.	Static groundwater at 7.5'.
				7.5 - 8.5		7.5 - 8.5 ft: SILTY CLAY (CL); Olive gray (5Y4/1) to Olive Black (5Y2/1), very fine-grained, semiconsolidated, moderate sorting, wet.	Hole backfilled with cuttings and clean fill.
TOTAL DEPTH = 8.5 FT.							
						Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).	

HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.	SITE and LOCATION MISS; 6 Hancock St, Lodi, NJ	HOLE NO. 52R
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GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

53R

SHEET NO. 1 OF 1

SITE and LOCATION

MISS; 4 Hancock St, Lodi, NJ

BEGUN

03-15-95

COORDINATES

N 748,780 E 2,163,568

GROUND ELEVATION

COMPLETED

03-15-95

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

SAMPLING EQUIPMENT

none

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						<p>0.0 - 3.0 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2" in size, moist.</p> <p>at 1.0 ft: color as above with Dusky yellowish brown (10YR2/2), Dusky brown (5YR2/2), and Brownish black (5YR2/1).</p> <p>at 2.0 ft: silt content decreasing with depth, changing to SILTY GRAVELLY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine grained, unconsolidated, poorly sorted, subangular to subrounded grains, gravel up to 2" in diameter, moist.</p> <p>at 2.5 ft: wet.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Groundwater was not encountered.</p>
TOTAL DEPTH = 3.0 FT.							Hole backfilled with cuttings and clean fill.
							<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 4 Hancock St, Lodi, NJ

HOLE NO.

53R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

55R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 4 Hancock St, Lodi, NJ

BEGUN

03-15-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,745 E 2,163,550

GROUND ELEVATION

COMPLETED

03-15-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 3.5		<p>0.0 - 3.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3/4" in size, moist.</p> <p>at 1.5 ft: silt content decreasing with depth, changing to SILTY GRAVELLY SAND (SM); Moderate brown (5YR4/4-3/4) Grayish brown (5YR3/2) very fine to coarse grained, unconsolidated, subangular to subrounded, poorly sorted, gravel up to 1/2" in diameter, wet.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Static groundwater at 1.5'.</p>
				TOTAL DEPTH = 3.5 FT.			<p>Hole backfilled with cuttings and clean fill.</p>
						<p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>	
<p>HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.</p>						<p>SITE and LOCATION MISS; 4 Hancock St, Lodi, NJ</p>	
						<p>HOLE NO. 55R</p>	



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

56R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 60 Trudy Dr, Lodi, NJ

BEGUN

03-21-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,617 E 2,163,460

GROUND ELEVATION

COMPLETED

03-21-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

7.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0		0.0 - 0.5 ft: SILTY SAND (SM); Moderate brown (5YR4/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger.
				0.5		0.5 - 2.0 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR4/4) to Light brown (5YR5/6), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2.0		2.0 - 3.5 ft: SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Light brown (5YR5/6), very fine- to medium fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, ~7% gravel up to 1" in size, moist.	
				3.5		3.5 - 7.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4), very fine- to medium fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist to wet at 4.0'. at 4.5 ft: with Black (N1) silty sand laminae. at 5.0 ft: color change to Dark reddish brown (10R3/4) to Moderate brown (5YR3/4), fine- to coarse-grained. at 5.5 ft: with Black (N1) sandy silt and Dark greenish gray (5GY4/1) silty sand laminae. at 6.5 ft: color change to Grayish red (10R4/2) to Dark reddish brown (10R3/4) to Moderate brown (5YR4/4-3/4) with Grayish brown (5YR3/2). at 7.0 ft: with Medium bluish grayish (5B5/1) sandy clay laminae.	Static groundwater at 4.5'.
				7.5		TOTAL DEPTH = 7.5 FT.	Hole backfilled with cuttings and clean fill.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 60 Trudy Dr, Lodi, NJ

HOLE NO.

56R

Description and classification by visual examination of cuttings.

Colors from "Rock-Color Chart" (GSA, 1948).



GEOLOGIC LOG

PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 57R
SITE and LOCATION MISS; 60 Trudy Dr, Lodi, NJ		SHEET NO. 1 OF 1
DRILLER Gold Seal		BEGUN 03-21-95
DRILLING EQUIPMENT Hand Auger	HOLE SIZE 3.25"	COORDINATES N 748,623 E 2,163,444
GROUND ELEVATION		COMPLETED 03-21-95
SAMPLING EQUIPMENT none		LOGGED BY P. Linley
		TOTAL DEPTH 4.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.0 ft: CONCRETE ; over gravel.	Concrete cut with coredrill.
						1.0 - 1.5 ft: SANDY GRAVEL (GW) ; Moderate brown (5YR4/4), fine- to very coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						1.5 - 2.5 ft: GRAVELLY SILTY CLAY (CL) ; Moderate brown (5YR3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
						2.5 - 4.0 ft: GRAVELLY CLAYEY SILT (ML) ; Moderate brown (5YR3/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Groundwater was not encountered.
						TOTAL DEPTH = 4.0 FT.	Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.	SITE and LOCATION MISS; 60 Trudy Dr, Lodi, NJ	HOLE NO. 57R
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template: HA, 4/95 update 03-31-95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

59R

DRILLER

Gold Seal

SITE and LOCATION

MISS; 62 Trudy Dr, Lodi, NJ

SHEET NO. 1 OF 1

BEGUN

03-21-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,568 E 2,163,454

GROUND ELEVATION

COMPLETED

03-21-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

1.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics <small>sample/recovery</small>	Description and Classification	Remarks
						0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4), very fine- to fine-grained, poorly sorted, unconsolidated, subrounded to subangular grains, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
						TOTAL DEPTH = 1.5 FT.	Two attempts made, auger refusal at maximum depth of 1.5'. Hole backfilled with cuttings and clean fill.
						Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).	
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 62 Trudy Dr, Lodi, NJ	59R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

60R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 112 Avenue E, Lodi, NJ

BEGUN

03-07-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 748,305 E 2,163,043

GROUND ELEVATION

COMPLETED

03-07-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.7

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.8 ft: CONCRETE; over gravel.	Concrete cut with coredrill. Hole advanced to depth with 3.25" OD hand auger.
						0.8 - 1.2 ft: CLAYEY SILT (ML); Light brown (5YR5/6), Pale brown (5YR5/2), and Dark yellowish brown (10YR4/2), very fine- to fine-grained, semiconsolidated, subangular to subrounded, moderately sorted, saturated.	Hole sampled and gamma-logged by TMA/Eberline Corp. Static groundwater at 0.7'.
						1.2 - 3.7 ft: SILTY SAND (SM); Pale yellowish brown (10YR6/2) to Moderate yellowish brown (10YR5/4) to Dark yellowish brown (10YR4/2) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderately to poorly sorted, un- to semiconsolidated, subangular to subrounded grains, saturated.	
						TOTAL DEPTH = 3.7 FT.	Hole backfilled with cuttings and sand.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
 HA = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 112 Avenue E, Lodi, NJ

HOLE NO.

60R



GEOLOGIC LOG

PROJECT and JOB NUMBER
FUSRAP 14501-100-138

HOLE NO.
62R
 SHEET NO. 1 OF 1

DRILLING EQUIPMENT
Gold Seal

SITE and LOCATION
MISS; 112 Avenue E, Lodi, NJ

BEGUN
03-07-95

HOLE SIZE
3.25"

COORDINATES
N 748,283 E 2,163,036

GROUND ELEVATION
03-07-95

SAMPLING EQUIPMENT
none

LOGGED BY
P. Linley

TOTAL DEPTH
3.7

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.8 ft: CONCRETE; over gravel.	Concrete cut with coredrill.
						0.8 - 1.2 ft: CLAYEY SILT (ML); Moderate brown (5YR4/4) to Light brown (5YR5/6), very fine- to fine-grained, moderately to poorly sorted, semiconsolidated, subangular to subrounded, - 15% sand, saturated.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
						1.2 - 3.7 ft: SILTY SAND (SM); Moderate yellowish brown (10YR5/4) to Dark yellowish orange (10YR6/6) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, saturated.	Static groundwater at 0.7'.
				2		at 2.0 ft: some Very light gray (NS) stringers.	
						at 3.0 ft: ~2" slag fragment.	
TOTAL DEPTH = 3.7 FT.							Hole backfilled with cuttings and sand.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND FIELD HAMMER DRIVEN SAMPLER;
 HX = HAND AUGER, P = PITCHER SAMPLER.

SITE and LOCATION
MISS; 112 Avenue E, Lodi, NJ

HOLE NO.
62R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

63R

SHEET NO. 1 OF 1

OWNER

Gold Seal

SITE and LOCATION

MISS; 106 Columbia St, Lodi, NJ

BEGUN

03-17-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 747,308 E 2,162,492

GROUND ELEVATION

COMPLETED

03-17-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.5

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.4 ft: CONCRETE.	Concrete cut with coredrill.
						0.4 - 3.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4.4/4), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
						TOTAL DEPTH = 3.5 FT.	Auger refusal at 3.5' hole backfilled with cuttings and concrete repaired.

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 106 Columbia St, Lodi, NJ

HOLE NO.

63R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

65R

SHEET NO. 1 OF 1

OWNER

Gold Seal

SITE and LOCATION

MISS; 106 Columbia St, Lodi, NJ

BEGUN

03-17-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 747,283 E 2,162,473

GROUND ELEVATION

COMPLETED

03-17-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.7

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: CONCRETE.	Concrete cut with coredrill.
						0.5 - 1.1 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, poorly to moderately sorted, unconsolidated, subangular to subrounded grains, gravel up to 1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
						1.1 - 3.3 ft: CLAYEY SILT (ML); Moderate brown (5YR3/4-4/4) to Grayish brown (5YR3/2), with Brownish black (5YR2/1) to Grayish black (N2) below 1.7', very fine-grained, moderately sorted, unconsolidated, minor gravel up to 1" in size, wet.	Static groundwater at 1.5'.
						3.3 - 3.6 ft: CLAY (CL); Light brown gray (5YR6/1), very fine-grained, moderate sorting, semiconsolidated, gravel up to 1-1/2" in size, moist.	Hole backfilled with cuttings and concrete repaired.
TOTAL DEPTH = 3.7 FT.							
						Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).	
HIS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION MISS; 106 Columbia St, Lodi, NJ	HOLE NO. 65R



GEOLOGIC LOG

PROJECT and JOB NUMBER FUSRAP 14501-100-138		HOLE NO. 66R
SITE and LOCATION MISS; 99 Garibaldi St, Lodi, NJ		SHEET NO. 1 OF 1
DRILLER Gold Seal		BEGUN 03-08-95
DRILLING EQUIPMENT Hand Auger	HOLE SIZE 3.25"	COORDINATES N 747,224 E 2,162,421
GROUND ELEVATION		COMPLETED 03-08-95
SAMPLING EQUIPMENT none		LOGGED BY P. Linley
		TOTAL DEPTH 6.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: SILTY CLAY (CL); Moderate brown (5YR3/4-4/4), very fine-grained, semi- to unconsolidated, moderate sorting, subangular to subrounded grains, minor gravel up to 3/4" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 2.0 ft: GRAVELLY SILTY CLAY (CL); Moderate brown (5YR4/4), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, ~30% gravel up to 2" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
				2		2.0 - 3.0 ft: GRAVELLY CLAYEY SAND (SC); Moderate brown (5YR3/4-4/4), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	Hole not surveyed.
						3.0 - 4.0 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, gravel up to 1" in size, minor clay, moist.	
				4		4.0 - 5.0 ft: GRAVELLY SAND (SW); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4), fine- to medium coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, minor clay, moist.	
						5.0 - 5.5 ft: GRAVELLY CLAYEY SAND (SC); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4-3/4), very fine- to medium coarse-grained, poorly sorted, unconsolidated subangular to subrounded grains, gravel up to 1" in size, wet.	
				6		5.5 - 6.0 ft: GRAVELLY SAND (SW); Brownish black (5YR2/1) to Dark Gray (N3) to Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1/4" in size, moist.	Hole backfilled with cuttings and sand.
TOTAL DEPTH = 6.0 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION MISS; 99 Garibaldi St, Lodi, NJ	
						HOLE NO. 66R	

template: HA, 4/95 update 05-31-95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

67R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 99 Garibaldi St, Lodi, NJ

BEGUN

03-08-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 747,203 E 2,162,405

GROUND ELEVATION

COMPLETED

03-08-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.1

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: SILTY CLAY (CL); Moderate brown (5YR3/4-4/4), very fine-grained, semiconsolidated, moderate sorting, subangular to subrounded grains, minor gravel up to 1/4" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 2.0 ft: GRAVELLY CLAYEY SAND (SC); Moderate brown (5YR4/4) to Light brown (5YR5/6), very fine- to medium-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		2.0 - 2.5 ft: GRAVELLY SAND (SW); Moderate brown (5YR3/4-4/4) to Light brown (5YR5/6) to Dark yellowish orange (10YR6/6), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole not surveyed.
				4		2.5 - 4.5 ft: SAND (SW); Moderate brown (5YR4/4) to Light brown (5YR5/6) to Dark yellowish orange (10YR6/6), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, moist.	
						4.5 - 5.0 ft: GRAVELLY SAND (SW); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4-3/4) to Light brown (5YR5/6) to Dark yellowish orange (10YR6/6), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	
						5.0 - 5.5 ft: SAND (SW); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4-3/4) to Light brown (5YR5/6), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, moist.	Static groundwater at bottom of hole.
				6		5.5 - 6.0 ft: GRAVELLY SAND (SW); Moderate yellowish brown (10YR5/4) to Moderate brown (5YR4/4-3/4) to Dark yellowish orange (10YR6/6) to Light brown (5YR5/6), fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	Hole backfilled with cuttings and sand.
TOTAL DEPTH = 6.1 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION MISS; 99 Garibaldi St, Lodi, NJ	HOLE NO. 67R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

69R

SHEET NO. 1 OF 1

OWNER

Gold Seal

SITE and LOCATION

MISS; Lodi Firestation, Lodi, NJ

BEGUN

03-08-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 746,990 E 2,162,335

GROUND ELEVATION

COMPLETED

03-08-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.9

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: GRAVELLY SILTY SAND (SM); Moderate brown (5YR3/4-4/4), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3/4" in size, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 3.0 ft: GRAVELLY SILTY SAND (SM); Dusky brown (5YR2/2) to Grayish brown (5YR3/2) to Moderate brown (5YR3/4-4/4) to Dusky yellowish brown (10YR2/2), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 3" in size, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered.
				2			Hole not surveyed.
						3.0 - 3.8 ft: GRAVELLY SAND (SW); Dusky brown (5YR2/2) to Grayish brown (5YR3/2) to Moderate brown (5YR3/4-4/4) to Dusky yellowish brown (10YR2/2), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, with debris, moist.	
				4		3.8 - 4.0 ft: SAND (SP); Dusky yellowish brown (10YR2/2), Dusky brown (5YR2/2), Grayish brown (5YR3/2), Moderate brown (5YR3/4-4/4), with Dark yellowish orange (10YR6/6) stringers, also white (N9) with Greenish gray (5GY6/1) to Dark greenish gray (5GY4/1) nodules, very fine to fine grained, unconsolidated, moderate sorting, subangular to subrounded grains, rubber fragments within interval.	
						4.0 - 4.5 ft: SILTY SAND (SM); Dusky brown (5YR2/2) to Black (N1), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, abundant wood fiber, minor gravel up to 1-1/2" in size, moist.	Hole backfilled with cuttings and sand.
						TOTAL DEPTH = 4.9 FT.	
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; Lodi Firestation, Lodi, NJ

HOLE NO.

