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December 3, 1998

Mr. Gerard Burke, P.E.
Project Manager
Bureau of Eastern Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Subject: Active Industrial Uniform, Lindenhurst NY, Site No. 1-52-125:
Phase II Remedial Design Investigation Report

Dear Mr. Burke:

Camp Dresser & McKee (CDM) has completed the review of unvalidated soil and groundwater data generated as part of Task 5 - Phase II Remedial Design Investigation. This report presents the field and laboratory data generated as part of this Task. Note that the results of the groundwater modeling studies completed by CDM under Task 5 are summarized in a separate letter report.

Introduction

In July 1998, CDM completed a Phase I Investigation of the Active Industrial Uniform site as part of the NYSDEC Remedial Design Work Assignment No. D002925-28. The objective was to assess the current concentration and distribution of volatile organic compounds (VOCs) within and downgradient of the site. The findings of this investigation were presented to NYSDEC in an August 31, 1998 letter report. On September 16, 1998, NYSDEC and CDM met to discuss the results and implications as they pertain to the remedial actions selected in the 1997 Record of Decision (ROD). During this meeting , NYSDEC authorized CDM to develop a scope of work to further define onsite and offsite contamination through additional field investigations and to perform groundwater modeling studies to assess various pumping scenarios needed to control and remediate onsite and offsite groundwater contamination.

In response, CDM developed a Phase II Remedial Design Investigation scope of work for the site. The objectives include:

- Further define the nature and extent of contamination within onsite septic systems and leaching pools.
- Estimate the total thickness of contaminated sediments within the septic systems/leaching pools.

- Estimate the quantity of unsaturated sediment that could be removed from each pool as part of site remediation.

- Further define the degree of VOC contamination within downgradient groundwater.

- Model selected groundwater pumping scenarios to control and remediate both onsite and offsite groundwater contamination.

- Collect additional data on the inorganic quality of onsite and offsite groundwater as this relates to the design of the groundwater extraction and treatment facility.

Onsite Geoprobe Investigation

In order to complete the Phase II scope of work, CDM completed a series of Geoprobe borings within and downgradient the Active Industrial Uniform site. Figure 1 provides the location of the Phase II Investigation borings as well as the previously completed Phase I borings. The Phase II Investigation sampling procedures were consistent with the Phase I Investigation and the approved Work Assignment Work Plan and SOP/QAPP.

A total of eleven Geoprobe borings were advanced onsite. Seven borings were placed through onsite septic/leaching pools that were not sampled during the Phase I Investigation. Additionally, CDM completed four borings immediately outside selected pools in order to assess soil conditions immediately adjacent to each pool. Table 1 summarizes the depth of each boring, boring objective and the total number of soil and groundwater samples selected for lab analysis. In general, soil samples exhibiting the highest PID measurements at each boring location were selected for laboratory analysis. Boring logs are provided in Attachment A. Attachment B provides schematics of each leaching pool noting the total void space and the estimated thickness of unsaturated and saturated contaminated soil.

Table 2 summarizes laboratory data for soil samples collected from onsite Geoprobe borings and compares the results to NYSDEC generic cleanup guidelines. Contaminants exceeding the respective cleanup guideline have been identified by bold type. (Note that the Phase I Investigation data has undergone third party data validation and the summary table includes all added data qualifiers. Validation of the Phase II data remains pending. CDM expects the validation of the Phase II data to be completed by December 18, 1998, at which time, CDM will update Table 2 to include any additional data qualifications. The updated table will be provided to NYSDEC. Table 3 summarizes the Toxic Characteristic Leaching Procedure (TCLP) and waste characteristic analytical results for samples GP-18 (5-8 ft.) and GP-22 (2-6 ft). Sample GP-22 (2-6 ft.) was selected for full TCLP analysis as well as waste characteristic analysis given field PID measurements indicated the sample to be highly contaminated. Sample GP-18 (5-8 ft.) was selected for TCLP (VOCs only) given field PID measurements indicated the sample to be moderately contaminated. The objective of the TCLP analysis was to assess likely disposal options under the Preliminary Design Subtask for soil removed from the leaching pools.

Results of the Phase II Investigation confirm that onsite septic system/leaching pools are a major source of contamination within the site. Total VOC concentrations observed in soils collected

within leaching pools ranged from a maximum of 760 ppm (GP-22) to a minimum of 0.160 ppm (GP-20). In general the highest observed contamination was within the leaching pools located on the southeastern portion of the site (Figure 1). TCLP analysis of GP-22 (2-6 fbg) indicates PCE at 16,000 ug/l whereas the USEPA hazardous waste threshold is 700 ug/l, indicating the material would have to be disposed as a hazardous waste.

As depicted in the schematic drawings of each leaching pool (Attachment B), the void space within each leaching pool varied from no void space at GP-18 to a maximum of eight feet at GP-9. Sediment samples collected from all leaching pools, with the exception of GP-22, consisted of a heavily stained sand with varying amounts of organic matter. Staining of soil decreased with increasing depth. The majority of recovered samples exhibited a petroleum-solvent like odor.