69R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

70R

SHEET NO. 1 OF 1

OWNER

Gold Seal

SITE and LOCATION

MISS; Lodi Firestation, Lodi, NJ

BEGUN

03-08-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 747,006 E 2,162,347

GROUND ELEVATION

COMPLETED

03-08-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

6.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 2.0		0.0 - 2.0 ft: GRAVELLY SILTY SAND (SM); Dusky brown (5YR2/2), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 2-1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp.
				2.0 - 3.0		2.0 - 3.0 ft: GRAVELLY SAND (SW); Dusky brown (5YR2/2) to Brownish black (5YR2/1) to Grayish black (N2), fine- to coarse-grained, poorly sorted, subrounded to subangular grains, gravel up to 2-1/2" in size, moist. at 2.9 ft: color change to Pale yellowish orange (10YR8/6) .M=SG 3.0 - 4.8 ft: SAND (SP); Light brown (5YR5/6) to Pale yellowish orange (10YR8/6) to Dark yellowish orange (10YR6/6) to Dusky yellowish brown (10YR2/2), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist. at 3.5 ft: color change to Very pale orange (10YR8/2).	Hole not surveyed.
				4.3		at 4.3 ft: wet, overall color Dusky brown (5YR2/2) with Pale yellowish brown (10YR6/2) stringers.	Static groundwater at 4.3'.
				4.8 - 5.5		4.8 - 5.5 ft: CLAYEY SILT (ML); Black (N1), very fine-grained, semiconsolidated, moderate sorting, subangular to subrounded grains, minor sand, wet.	
				5.5 - 6.0		5.5 - 6.0 ft: SILTY CLAY (CL); Olive gray (5Y4/1) to Olive Black (5Y2/1), very fine-grained, semiconsolidated, subangular to subrounded grains, moderate sorting, minor sand, wet.	Hole backfilled with cuttings and sand.
TOTAL DEPTH = 6.0 FT.							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HHS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; Lodi Firestation, Lodi, NJ	70R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

71R

SHEET NO. 1 OF 1

SAMPLER

Gold Seal

SITE and LOCATION

MISS; Lodi Firestation, Lodi, NJ

BEGUN

03-08-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 747,020 E 2,162,359

GROUND ELEVATION

COMPLETED

03-08-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

5.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				0.0 - 3.3		0.0 - 3.3 ft: GRAVELLY SILTY SAND (SM); Dusky brown (5YR2/2) to Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to medium-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1-1/2" in size, moist.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Groundwater was not encountered. Hole not surveyed.
				3.3 - 5.0		3.3 - 5.0 ft: SAND (SP); Black (N1) to Grayish black (N2), with Pale yellowish orange (10YR8/6) stringers, and Dusky brown (5YR2/2) below 4.0', very fine- to fine-grained, moderate to well sorted, unconsolidated, subangular to subrounded grains, glass shards in upper portion of interval, moist.	
TOTAL DEPTH = 5.0 FT.							Hole backfilled with cuttings and sand.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HA = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; Lodi Firestation, Lodi, NJ

HOLE NO.

71R

template: HA, 4/95
update: 05-26-95



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

72R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 16 Long Valley Rd, Lodi, NJ

BEGUN

03-17-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,780 E 2,163,776

GROUND ELEVATION

COMPLETED

03-17-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				2		<p>0.0 - 0.5 ft: SILT (ML); Dusky yellowish brown (10YR2/2), very fine-grained, unconsolidated, moderately sorted, abundant roots, moist.</p> <p>0.5 - 3.0 ft: SILTY SAND (SM); Moderate brown (5YR3/4-4/4) to Light brown (5YR5/6) to Dark reddish brown (10R3/4), very fine- to medium fine- grained, moderately sorted, unconsolidated, subangular to subrounded grains, moist.</p>	<p>Hole advanced to depth with 3.25" OD hand auger.</p> <p>Hole sampled and gamma-logged by TMA/Eberline Corp.</p> <p>Groundwater was not encountered.</p>
TOTAL DEPTH = 3.0 FT.							<p>Hole backfilled with cuttings and clean fill.</p> <p>Description and classification by visual examination of cuttings.</p> <p>Colors from "Rock-Color Chart" (GSA, 1948).</p>

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 16 Long Valley Rd, Lodi, NJ

HOLE NO.

72R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

73R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 20 Long Valley Rd, Lodi, NJ

BEGUN

03-17-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,698 E 2,163,807

GROUND ELEVATION

COMPLETED

03-17-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics	sample/recovery	Description and Classification	Remarks
				0.0			0.0 - 0.5 ft: SILT (ML); Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, unconsolidated, moderate sorting, abundant roots, moist.	Hole advanced to depth with 3.25" OD hand auger.
				0.5			0.5 - 3.0 ft: SILTY SAND (SM); Brownish black (5YR2/1) to Brownish gray (5YR8/1) changing to Moderate yellowish brown (10YR5/4) with Pale yellowish brown (10YR6/2) at 1.0', very fine- to medium-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, wet.	Hole sampled and gamma-logged by TMA/Eberline Corp. Static groundwater at 0.1'.
				2				
							TOTAL DEPTH = 3.0 FT.	Hole backfilled with cuttings and clean fill.
								Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; 20 Long Valley Rd, Lodi, NJ

HOLE NO.

73R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

74R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; 22 Long Valley Rd, Lodi, NJ

BEGUN

03-17-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,631 E 2,163,829

GROUND ELEVATION

COMPLETED

03-17-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

3.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 1.0 ft: SILT (ML) ; Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderate sorting, abundant roots, moist.	Hole advanced to depth with 3.25" OD hand auger.
						1.0 - 1.7 ft: SILTY CLAY (CL) ; Brownish black (5YR2/1) to Grayish black (N2), very fine-grained, semi- to unconsolidated, moderate sorting, moist.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		1.7 - 2.0 ft: SILTY SAND (SM) ; Light olive gray (5Y6/1) to Light brown (5YR5/6) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, moist.	Static groundwater at 2.0'
						2.0 - 2.5 ft: CLAYEY SAND (SC) ; Light bluish gray (5B7/1) to Dark yellowish orange (10YR6/6), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, wet.	
						2.5 - 3.0 ft: SILTY SAND (SM) ; Light olive gray (5Y6/1) to Light brown (5YR5/6), very fine- to fine-grained, moderately sorted, unconsolidated, subangular to subrounded grains, wet to saturated.	
TOTAL DEPTH = 3.0 FT.							Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION	HOLE NO.
						MISS; 22 Long Valley Rd, Lodi, NJ	74R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP**14501-100-138**

HOLE NO.

75R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

BEGUN

03-21-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,035 E 2,163,550

GROUND ELEVATION

COMPLETED

03-21-95

SAMPLING EQUIPMENT

none

LOGGED BY

P. Linley

TOTAL DEPTH

4.0

Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
				4		0.0 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4) to Dusky brown (5YR2/2), very fine- to fine-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, wet.	Hole advanced to depth with 3.25" OD hand auger. Hole sampled and gamma-logged by TMA/Eberline Corp. Static groundwater at 1.0'.
				2		1.5 - 2.0 ft: SANDY CLAY (CL); Light brown (5YR5/6) to Moderate brown (5YR4/4) to Grayish brown (5YR3/2), very fine- to medium-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, wet.	
				2		2.0 - 2.5 ft: CLAYEY SILT (ML); Light brown (5YR5/6) to Moderate brown (5YR4/4) to Grayish brown (5YR3/2), very fine- to fine-grained, moderate sorting, semi- to unconsolidated, subangular to subrounded grains, wet.	
				2.5		2.5 - 3.0 ft: CLAYEY SAND (SC); Moderate brown (5YR3/4-4/4), very fine- to medium-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, wet.	
				4		3.0 - 4.0 ft: GRAVELLY CLAYEY SAND (SC); Moderate brown (5YR3/4-4/4) with Dark reddish brown (10R3/4), very fine- to coarse-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, gravel up to 3/4" in size, wet.	
TOTAL DEPTH = 4.0 FT.							Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).

HS = HAND HELD HAMMER DRIVEN SAMPLER;
HX = HAND AUGER; P = PITCHER SAMPLER.

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

HOLE NO.

75R



GEOLOGIC LOG

PROJECT and JOB NUMBER

FUSRAP

14501-100-138

HOLE NO.

76R

SHEET NO. 1 OF 1

DRILLER

Gold Seal

SITE and LOCATION

MISS; Lodi Park, Lodi, NJ

BEGUN

03-21-95

DRILLING EQUIPMENT

Hand Auger

HOLE SIZE

3.25"

COORDINATES

N 749,035 E 2,163,490

GROUND ELEVATION

COMPLETED

03-21-95

SAMPLING EQUIPMENT

none

LOGGED BY

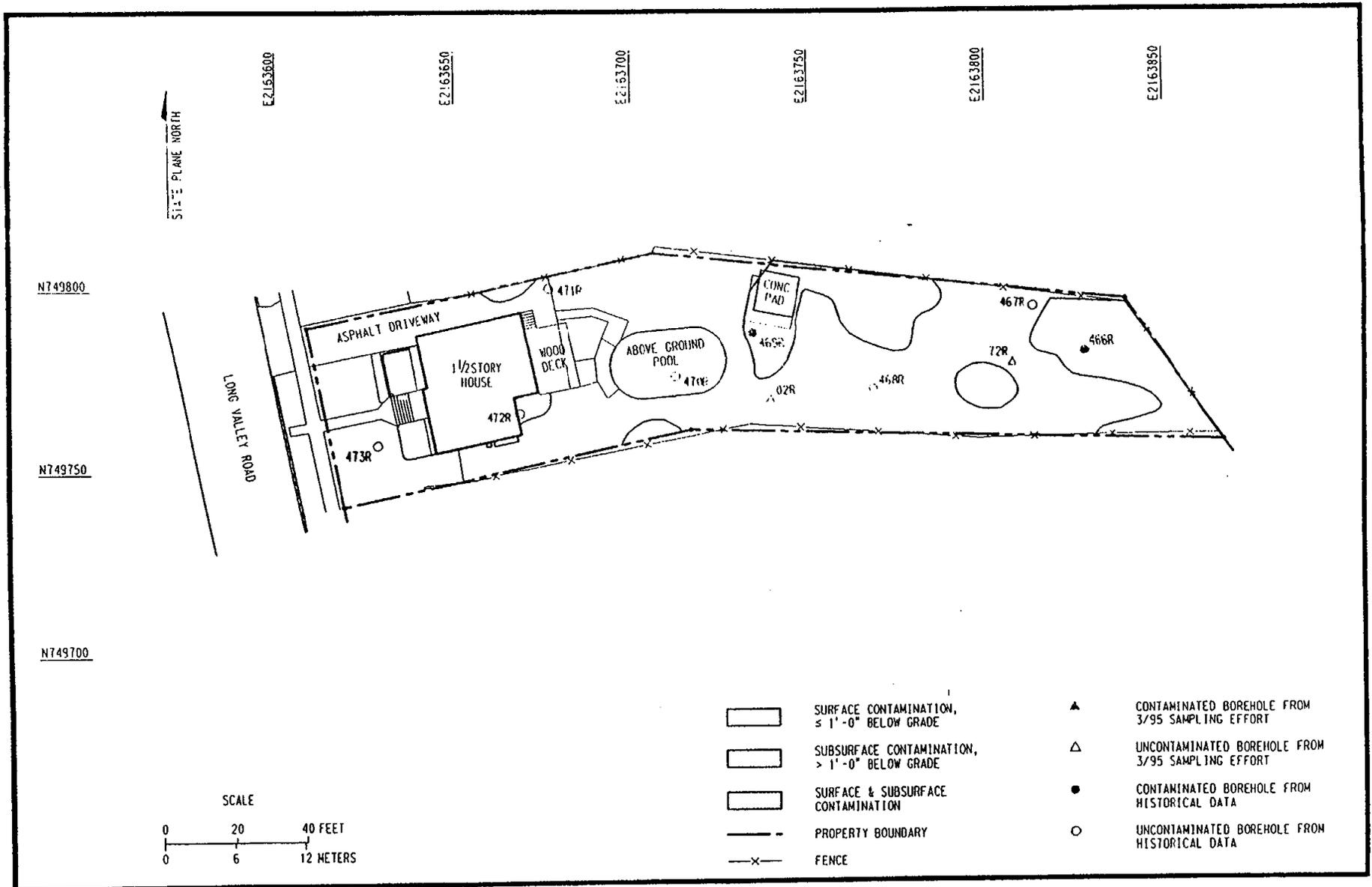
P. Linley

TOTAL DEPTH

5.5

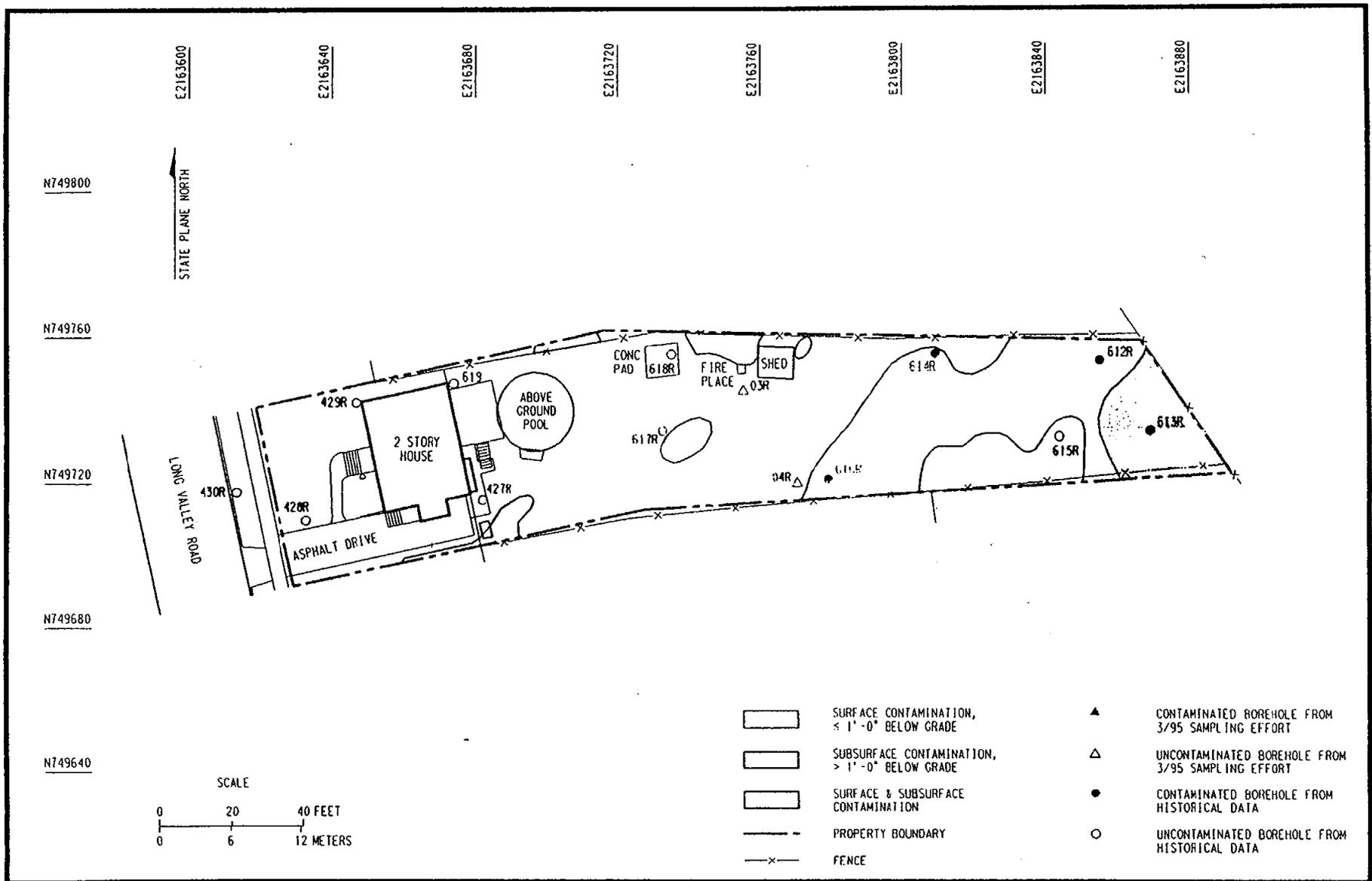
Sampler Type	Sampler Length	Recovery (ft)	Elevation in Feet	Depth in Feet	Graphics sample/recovery	Description and Classification	Remarks
						0.0 - 0.5 ft: CLAYEY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to fine-grained, moderate to poorly sorted, unconsolidated, subangular to subrounded grains, moist.	Hole advanced to depth with 3.25" OD hand auger.
						0.5 - 1.5 ft: GRAVELLY SILTY SAND (SM); Grayish brown (5YR3/2) to Moderate brown (5YR4/4-3/4), very fine- to coarse-grained, poorly sorted, unconsolidated, subangular to subrounded grains, gravel up to 1" in size, moist to wet.	Hole sampled and gamma-logged by TMA/Eberline Corp.
				2		1.5 - 2.0 ft: GRAVELLY SANDY SILT (ML); Grayish brown (5YR3/2) to Dusky brown (5YR2/2) to Moderate reddish brown (10R4/6), very fine- to fine-grained, poorly sorted, semi- to unconsolidated, subangular to subrounded grains, wet.	Static groundwater at 1.5'.
				4		2.0 - 5.5 ft: SILTY SAND (SM); Brownish black (5YR2/1) to Dusky brown (5YR2/2) Dusky yellowish brown (10YR2/2) changing to Pale yellowish brown (10YR6/2) to Moderate yellowish brown (10YR5/4) to Dark yellowish orange (10YR6/6) at 3.0', very fine- to fine-grained, moderately sorted, semi- to unconsolidated, subangular to subrounded grains, wet.	
TOTAL DEPTH = 5.5 FT.							Hole backfilled with cuttings and clean fill.
							Description and classification by visual examination of cuttings. Colors from "Rock-Color Chart" (GSA, 1948).
HS = HAND HELD HAMMER DRIVEN SAMPLER; HX = HAND AUGER; P = PITCHER SAMPLER.						SITE and LOCATION MISS; Lodi Park, Lodi, NJ	
						HOLE NO. 76R	

APPENDIX C
PROPERTY MAPS



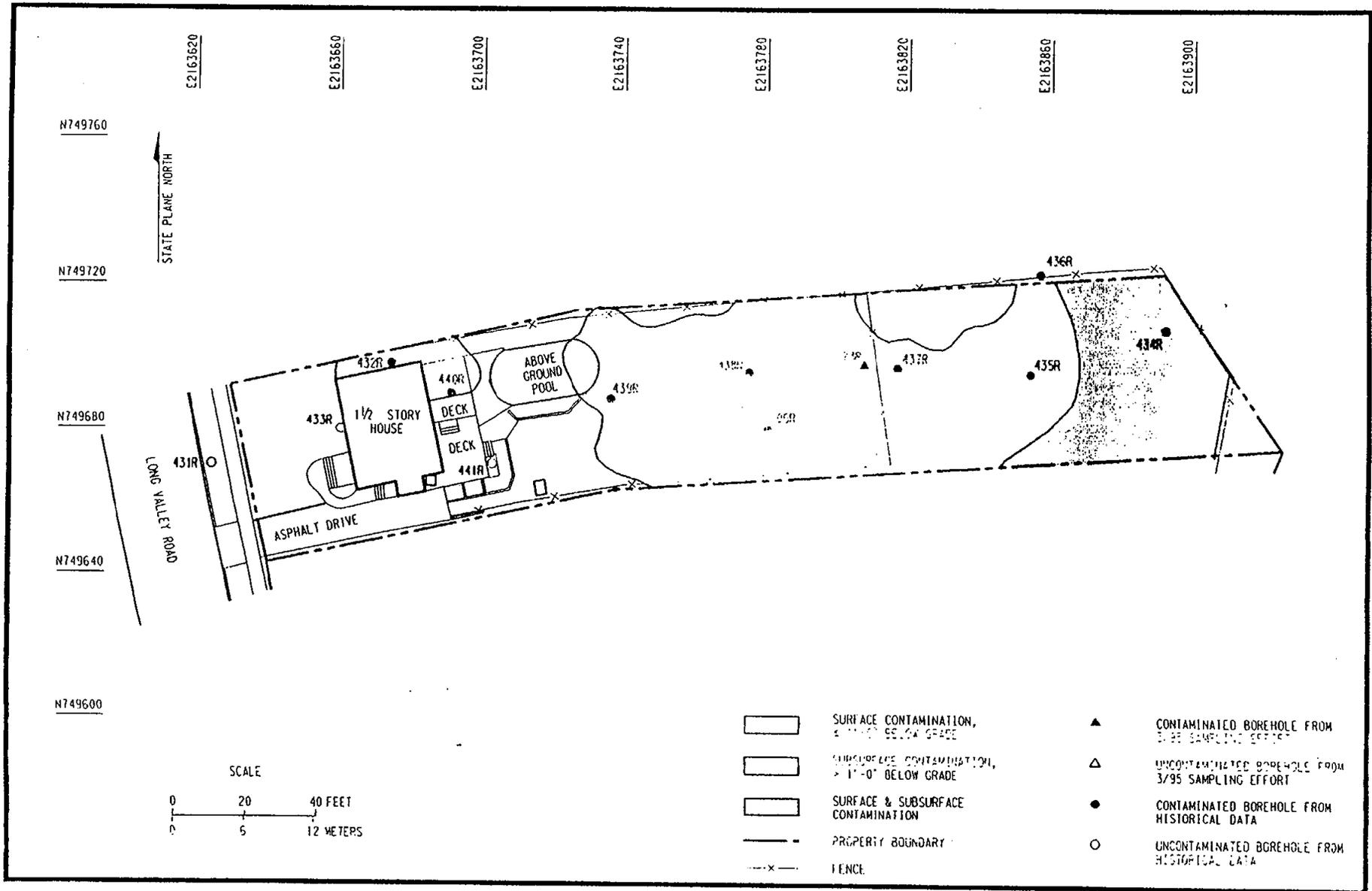
R62F002.DGN

Figure 1
 Borehole Locations and Contamination Zones at Long Valley Road



R62F 003.DGN

Figure 2
Borehole Locations and Areas of Contamination at 18 Long Valley Road



R62F004.DGN

Figure 3
Borehole Locations and Areas of Contamination at 20 Long Valley Road

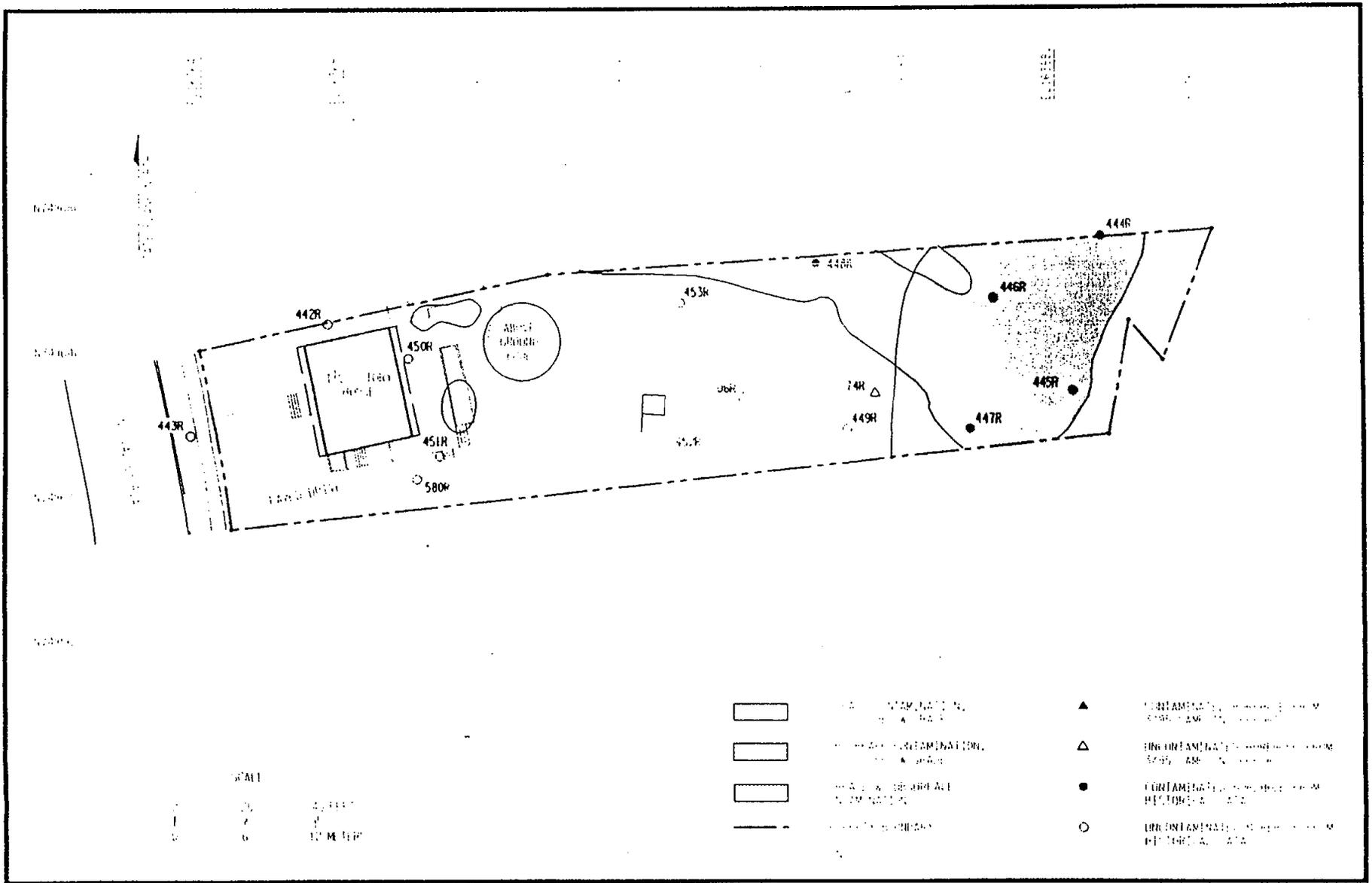


Figure 4
Borehole Locations and Areas of Contamination at 22 Long Valley Road

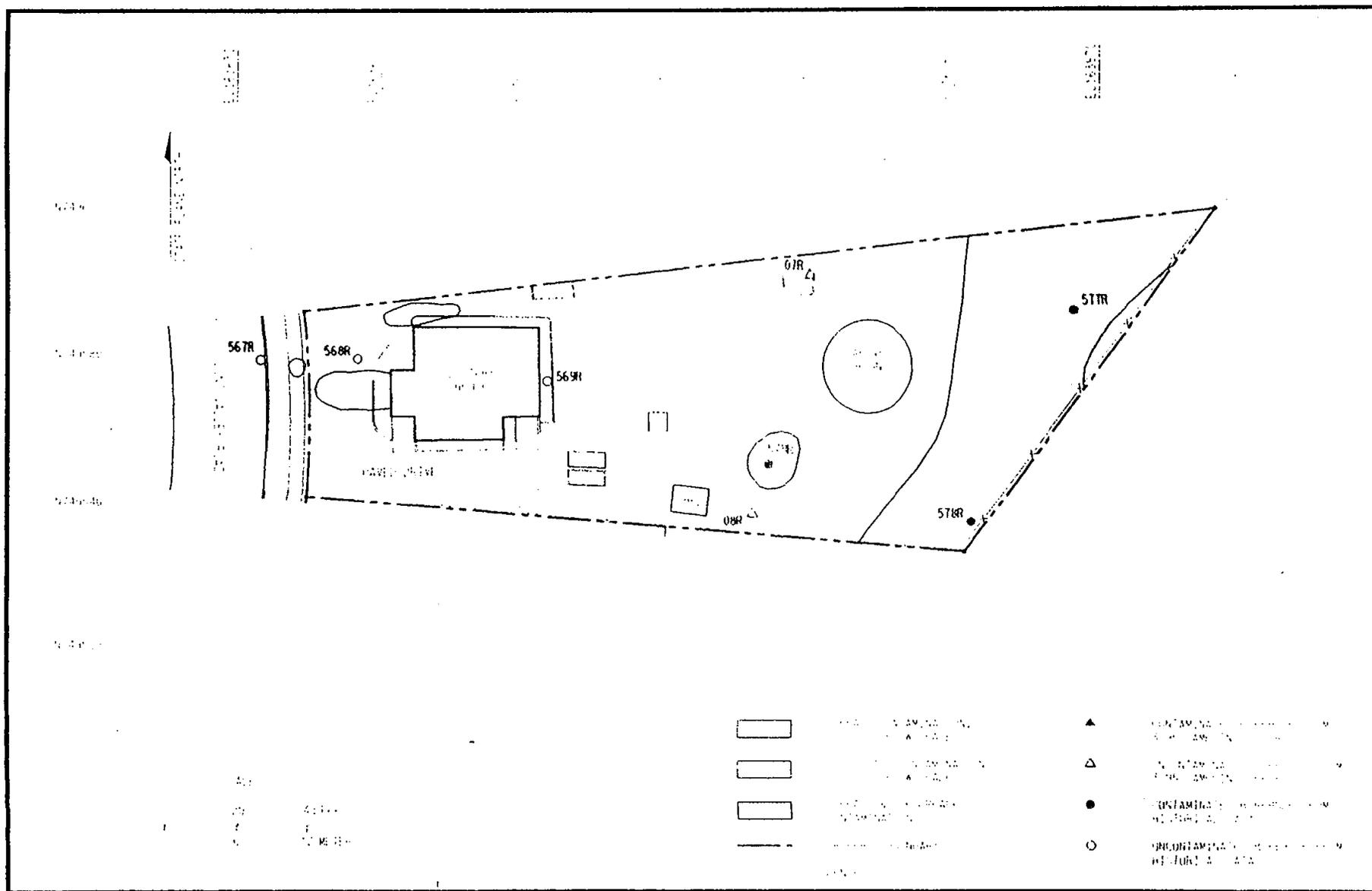
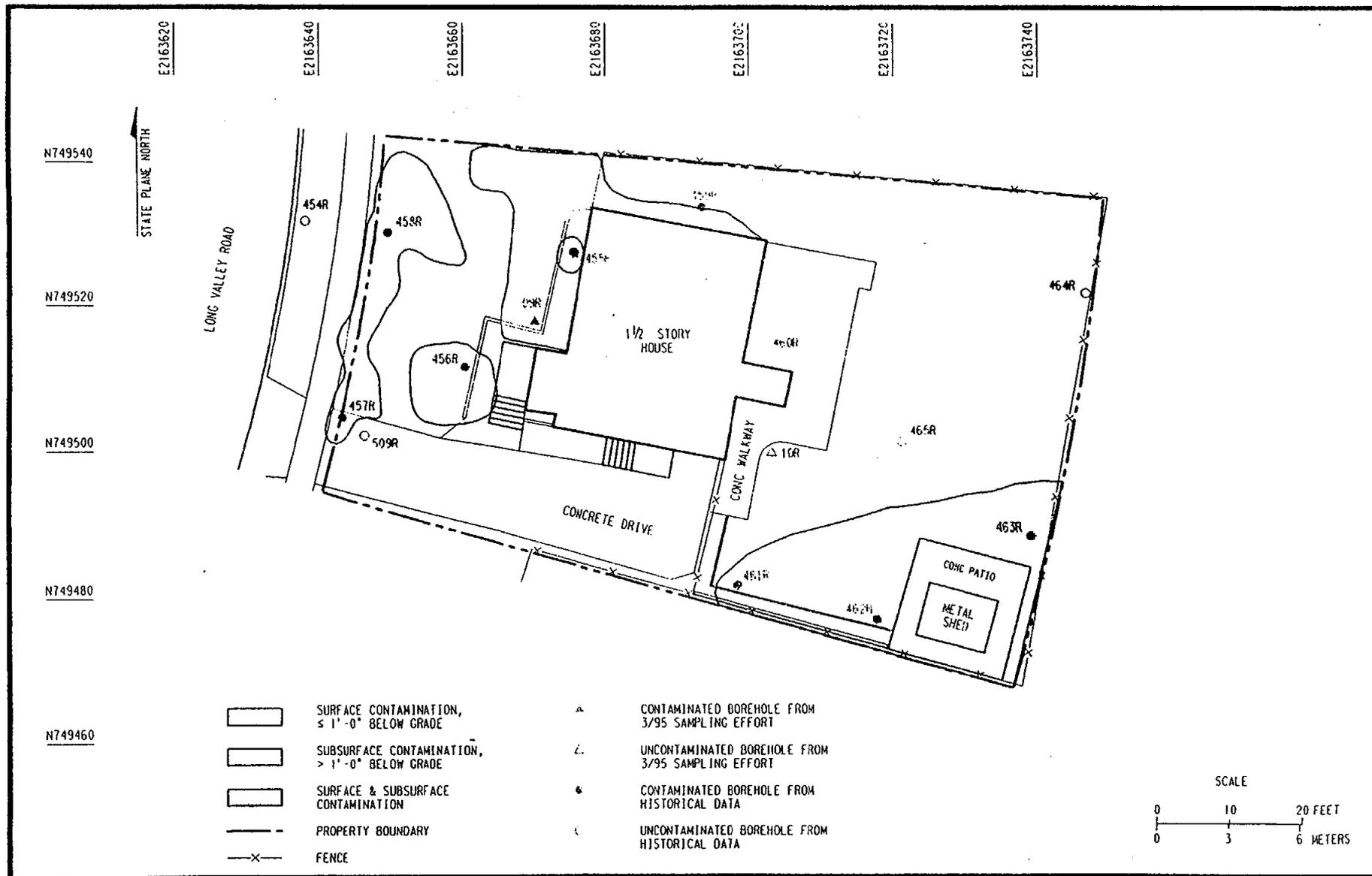
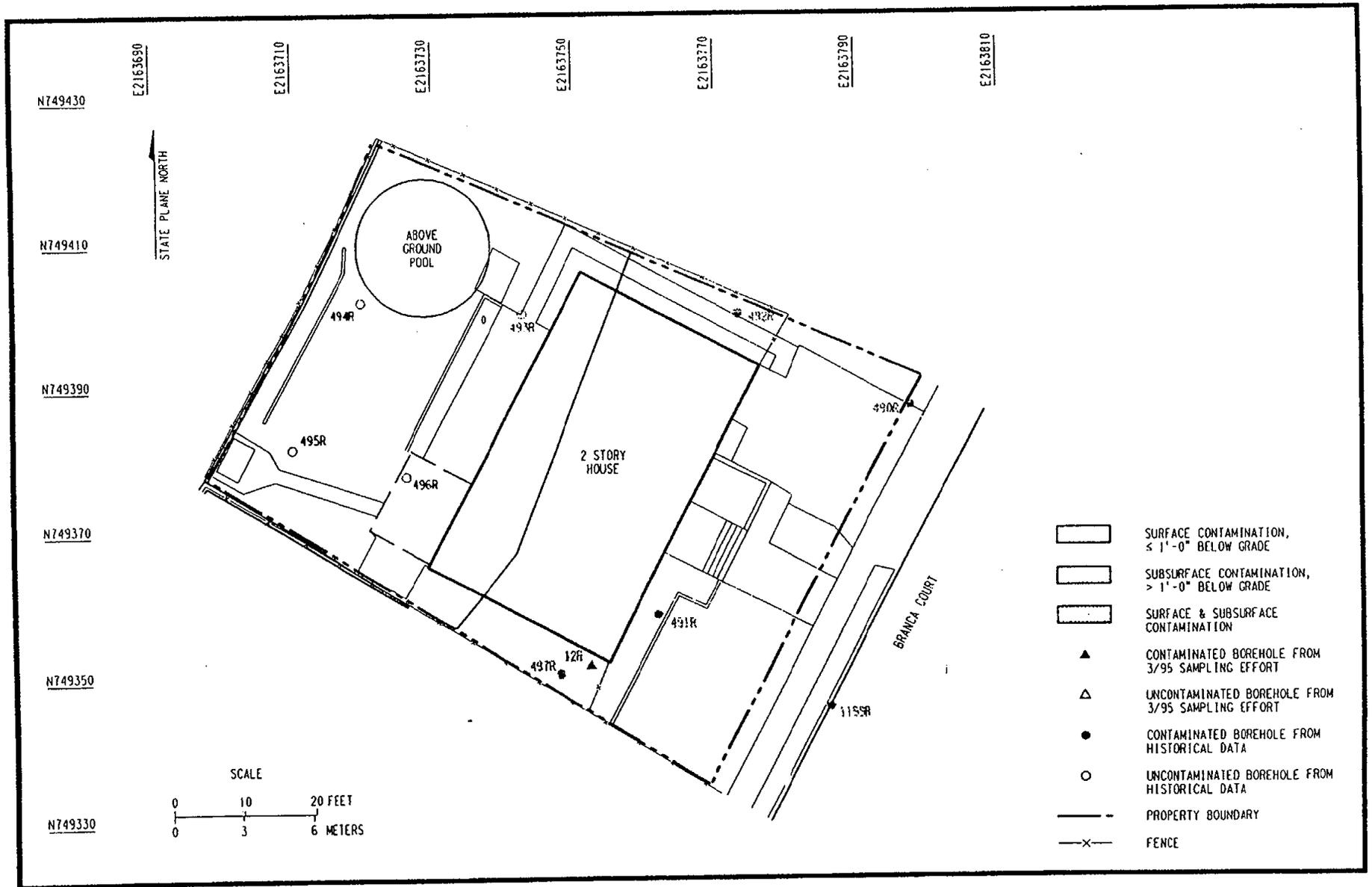