Borings completed on the outside of the leaching pools, including GP-4, GP-10, GP-25, GP-27 and GP-28, indicated stained soil with a petroleum-solvent like odor from seven to 20 feet below grade. Though most samples were not selected for laboratory analysis at these locations, PID measurements ranged between 12 and 199 ppm indicating relatively high levels of VOCs adjacent to each leaching pool. However GP-26, installed adjacent to leaching pools designated by GP-19 and GP-20, was found to be relatively free of visibly contaminated soil and exhibited a maximum PID measurement of 13 ppm.

Tetrachloroethene (PCE)and trichloroethene (TCE) and associated breakdown products such as 1,2-dichloroethene (DCE) were observed within four out of nine pools exceeding NYSDEC cleanup standards. Xylene, the most commonly detected VOC, was observed in seven of nine pools exceeding cleanup standards. Additionally, toluene and ethyl benzene exceed cleanup standards in five of nine pools. Only one pool, designated by Geoprobe boring GP-20, was found to be free of VOCs exceeding the NYSDEC generic soil cleanup standards.

Table 4 summarizes the total estimated depth and volume of unsaturated sediment within each leaching pool. It also provides an estimated volume of sediment/soil located below the water table that appears to be contaminated by VOCs. The volume estimates assume that all leaching pools have a eight foot diameter (based on the available site survey). In most cases, the water table was estimated to be at approximately ten feet below grade, though several locations appeared to have saturated sediment as shallow as eight feet below grade. As shown in Table 4, only the leaching pool designated by GP-18, appears to contain no unsaturated sediment, given the presence of the relatively large void space of eight feet.

Based on the completed Geoprobe borings and the encountered location of the water table, the total estimated volume of unsaturated contaminated sediment which can be removed from onsite leaching pools is approximately 2,135 cubic feet, or 79 cubic yards. If sediment from GP-18 were subtracted from this estimate, given contaminant concentrations appear to be below NYSDEC generic cleanup guidelines, this volume would be reduced to approximately 1,733 cubic feet, or 64 cubic yards. The actual method of removal, storage and offsite disposal of the unsaturated soil and subsequent backfilling of the leaching pools will be determined as part of the Remedial Design Task of the Active Industrial Uniform Work Assignment. However, TCLP analysis likely will classify the removed soil as a USEPA characteristic hazardous waste.

The total volume of saturated contaminated sediment/soil which would remain in the ground is estimated to be approximately 4,344, cubic yards or 161 cubic yards. If GP-18 were to be subtracted from this estimate due to the presence of low level contamination, this estimate would be reduced to approximately 3,741 cubic feet, or 139 cubic yards.

Offsite Geoprobe Investigation

Five offsite Geoprobe borings were completed to better define groundwater contamination previously identified at Geoprobe boring GP-14 completed during the Phase I Investigation. The most significant contamination was observed at 36-40 feet below grade at the GP-14 location; therefore, the Phase II groundwater samples were collected at intervals of 24-30, 36-40 and 46-50 feet and analyzed for TCL VOAs. In addition to VOA analysis, two Geoprobe groundwater samples and one sample from a groundwater extraction well located at a bowling alley approximately 200 feet east of the Active Industrial Uniform site were also selected for TAL metals and conventional parameter analysis to assess possible pretreatment requirements for the planned groundwater treatment system.

Table 1 summarizes the depth of each completed boring offsite, boring objective and the total number of soil and groundwater samples selected for lab analysis. Boring logs are provided as Attachment A. Figure 2 provides the location of each completed offsite boring.
Table 5 summarizes VOC data for all Phase I and Phase II Geoprobe groundwater samples.
Table 6 summarizes all VOC data for samples collected from existing monitoring wells completed as part of the Phase I Investigation. Note that the Phase I Investigation data has undergone third party validation and Tables 5 and 6 include the qualifiers associated with that validation. To date, validation of the Phase II data has not been completed. CDM expects the validation of the Phase II data to be completed by December 18, 1998, at which time, Tables 5 and 6 will be updated to include any additional data qualifiers. The updated Tables will be provided to NYSDEC. Table 7 provides inorganic sample results for existing monitoring wells and the three Phase II Investigation samples.

Figure 3 summarizes the total VOC concentrations for all offsite Geoprobe locations and groundwater monitoring wells. Geoprobe boring GP-29 and GP-30 located east of GP-14 indicates some lateral spread of VOC contamination within the Upper Glacial aquifer at 26 to 40 feet below grade, though the most significant contamination appears to remain west of these locations. The offsite groundwater data indicates the majority of VOC contamination is migrating in a southwesterly direction with Geoprobes GP-11, GP-13, GP-14 and GP-31 showing the highest levels of contamination. With the exception of GP-11 located immediately downgradient of the Active Industrial Uniform site, the most significant VOC contamination is present in the Upper Glacial aquifer, between 26 to 40 feet below grade, at the offsite Geoprobe boring locations.