Figure 5
Borehole Locations and Areas of Contamination at 24 Long Valley Road



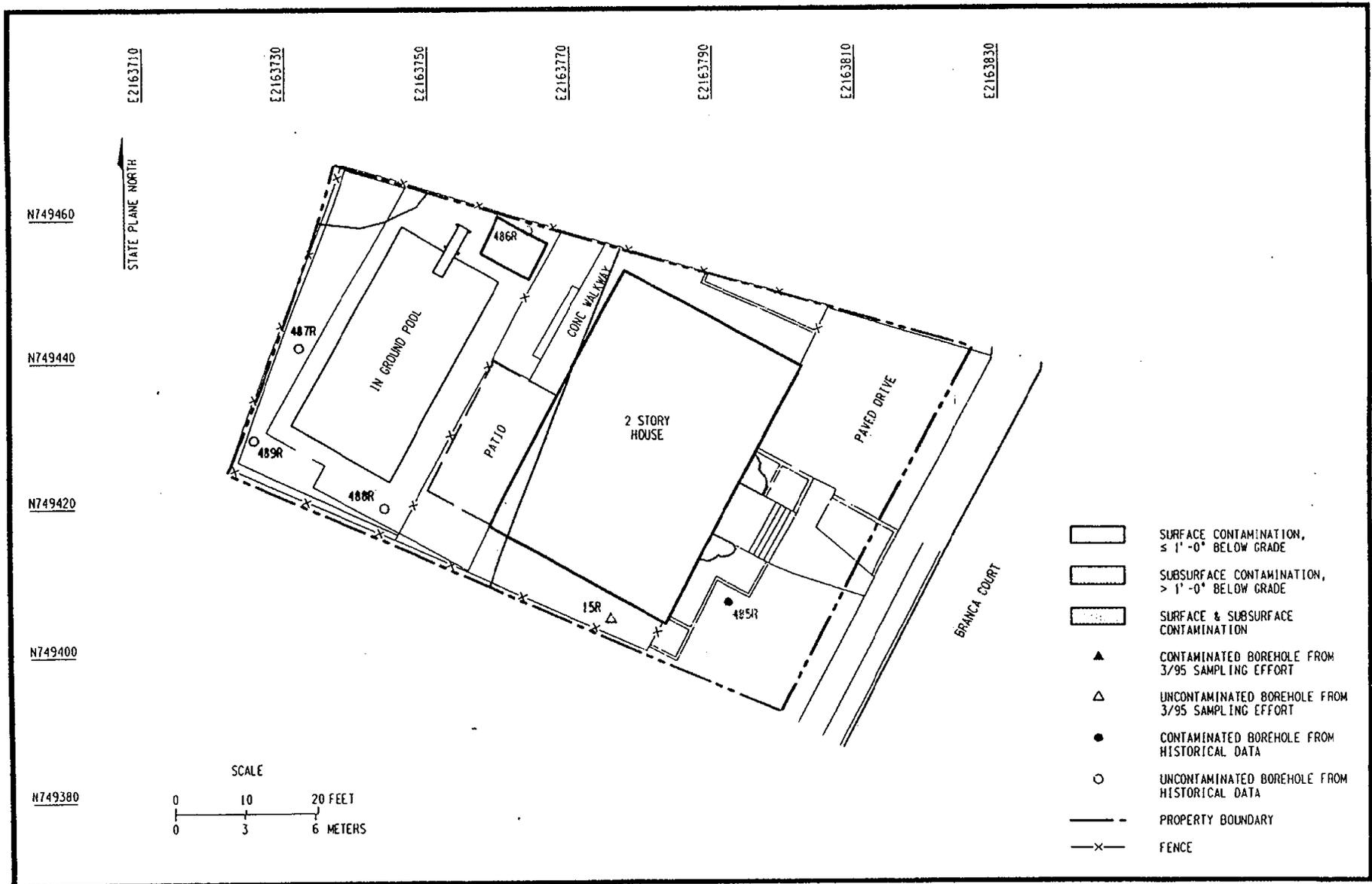
R62F007.DCN

Figure 6
Borehole Locations and Areas of Contamination at 26 Long Valley Road



R62F008.DGN

Figure 7
Borehole Locations and Areas of Contamination at 2 Branca Court



R62F 009.DGN

Figure 8
Borehole Locations and Areas of Contamination at 4 Branca Court

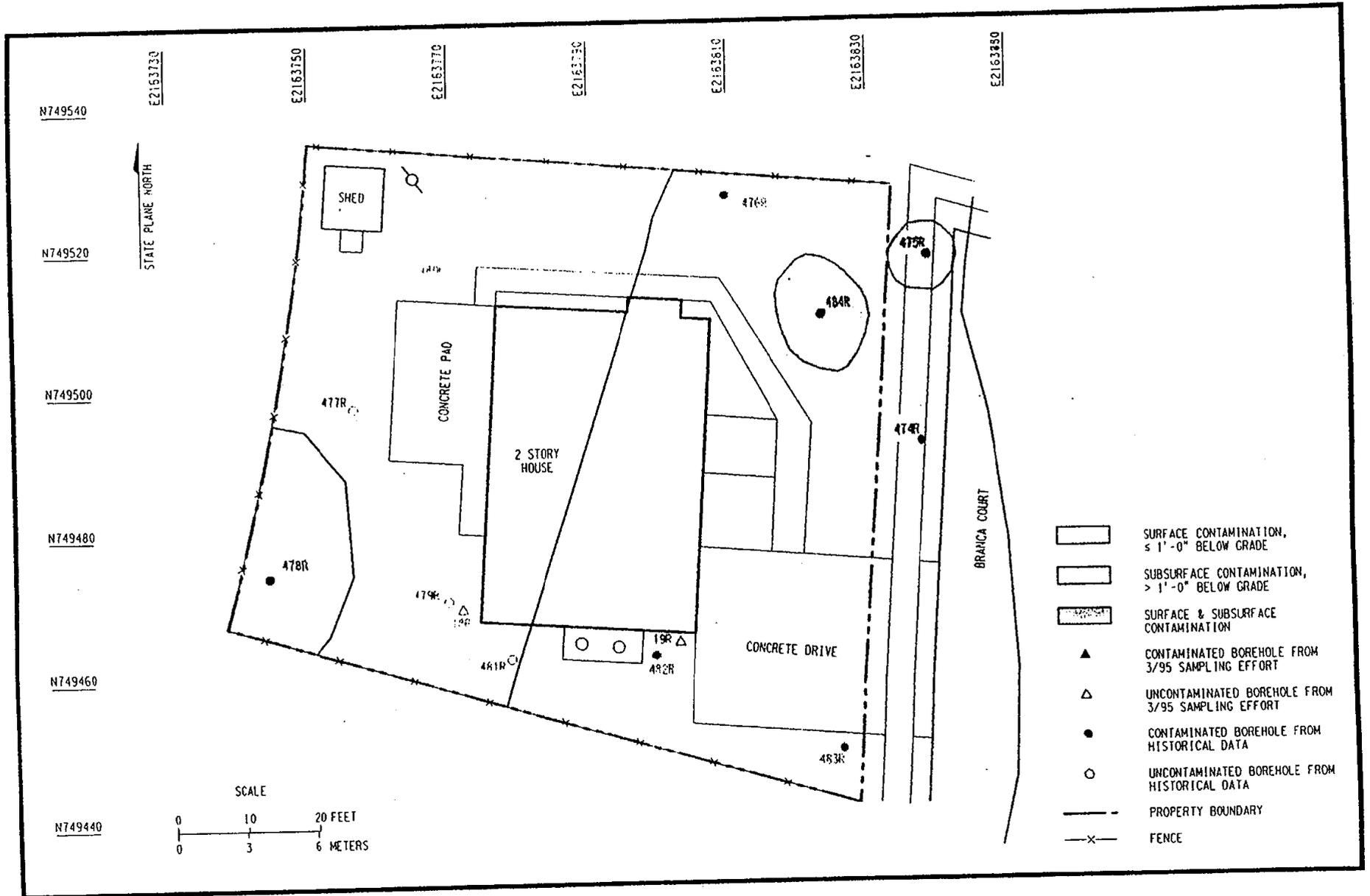
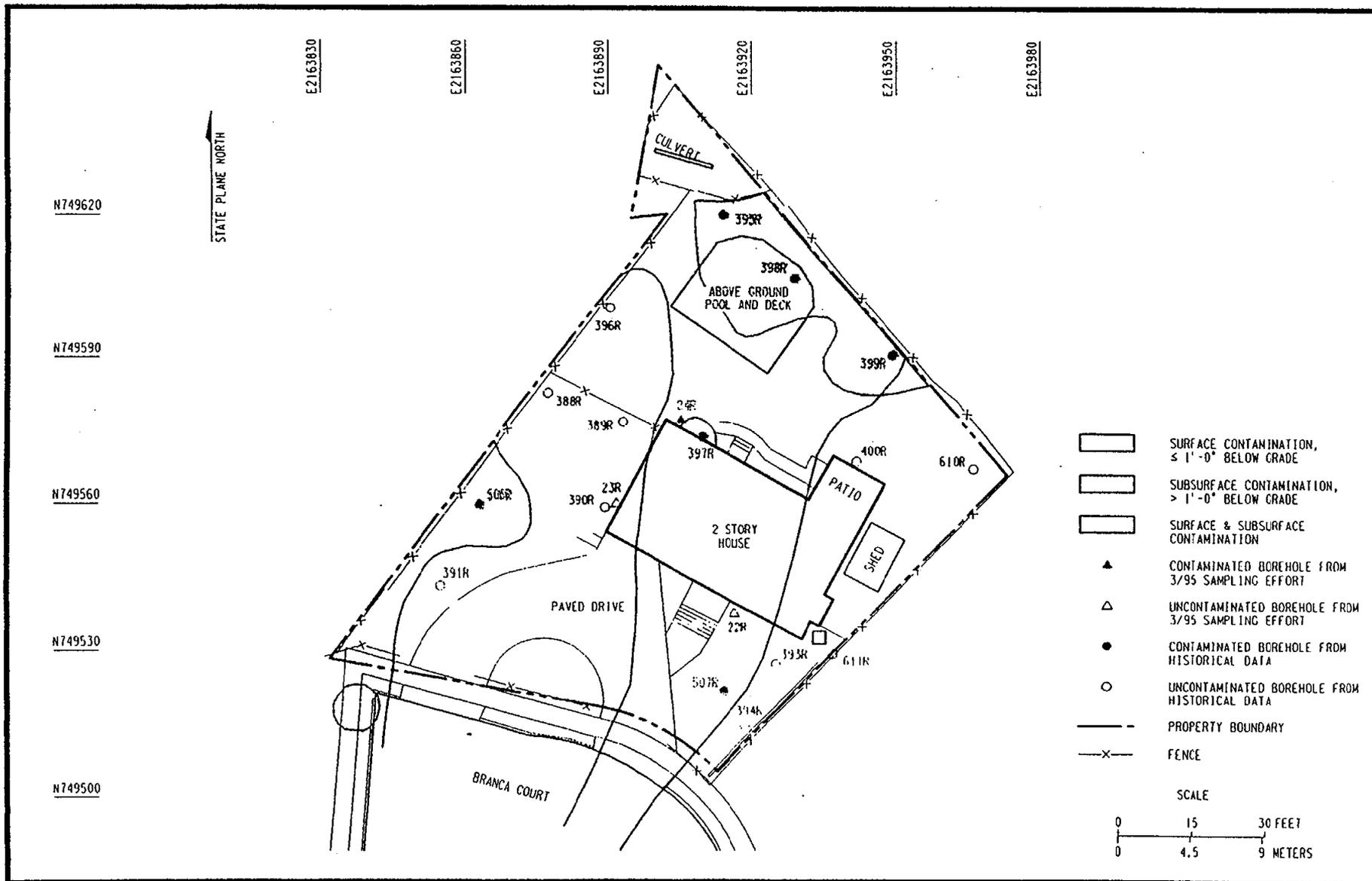
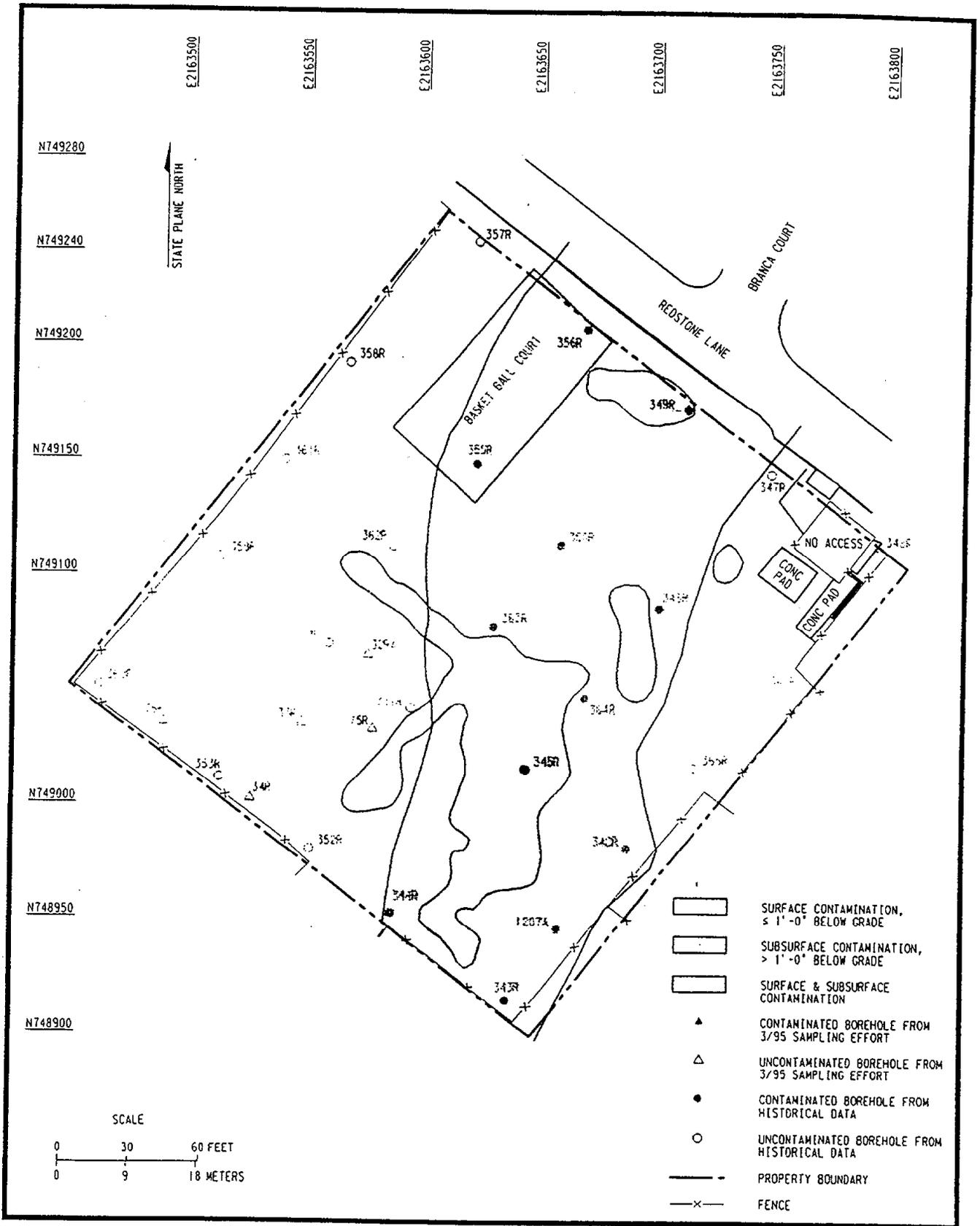


Figure 9
 Borehole Locations and Areas of Contamination at 6 Branca Court



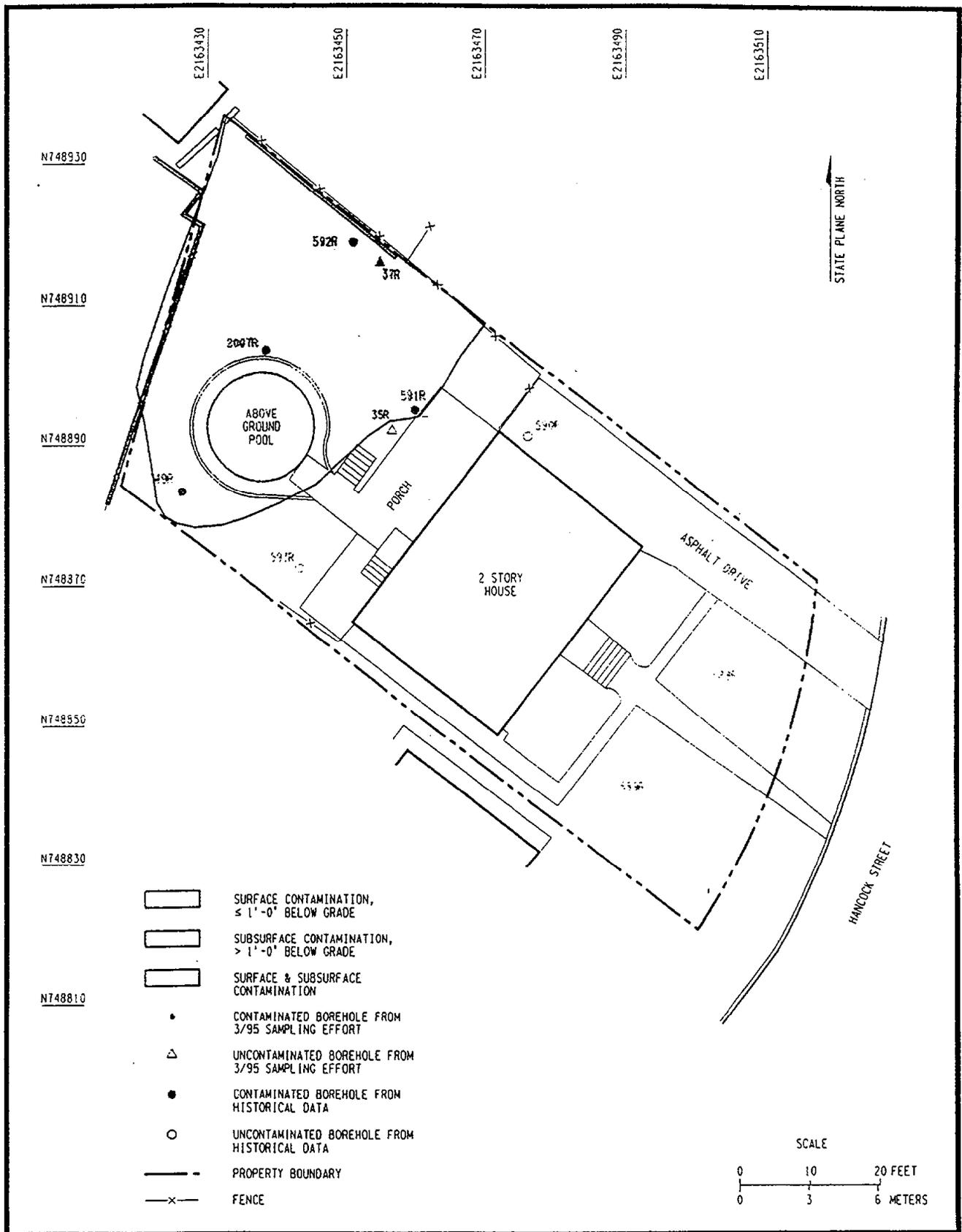
R62F011.DGN

Figure 10
Borehole Locations and Areas of Contamination at 11 Branca Court



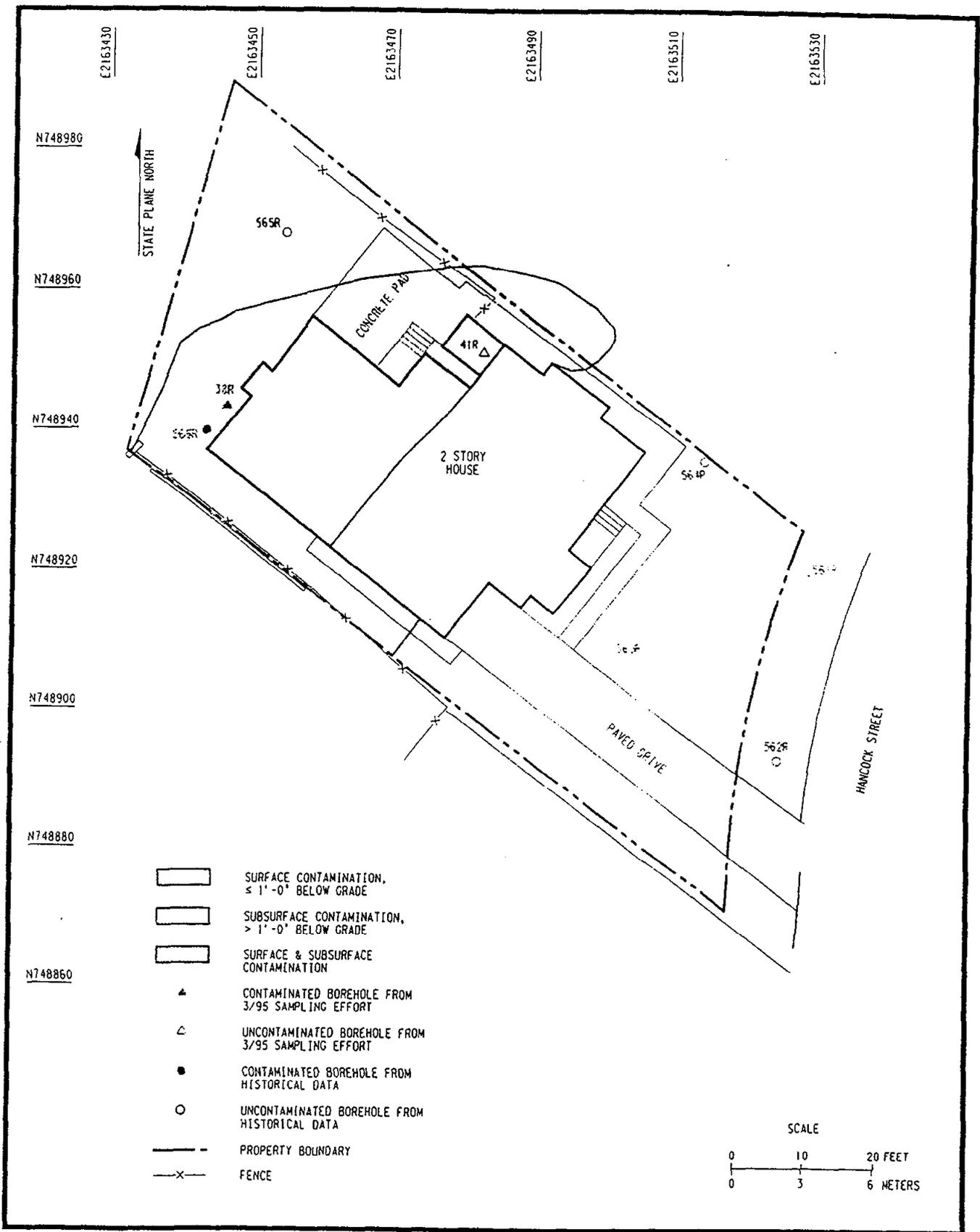
R62F014.DGN

Figure 13
Borehole Locations and Areas of Contamination at Lodi Municipal Park



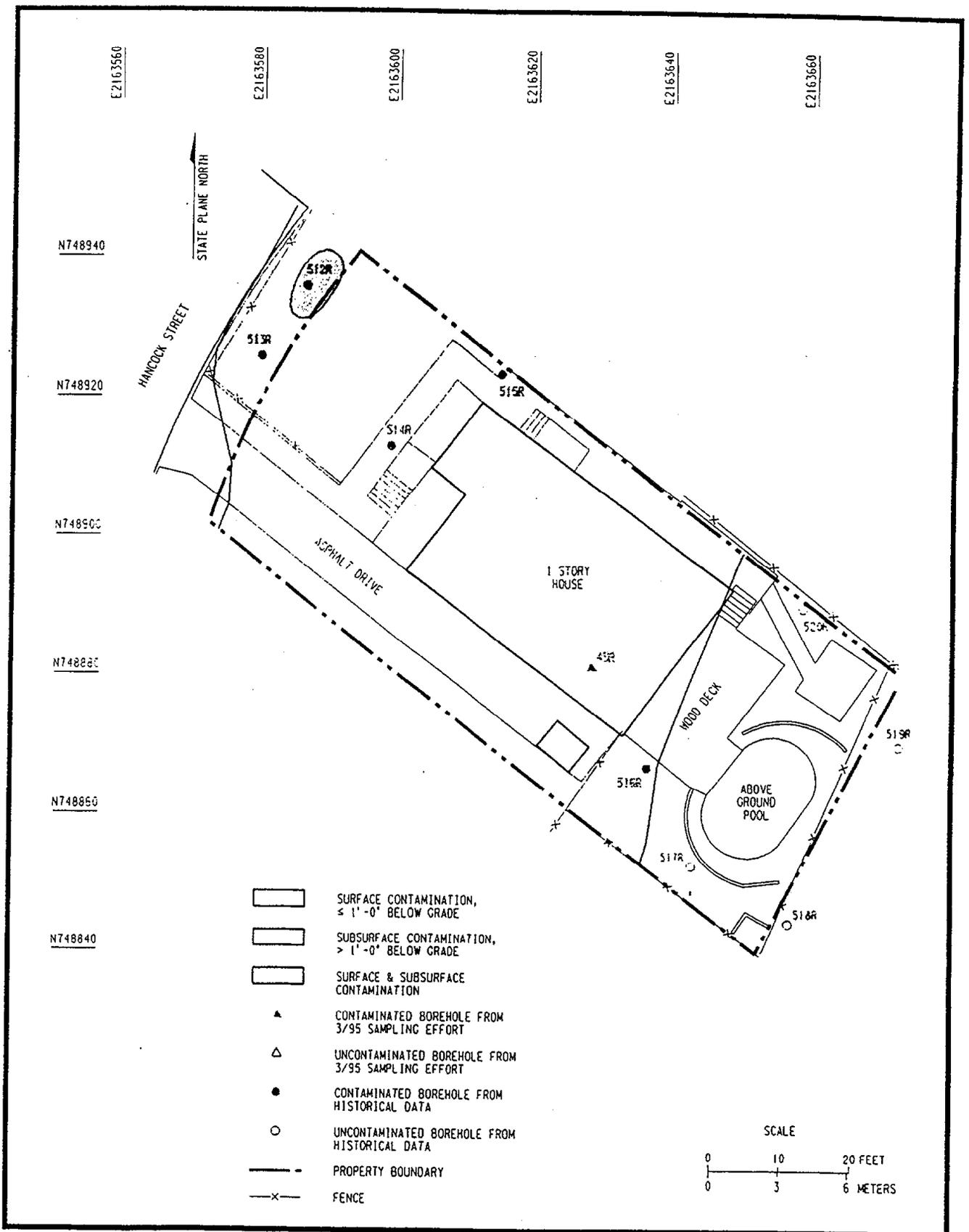
R62F015.DGN

Figure 14
Borehole Locations Areas of Contamination at 5 Hancock Street



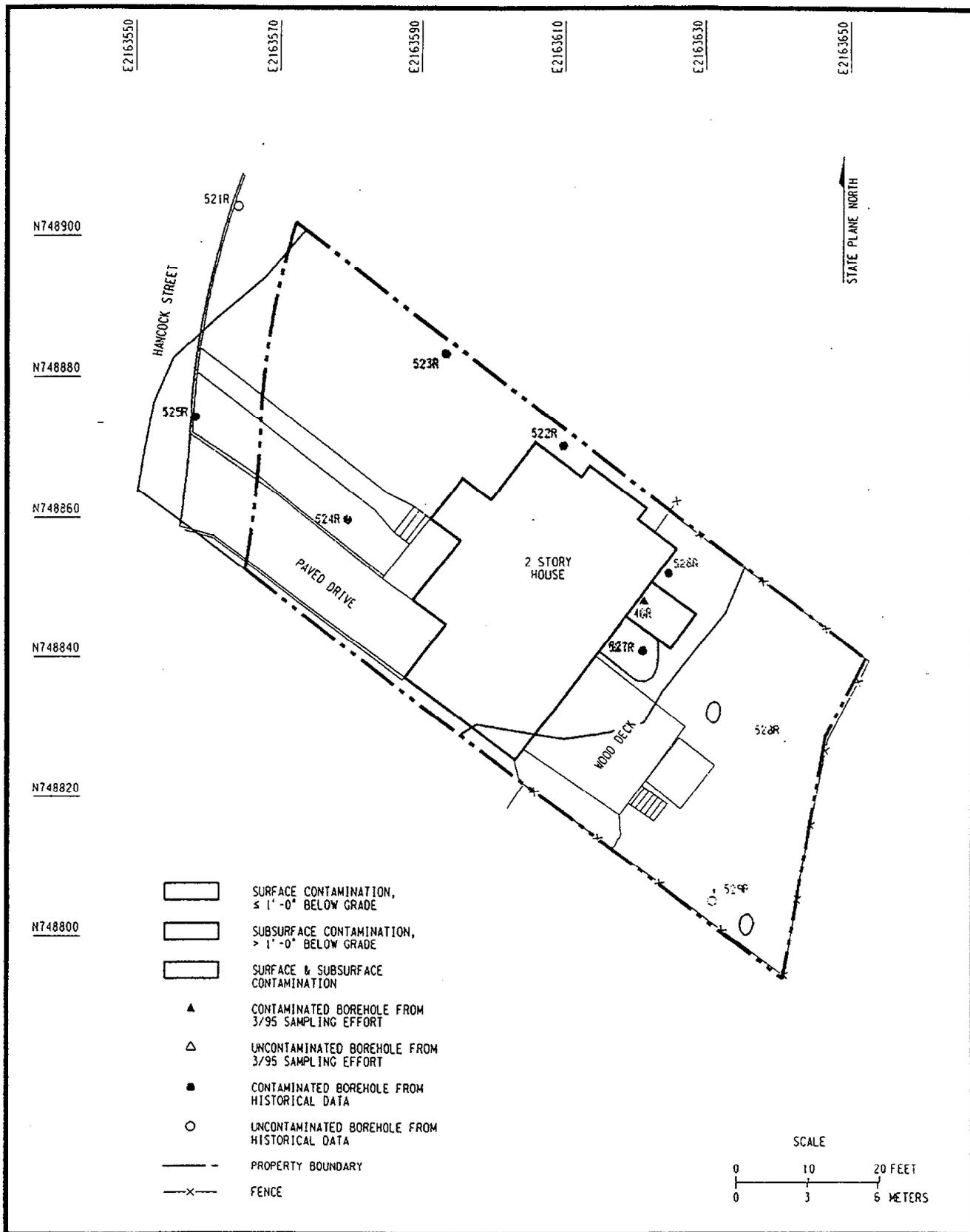
R62F016.DGN

Figure 15