Geoprobe boring GP-33, the farthest downgradient point, shows significantly lower levels of contamination when compared to the next farthest downgradient point, GP-31. This suggests the contamination is migrating in a westerly direction toward Little Neck Creek. This change in plume migration is consistent with completed model simulations as detailed in CDM's Groundwater Modeling Letter Report, dated December 3, 1998. Based on the groundwater data

and model simulations, Little Neck Creek does appear to be the discharge point for the contaminant plume. Sample results for monitoring well MW-9S do not correlate well with this conclusion given only low levels of VOCs were observed at this well. Though the reason for this discrepancy is not readily apparent, it is possible that the majority of groundwater contamination remains relatively deep before up welling into the creek, thereby missing the shallow well which is screened at 12 to 22 feet below grade.

The groundwater samples collected from GP-32, GP-33 and the Werner's Bowling Alley extraction well located approximately 200 feet east of the Active Industrial Uniform site indicate elevated levels of iron, manganese and sodium. In comparison to the inorganic data from the two onsite monitoring wells collected during the Phase I Investigation, the bowling alley influent is probably most representative of a continuous pumping scenario for onsite groundwater. The bowling alley influent sample exhibits lower inorganic concentrations than the two offsite Geoprobe samples in most cases and significantly lower concentrations than the sample collected from onsite monitoring well MW-4S.

Using the Phase II data, the iron concentrations range from 1.37 to 4.03 ppm and the manganese concentrations range from 2.83 to 10.1 ppm (Table 7). Iron and manganese are oxidized during the air stripping process and will precipitate out of solution. This precipitate will cause fouling of air stripper systems during its operation. However, at these concentrations, the fouling should be controllable through routine acid recirculation without a pre-treatment system. Another problem caused by the oxidation of iron and manganese is fouling of systems downstream of the air stripper. For this reason, liquid phase carbon polishing will not be suitable for the Active Industrial Uniform groundwater treatment system. Design issues related to the observed groundwater iron and manganese will be evaluated as part of the Preliminary Design Subtask.

The sodium, chloride and Total Dissolved Solids (TDS) results for GP-33 indicates significant salt water influence on groundwater quality at this location. As shown in the CDM Groundwater Model Letter Report, the offsite extraction well will be installed within the general location of GP-33. The salt water influence at this location will likely increase after pumping is initiated. As result, inorganic concentrations will likely be even greater within extracted offsite groundwater than currently observed at GP-33. The presence of elevated levels of sodium within groundwater undergoing treatment has the potential of causing corrosion of metal surfaces exposed to the water. Therefore, the elevated sodium concentration may effect the materials selected for piping and equipment. The potential for corrosion and selection of piping and equipment materials will be further evaluated as part of the Preliminary Design Subtask.

If you have any questions or comments regarding this project report or recommendations, please feel free to call me at (516) 496-8400.

Very truly yours,

CAMP DRESSER & McKEE

David J. Keil, P.G.
Project Manager

cc: M. Memoli
L. Guterman
B. Beckerer (NYSDEC)
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Figures

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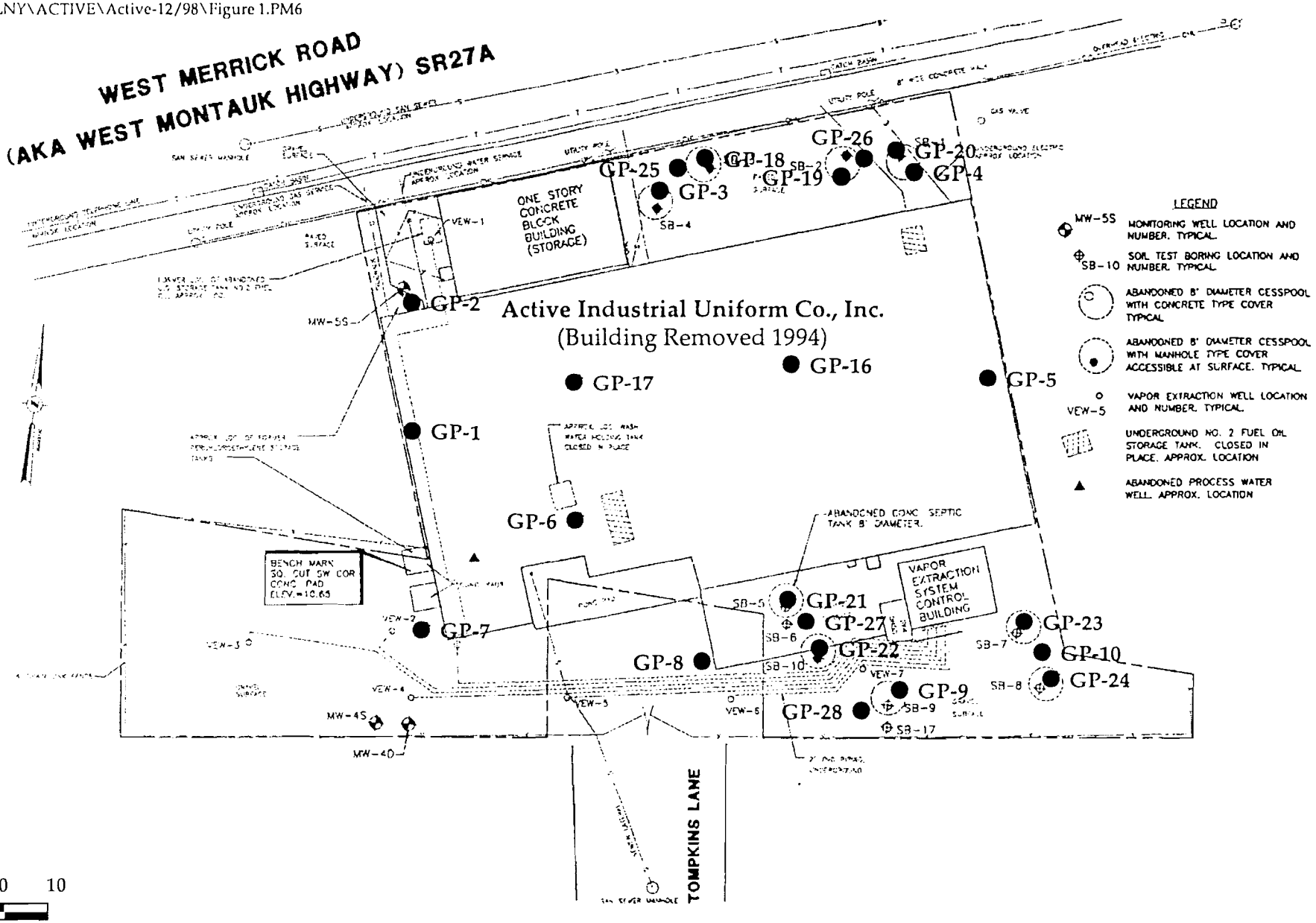

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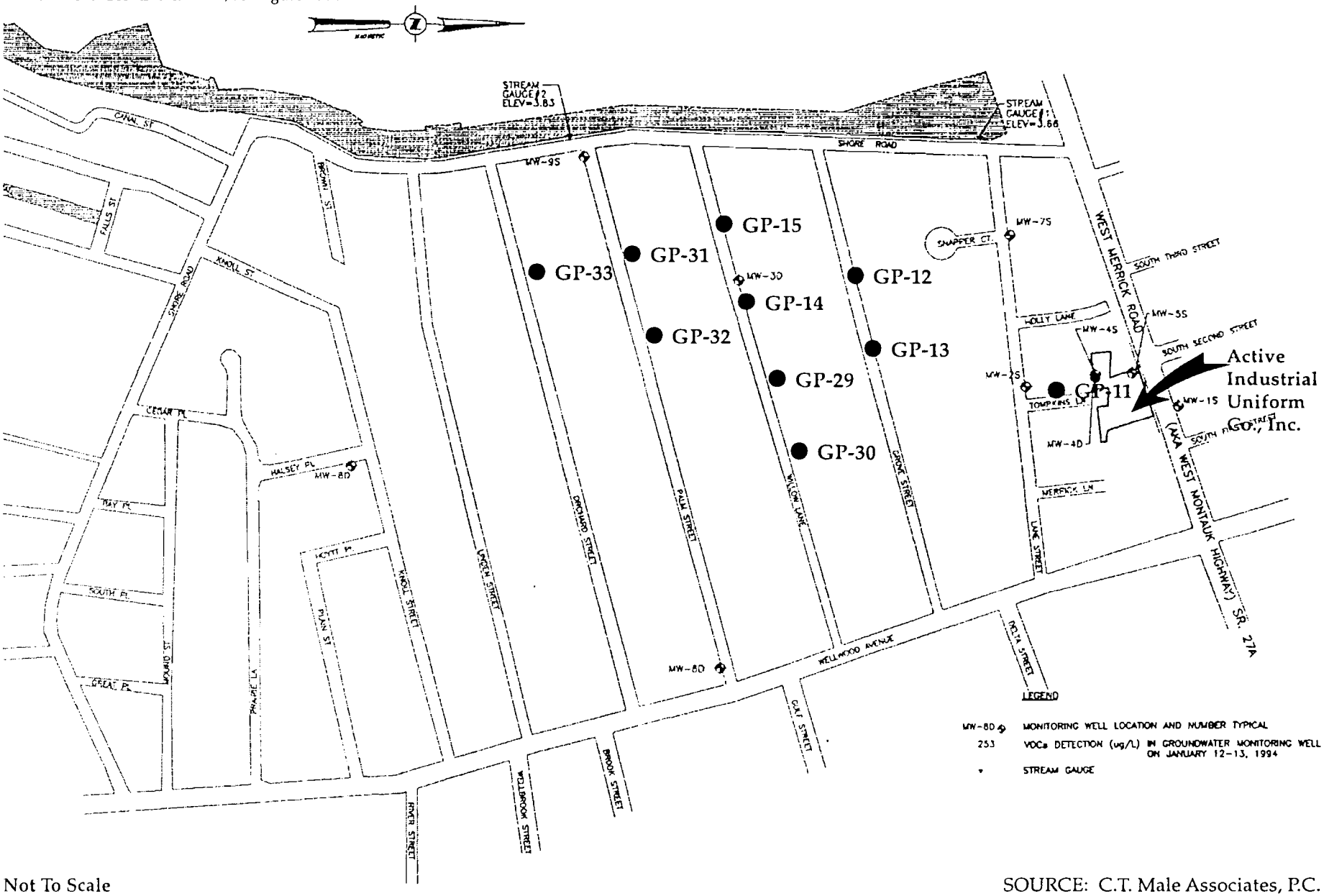
scale feet

SOURCE: C.T. Male Associates, P.C.