Borehole Locations and Areas of Contamination at 7 Hancock Street



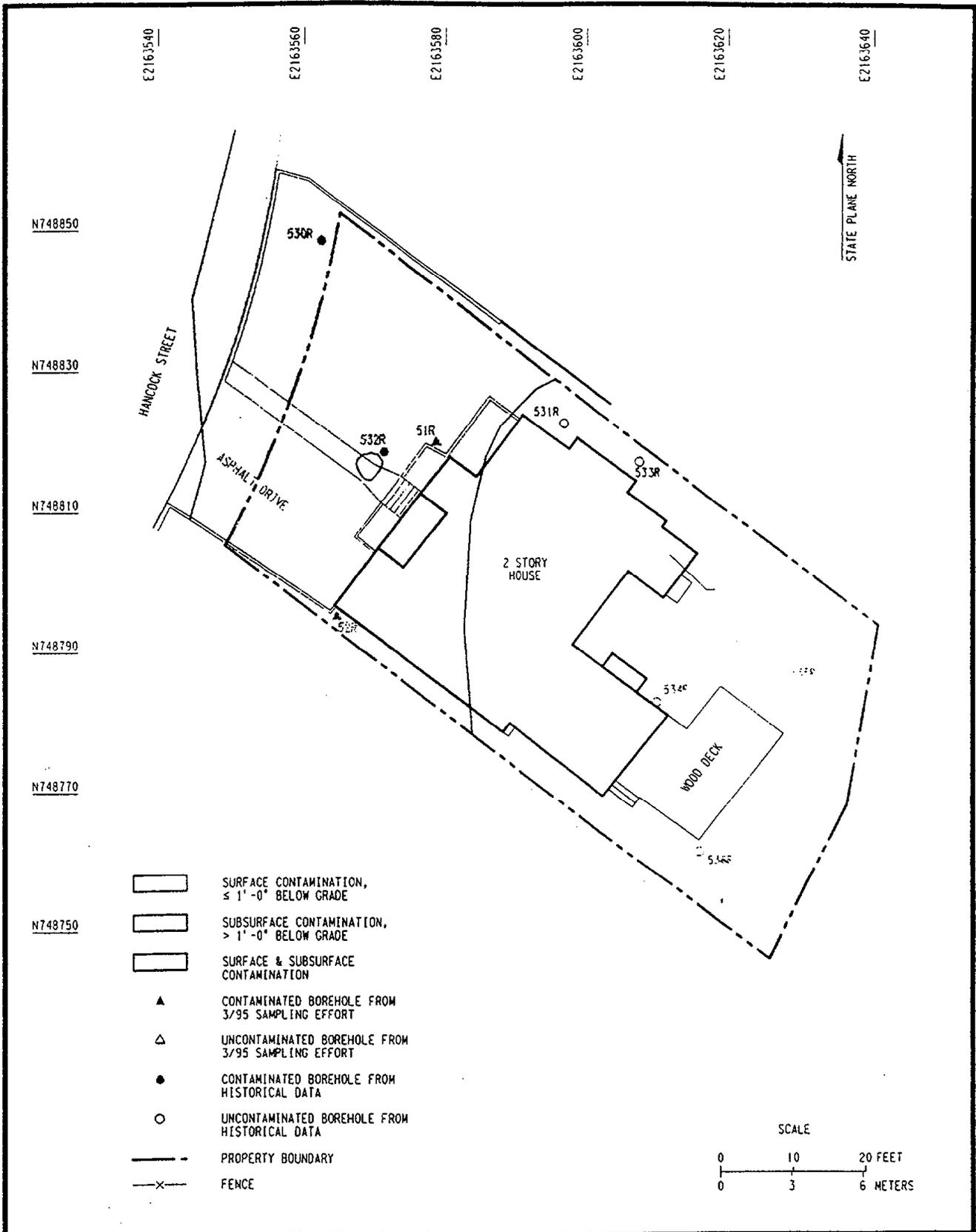
R62F017.0GN

Figure 16
Borehole Locations and Areas of Contamination at 10 Hancock Street



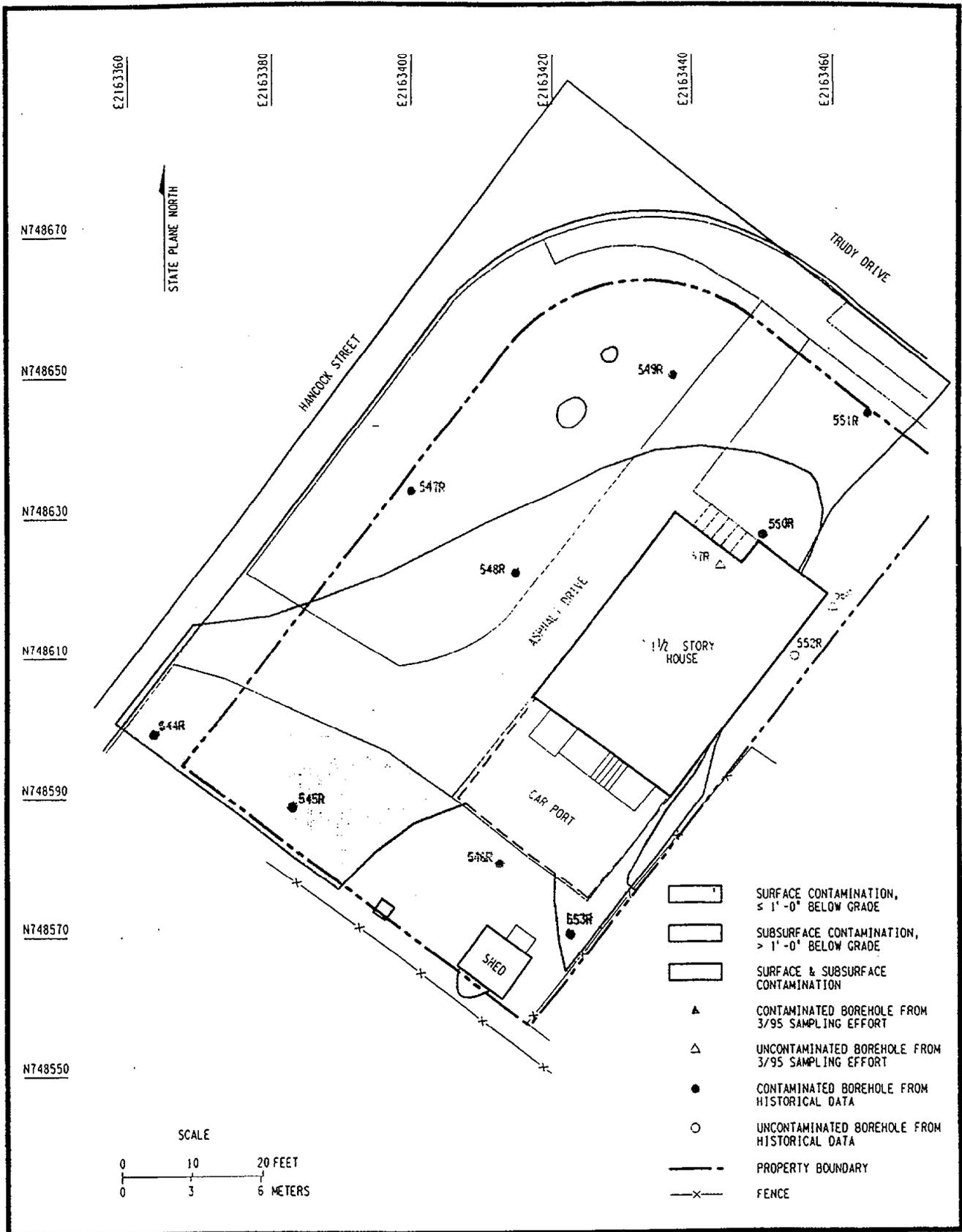
R62F018.DGN

Figure 17
 Borehole Locations and Areas of Contamination at 8 Hancock Street



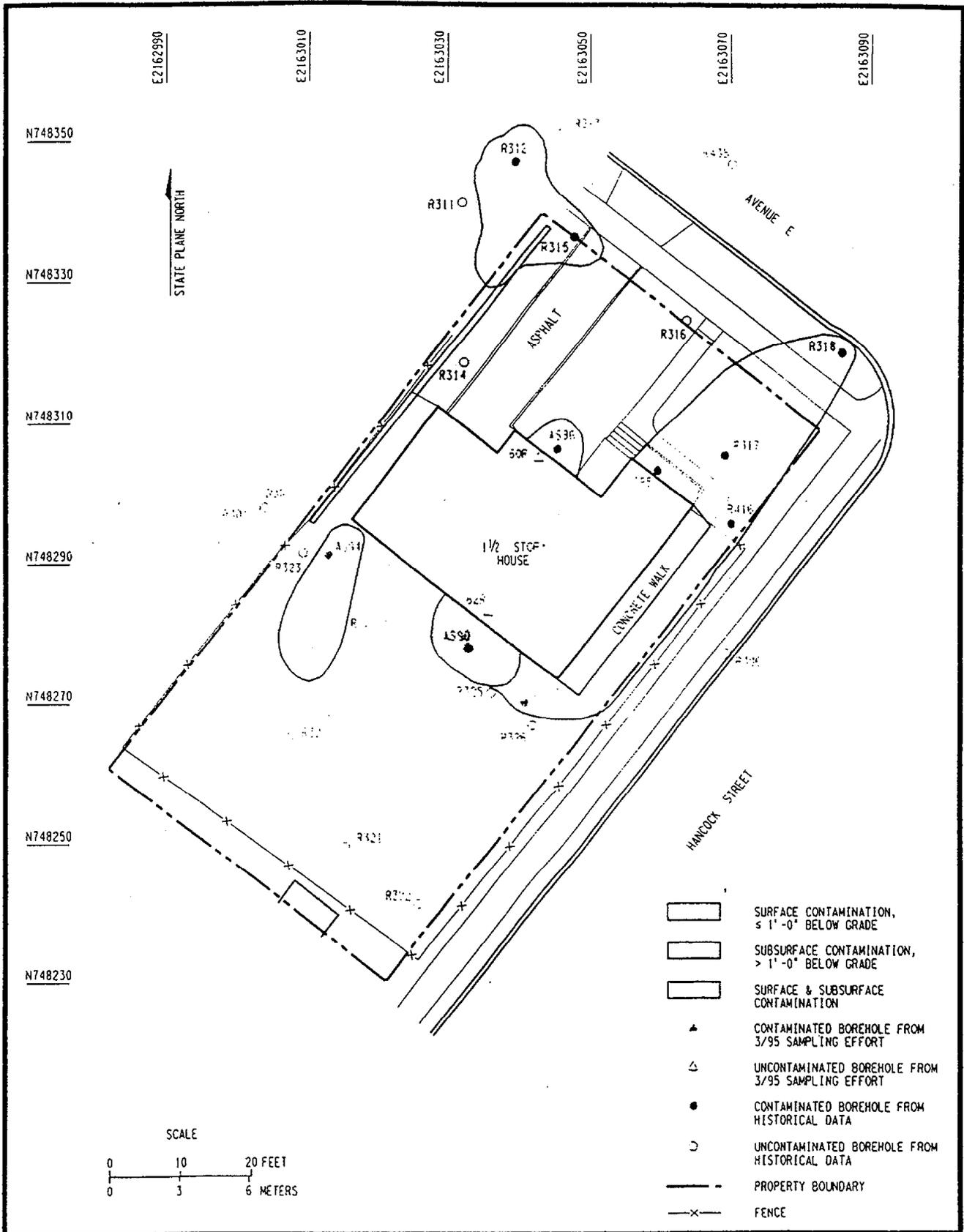
R62F 019.DGN

Figure 18
Borehole Locations and Areas of Contamination at 6 Hancock Street



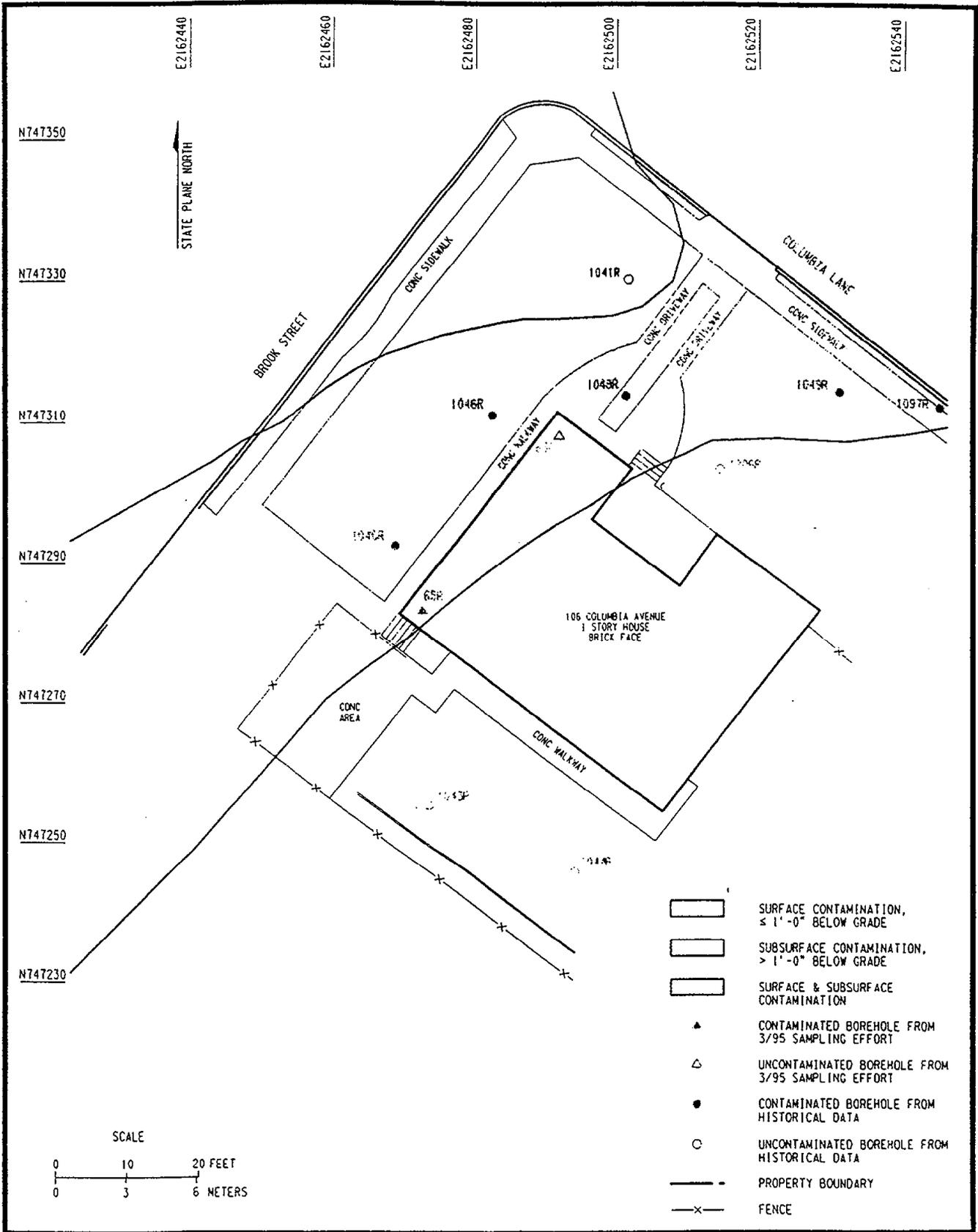
R62F021.DGN

Figure 20
Borehole Locations and Areas of Contamination at 60 Trudy Drive