Figure 1
On-Site Geoprobe Locations
Updated To Include Phase II Probe Locations

O:\KALNY\ACTIVE\Active-12/98\Figure 2.PM6



Not To Scale

SOURCE: C.T. Male Associates, P.C.

Figure 2
Off-Site Geoprobe Locations
Updated To Include Phase II Probe Locations

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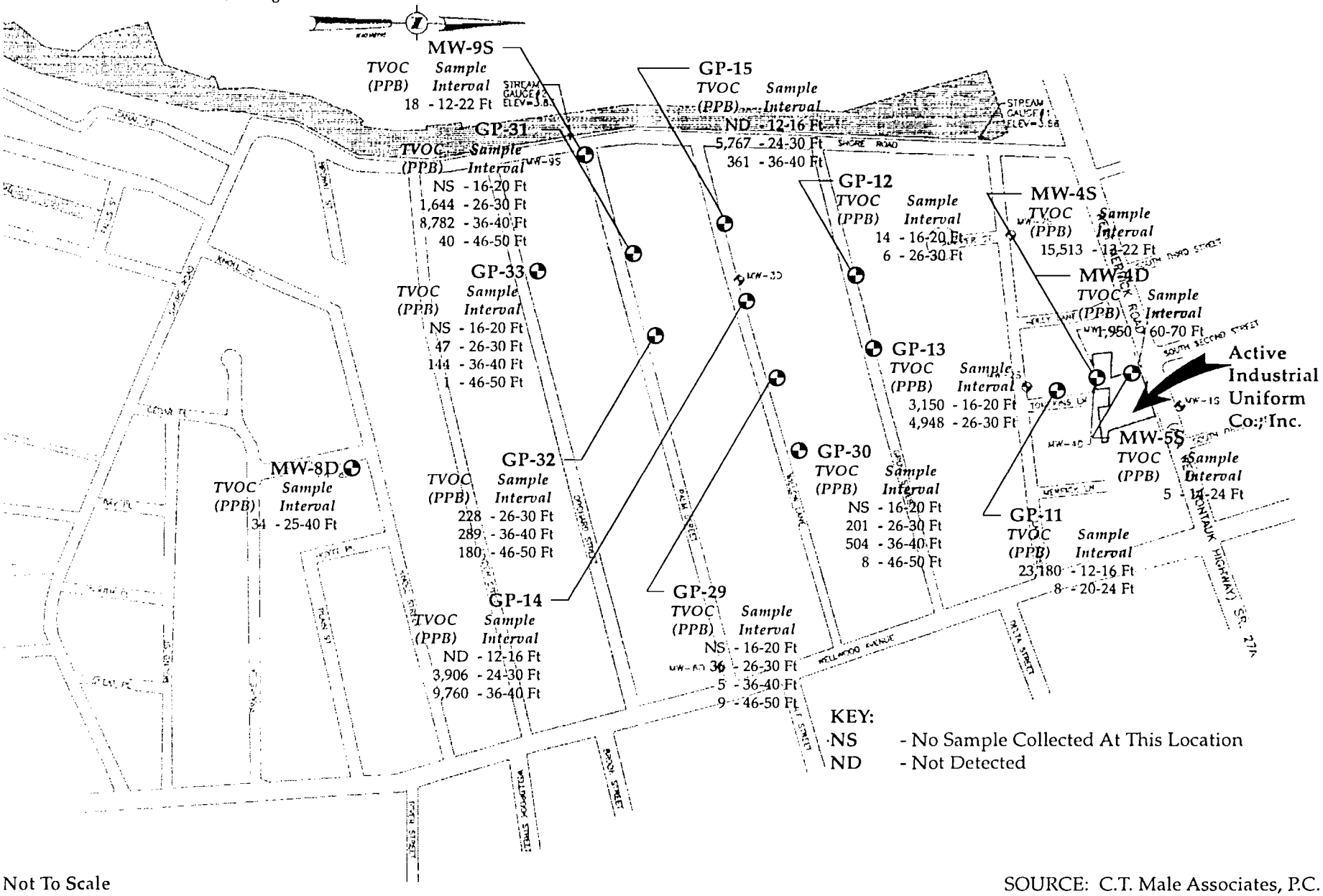
O:\KALNY\ACTIVE\Active-12/98\Figure 3.PM6



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SOURCE: C.T. Male Associates, P.C.