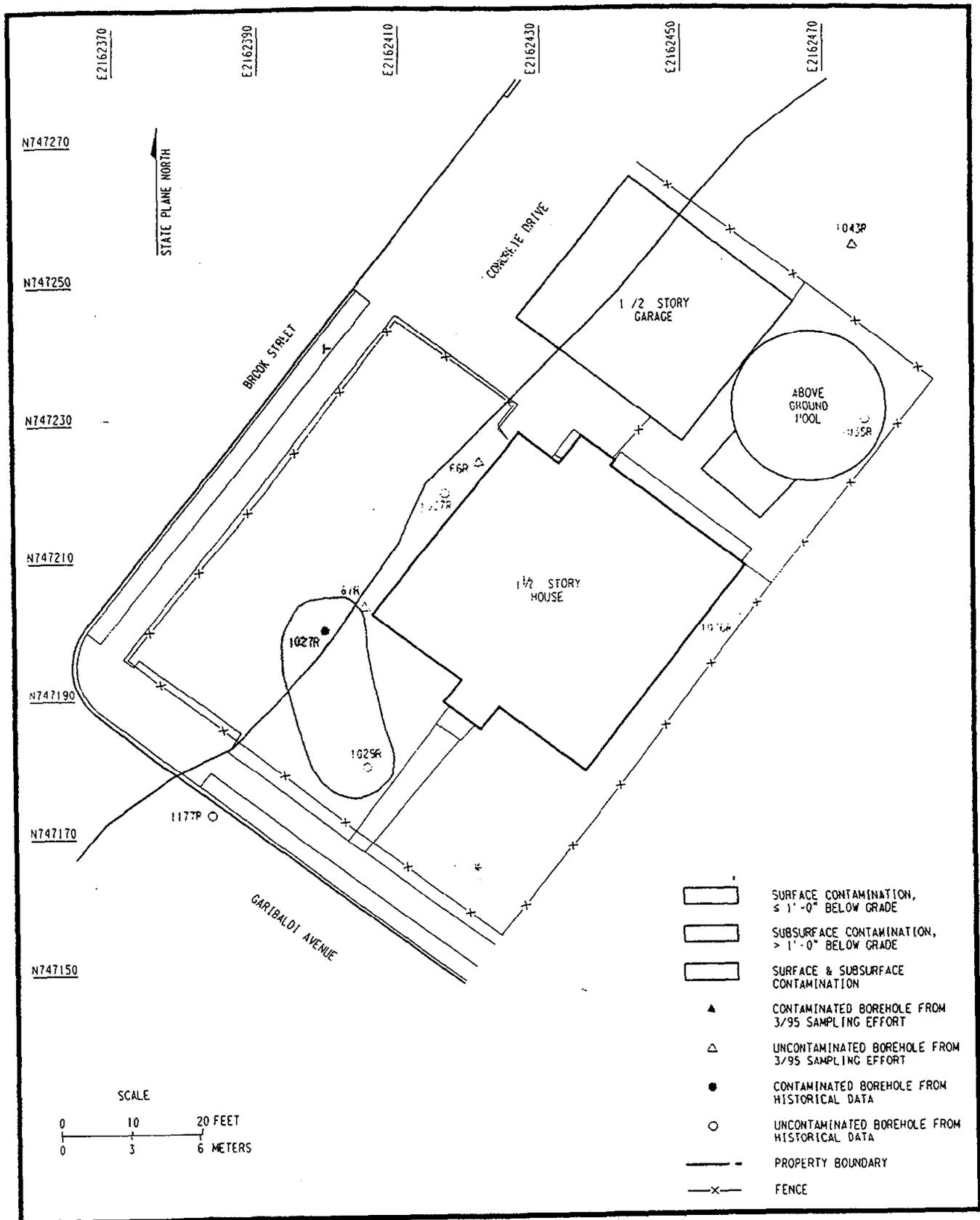
R62F023.DGN

Figure 21
Borehole Locations at 112 Avenue E



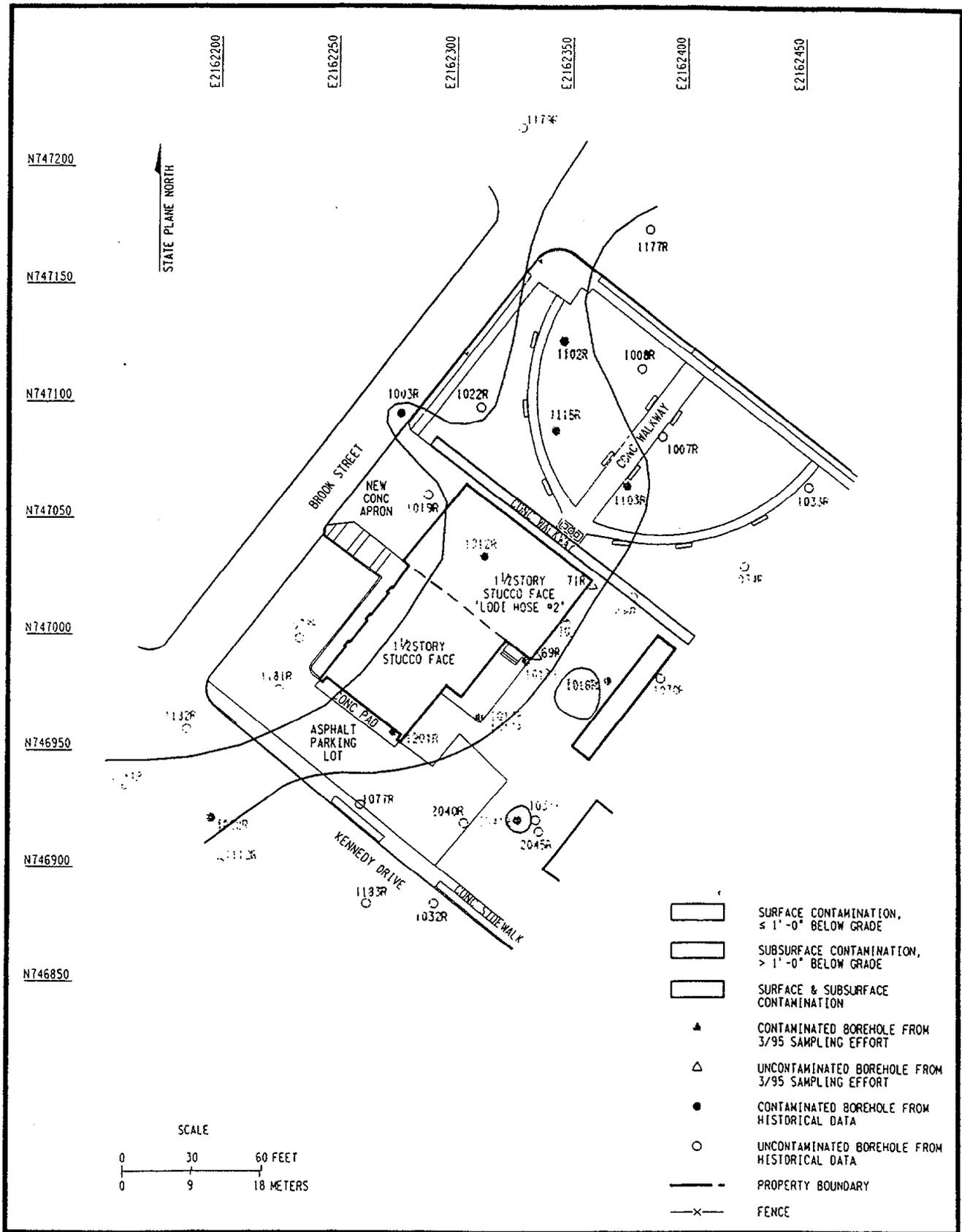
R62F024.DGN

Figure 22
Borehole Locations at 106 Columbia Lane

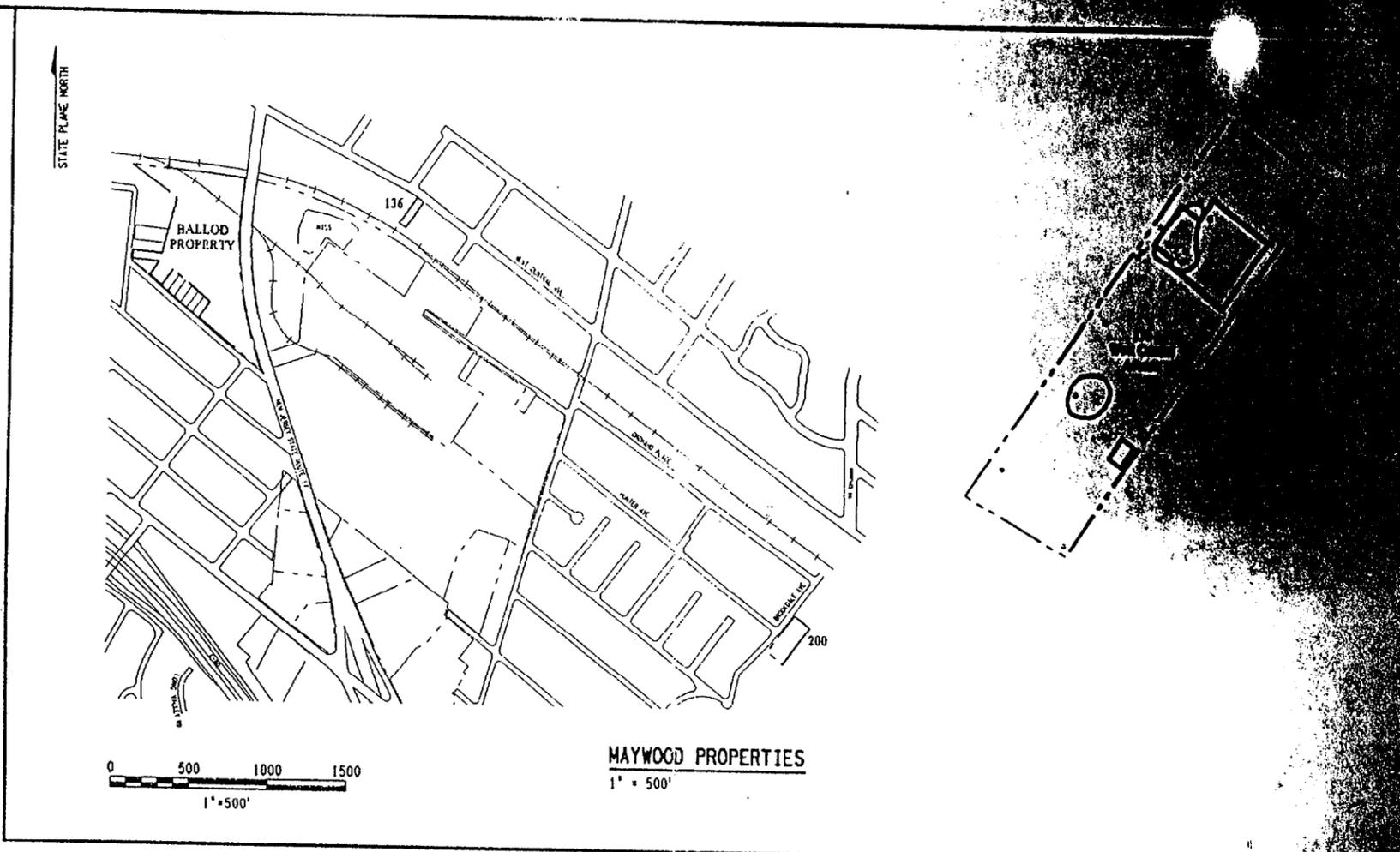


R62F025.DGN

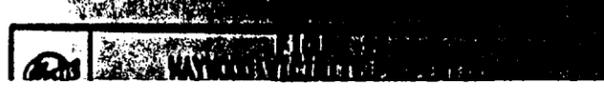
Figure 23
Borehole Locations at 99 Garibaldi Avenue



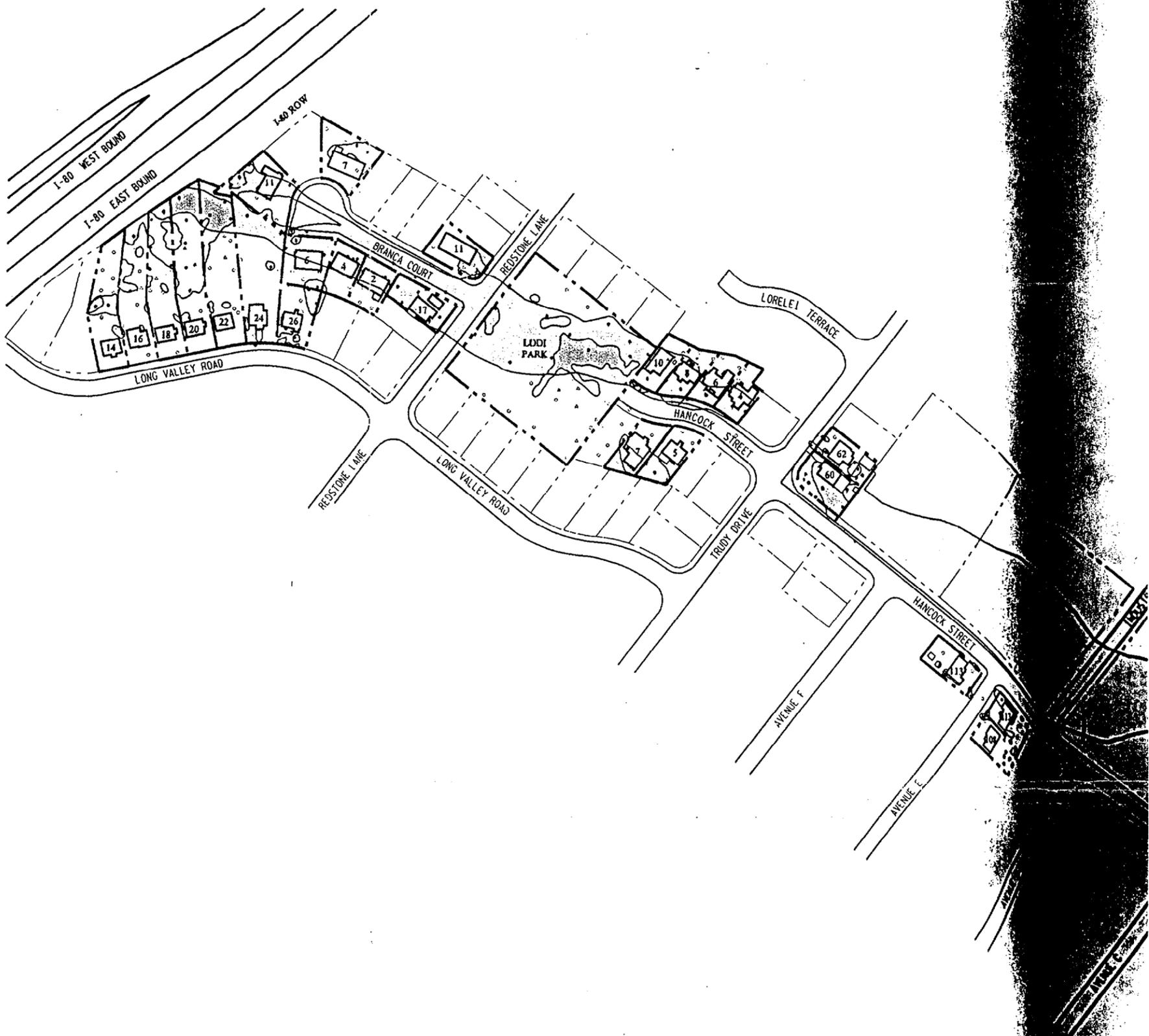
R62F014.DGN

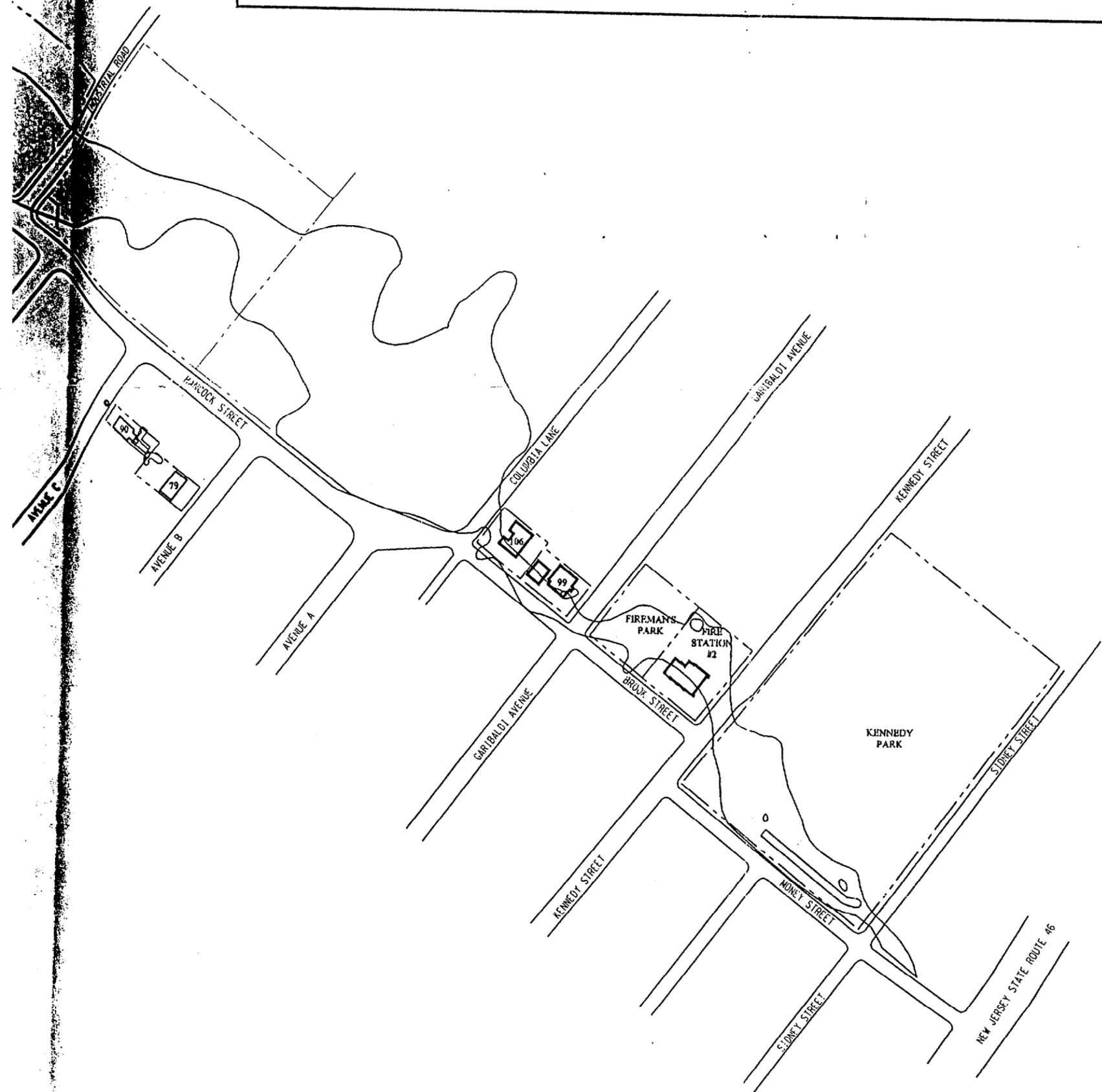
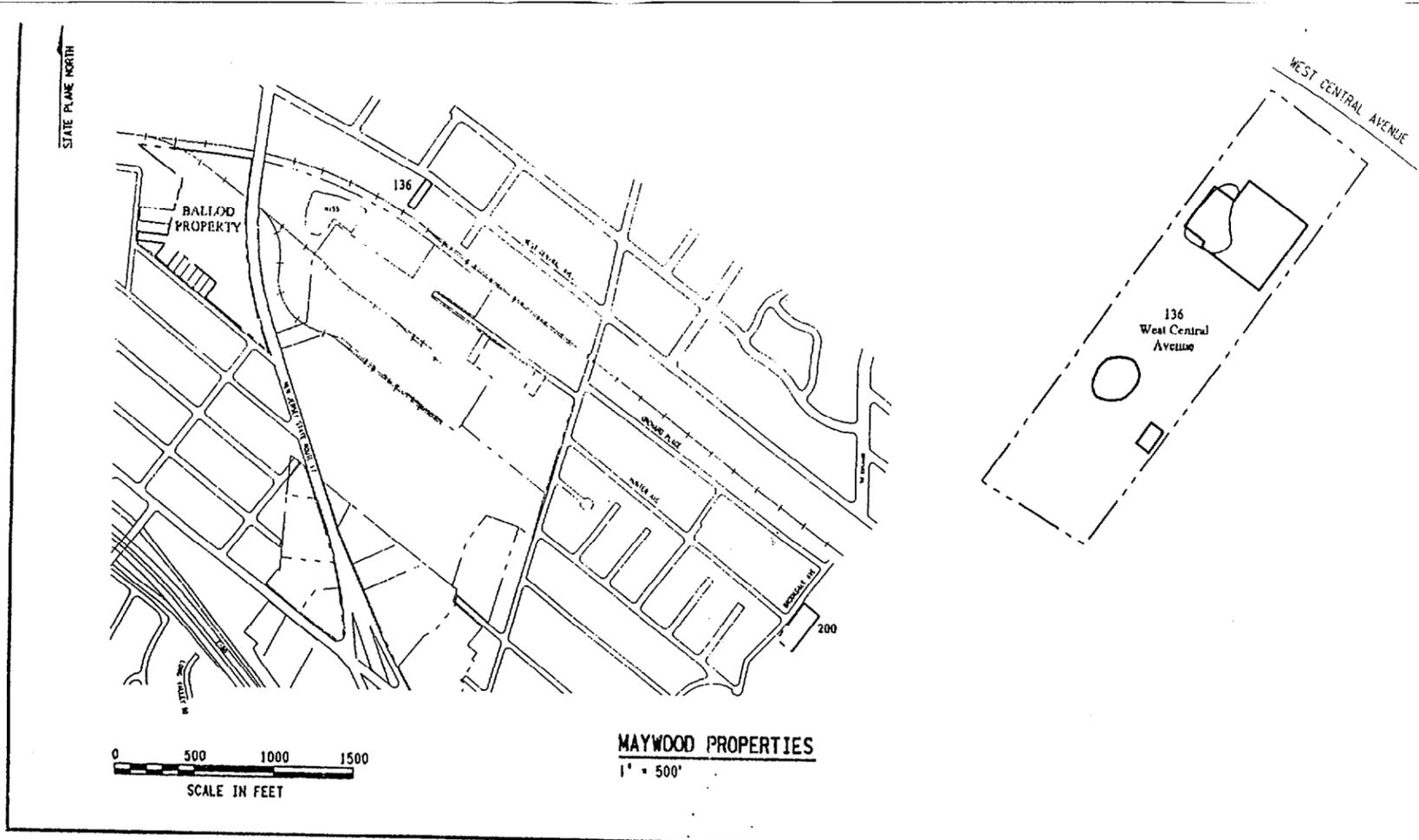


- CONTAMINATED BOREHOLE FROM HISTORICAL DATA
 - CONTAMINATED BOREHOLE FROM 3/95 SAMPLING EFFORT
 - UNCONTAMINATED BOREHOLE FROM HISTORICAL DATA
 - UNCONTAMINATED BOREHOLE
- SURFACE CONTAMINATION, ≤ 1'-0" BELOW GRADE
 - SUBSURFACE CONTAMINATION, > 1'-0" BELOW GRADE
 - SURFACE & SUBSURFACE CONTAMINATION
 - PROPERTY BOUNDARY

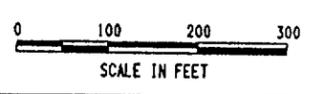


STATE PLANE NORTH





-  PHASE 1 PROPERTY
-  SUBSURFACE CONTAMINATION
-  SURFACE CONTAMINATION
-  SURFACE AND SUBSURFACE CONTAMINATION



 **FIGURE 25**
MAYWOOD VICINITY PROPERTIES
AREAS OF CONTAMINATION
PRIOR TO 3/95 SAMPLING EFFORT