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Figure 3
Total VOCs In Groundwater At Off-Site Sample Locations

Tables

Table 1
Geoprobe Boring Summary Table
Active Industrial Uniform Remedial Design Investigation
NYSDEC Site No. 1-52-125

Geoprobe ID	Objective	Total Depth (ft)	Number of Soil Samples for TCL VOA Analysis	Number of Groundwater Samples for TCL VOA Analysis
GP-1	Define western limit of soil/GW contamination	26	1	1
GP-2	Assess current VOA soil contamination adjacent to removed PCE UST	22	2	0
GP-3	Assess current VOA contamination at north cess pools	20	2	1
GP-4	Assess current VOA contamination at north cess pools	20	2	1
GP-5	Define eastern limit of soil/GW contamination	22	1	1
GP-6	Assess current VOA contamination at abandoned wash water UST	22	2	1
GP-7	Assess current VOA contamination at removed PCE ASTs	47	4	0
GP-8	Assess effectiveness of SVES IRM	28	2	1
GP-9	Assess current soil/GW contamination at south cess pools - Assess effectiveness of SVES system.	32	3	1
GP-10	Assess current soil/GW contamination at south cess pools	22	2	1
GP-11	Assess shallow aquifer contamination at hot spot	24	0	2
GP-12	Assess shallow aquifer contamination down gradient of hot spot	30	0	2
GP-13	Assess shallow aquifer contamination down gradient of hot spot	30	0	2
GP-14	Assess shallow aquifer contamination down gradient of hot spot	40	0	3
GP-15	Assess shallow aquifer contamination down gradient of hot spot	40	0	3
GP-16	Assess contamination within center of property	22	1	1
GP-17	Assess contamination within center of property	22	1	1
GP-18	Assess contamination within drywell	20	1 VOA, 1 TCLP	0
GP-19	Assess contamination within drywell	12	1	0
GP-20	Assess contamination within drywell	12	1	0
GP-21	Assess contamination within drywell	22	1	0
GP-22	Assess contamination within drywell	25	1 VOA, 1 TCLP	0
GP-23	Assess contamination within drywell	20	1	0
GP-24	Assess contamination within drywell	20	1	0

Table 1
Geoprobe Boring Summary Table
Active Industrial Uniform Remedial Design Investigation
NYSDEC Site No. 1-52-125

Geoprobe ID	Objective	Total Depth (ft)	Number of Soil Samples for TCL VOA Analysis	Number of Groundwater Samples for TCL VOA Analysis
GP-25	Assess contamination along north side of the site	20	0	0
GP-26	Assess contamination along north side of the site	16	0	0
GP-27	Assess contamination along south side of the site	20	0	0
GP-28	Assess contamination along south side of the site	20	0	0
GP-29	Assess offsite groundwater quality downgradient from the site.	50	0	3
GP-30	Assess offsite groundwater quality downgradient from the site.	50	0	3
GP-31	Assess offsite groundwater quality downgradient from the site.	50	0	3
GP-32	Assess offsite groundwater quality downgradient from the site.	50	0	3
GP-33	Assess offsite groundwater quality downgradient from the site.	50	0	3

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1](ug/kg)	GP1(9-11) 07/13/98 (Phase I)	GP2(10-12) 07/13/98 (Phase I)	GP2(20-22) 07/13/98 (Phase I)	GP3(7-8) 07/13/98 (Phase I)	GP3(7-8)DL 07/13/98 (Phase I)	GP3(12-14) 07/13/98 (Phase I)	GP3(12-14)DL 07/13/98 (Phase I)	GP4(7-8) 07/13/98 (Phase I)	GP4(10-12) 07/13/98 (Phase I)
Chloromethane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Bromomethane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Vinyl chloride	120	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	20 J	190 J	11 UJ	28 UJ
Chloroethane	1900	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Methylene chloride	100	12 U	12 U	31 U	11 U	1400 U	53 UJ	1500 U	11 U	28 U
Acetone	110	12 U	12 UJ	31 UJ	11 UJ	1400 UJ	53 UJ	1500 UJ	11 UJ	28 UJ
Carbon disulfide	2700	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,1-Dichloroethene	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,1-Dichloroethane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	18 J	1500 U	11 UJ	28 UJ
1,2-Dichloroethene (Total)	300	12 UJ	12 UJ	31 UJ	68 J	480 J	430 J	2900	11 UJ	28 UJ
2-Butanone	300	12 UJ	12 UJ	31 UJ	11 UJ	1400 UJ	53 UJ	1500 UJ	11 UJ	28 UJ
Chloroform	300	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,2-Dichloroethane	100	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,1,1-Trichloroethane	760	12 UJ	12 UJ	31 UJ	1 J	1400 U	380 J	1200 J	11 UJ	28 UJ
Carbon tetrachloride	600	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Bromodichloromethane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,2-Dichloropropane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
cis-1,3-Dichloropropene	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Trichloroethene	700	12 UJ	12 UJ	31 UJ	100 J	870 J	440 J	1400 J	11 UJ	28 UJ
Benzene	60	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Dibromochloromethane	N/A	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
trans-1,3-Dichloropropene	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
1,1,2-Trichloroethane	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Bromoform	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
4-Methyl-2-pentanone	1000	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
2-Hexanone	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 UJ	11 UJ	28 UJ
Tetrachloroethene	1400	12 UJ	52 J	31 UJ	1400 E	14000	9700 E	26000	24 J	20 J
1,1,2,2-Tetrachloroethane	600	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Toluene	1500	12 UJ	12 UJ	31 UJ	11 U	1400 U	53 U	1500 U	11 UJ	28 UJ
Chlorobenzene	1700	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Ethylbenzene	5500	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	200 J	440 J	11 UJ	28 UJ
Styrene	------	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	53 UJ	1500 U	11 UJ	28 UJ
Xylenes (total)	1200	12 UJ	12 UJ	31 UJ	11 UJ	1400 U	530 J	1100 J	11 UJ	28 UJ
Total Volatile Organic Compounds (Total VOC's)	-------	ND	52	ND	1569	15350	11718	33230	24	20
Total Tentatively Identified Compounds (Total TIC's)	-------	94	19720	148	ND	8280	549	ND	1473	1630

NOTES:

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1% (NYSDEC TAGM, 04/95). "------" indicates no criteria provided for this compound.

(2) Bold values indicate exceedance of the Generic Soil Cleanup Value.

(3) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis.

(8) ND indicates values were not detected.

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1] (ug/kg)	GP4(10-12)RE 07/13/98 (Phase I)	GP5(9-11) 07/13/98 (Phase I)	GP6(8-10) 07/14/98 (Phase I)	GP6(20-22) 07/14/98 (Phase I)	GP7(9-12) 07/13/98 (Phase I)	GP7(14-16) 07/13/98 (Phase I)	GP7(14-16)DL 07/13/98 (Phase I)	GP7(24-26) 07/13/98 (Phase I)
Chloromethane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Bromomethane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Vinyl chloride	120	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Chloroethane	1900	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Methylene chloride	100	30 U	12 U	12 U	12 U	11 U	5600 U	28000 U	11 U
Acetone	110	30 UJ	12 UJ	12 UJ	12 UJ	12 J	5600 U	28000 U	11 UJ
Carbon disulfide	2700	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,1-Dichloroethene	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,1-Dichloroethane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,2-Dichloroethene (Total)	300	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
2-Butanone	300	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Chloroform	300	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,2-Dichloroethane	100	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,1,1-Trichloroethane	760	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Carbon tetrachloride	600	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Bromodichloromethane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,2-Dichloropropane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
cis-1,3-Dichloropropene	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Trichloroethene	700	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	2400 JD	28000 U	11 UJ
Benzene	60	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Dibromochloromethane	N/A	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
trans-1,3-Dichloropropene	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
1,1,2-Trichloroethane	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Bromoform	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
4-Methyl-2-pentanone	1000	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
2-Hexanone	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Tetrachloroethene	1400	13 J	2 J	12 UJ	12 UJ	4 J	310000 E	270000 D	1 J
1,1,2,2-Tetrachloroethane	600	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	4800 JD	11 UJ
Toluene	1500	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Chlorobenzene	1700	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Ethylbenzene	5500	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Styrene	------	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Xylenes (total)	1200	30 UJ	12 UJ	12 UJ	12 UJ	11 UJ	5600 U	28000 U	11 UJ
Total Volatile Organic Compounds (Total VOC's)	-------	13	2	ND	ND	16	312400	274800	1
Total Tentatively Identified Compounds (Total TIC's)	-------	108	6	ND	ND	ND	ND	790	1336

NOTES:

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1% (NYSDEC TAGM, 04/95). "------" indicates no criteria provided for this compound.

(2) Bold values indicate exceedance of the Generic Soil Cleanup Value.

(3) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis.

(8) ND indicates values were not detected.

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1] (ug/kg)	GP7(45-47) 07/13/98 (Phase I)	GP8(16-18) 07/14/98 (Phase I)	GP8(26-28) 07/14/98 (Phase I)	GP9(11-12) 07/14/98 (Phase I)	GP9(11-12)DL 07/14/98 (Phase I)	GP9(22-24) 07/14/98 (Phase I)	GP9(30-32) 07/14/98 (Phase I)	GP10(10-12) 7/14/98 (Phase I)
Chloromethane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Bromomethane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Vinyl chloride	120	13 UJ	12 UJ	12 UJ	48 J	7600 U	11 UJ	12 UJ	1500 UJ
Chloroethane	1900	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Methylene chloride	100	13 U	12 U	12 U	30 UJ	7600 U	11 U	12 U	1500 UJ
Acetone	110	13 UJ	11 J	12 UJ	30 UJ	7600 UJ	11 UJ	12 UJ	1500 UJ
Carbon disulfide	2700	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,1-Dichloroethene	----------	13 UJ	12 UJ	12 UJ	11 J	7600 U	11 UJ	12 UJ	1500 UJ
1,1-Dichloroethane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,2-Dichloroethene (Total)	300	13 UJ	12 UJ	12 UJ	**1400 E**	**30000 DJ**	11 UJ	12 UJ	1500 UJ
2-Butanone	300	13 UJ	12 UJ	12 UJ	30 UJ	7600 UJ	11 UJ	12 UJ	1500 UJ
Chloroform	300	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,2-Dichloroethane	100	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,1,1-Trichloroethane	760	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Carbon tetrachloride	600	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Bromodichloromethane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,2-Dichloropropane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
cis-1,3-Dichloropropene	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Trichloroethene	700	3 J	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Benzene	60	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Dibromochloromethane	N/A	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
trans-1,3-Dichloropropene	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
1,1,2-Trichloroethane	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Bromoform	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
4-Methyl-2-pentanone	1000	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
2-Hexanone	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 UJ	11 UJ	12 UJ	1500 UJ
Tetrachloroethene	1400	150 J	12 UJ	12 UJ	28 J	7600 U	11 UJ	12 UJ	1500 UJ
1,1,2,2-Tetrachloroethane	600	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Toluene	1500	13 UJ	12 UJ	12 UJ	1100 E	**2500 JD**	11 UJ	12 UJ	2100 J
Chlorobenzene	1700	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	1500 UJ
Ethylbenzene	5500	13 UJ	12 UJ	12 UJ	2100 E	**6400 JD**	11 UJ	12 UJ	4800 J
Styrene	----------	13 UJ	12 UJ	12 UJ	30 UJ	7600 U	11 UJ	12 UJ	160 J
Xylenes (total)	1200	13 UJ	12 UJ	12 UJ	10000 E	**40000 DJ**	11 UJ	12 UJ	**25000** J
Total Volatile Organic Compounds (Total VOC's)	-------	153	11	ND	14687	86500	ND	ND	32060
Total Tentatively Identified Compounds (Total TIC's)	-------	108	ND	14340	ND	25	331	155600	565

NOTES:

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1% (NYSDEC TAGM, 04/95). "------" indicates no criteria provided for this compound.

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(3) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis.

(8) ND indicates values were not detected.

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1](ug/kg)	GP10(20-22) 07/14/98 (Phase I)	GP16(8-11) 07/15/98 (Phase I)	GP16(8-11)Dup 07/1598 (Phase I)	GP17(8-11) 07/15/98 (Phase I)	FIELDBLANK (ug/L) O7/13/98 (Phase I)	TRPBLK-03 (ug/L) 07/14/98 (Phase I)
Chloromethane	----------	11 UJ	12 UJ	12 UJ	12 UJ	10 U	10 U
Bromomethane	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
Vinyl chloride	120	11 UJ	12 UJ	12 UJ	12 UJ	10 U	10 U
Chloroethane	1900	11 UJ	12 U	12 U	12 U	10 U	10 U
Methylene chloride	100	11 U	12 U	12 U	12 U	10 U	10 U
Acetone	110	11 UJ	12 U	12 U	12 U	10 UJ	10 UJ
Carbon disulfide	2700	11 UJ	12 U	12 U	12 U	10 U	10 U
1,1-Dichloroethene	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
1,1-Dichloroethane	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
1,2-Dichloroethene (Total)	300	11 UJ	12 U	12 U	12 U	10 U	10 U
2-Butanone	300	11 UJ	12 U	12 U	12 U	10 UJ	10 UJ
Chloroform	300	11 UJ	12 U	12 U	12 U	10 U	10 U
1,2-Dichloroethane	100	11 UJ	12 U	12 U	12 U	10 U	10 U
1,1,1-Trichloroethane	760	11 UJ	12 U	12 U	12 U	10 U	10 U
Carbon tetrachloride	600	11 UJ	12 U	12 U	12 U	10 U	10 U
Bromodichloromethane	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
1,2-Dichloropropane	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
cis-1,3-Dichloropropene	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
Trichloroethene	700	11 UJ	12 U	12 U	12 U	10 U	10 U
Benzene	60	11 UJ	12 U	12 U	12 U	10 U	10 U
Dibromochloromethane	N/A	11 UJ	12 U	12 U	12 U	10 U	10 U
trans-1,3-Dichloropropene	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
1,1,2-Trichloroethane	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
Bromoform	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
4-Methyl-2-pentanone	1000	11 UJ	12 U	12 U	12 U	10 U	10 U
2-Hexanone	----------	11 UJ	12 U	12 U	12 U	10 UJ	10 UJ
Tetrachloroethene	1400	11 UJ	12 U	12 U	12 U	10 U	10 U
1,1,2,2-Tetrachloroethane	600	11 UJ	12 UJ	12 UJ	12 UJ	10 U	10 U
Toluene	1500	11 UJ	12 U	12 U	12 U	1 J	10 U
Chlorobenzene	1700	11 UJ	12 U	12 U	12 U	10 U	10 U
Ethylbenzene	5500	11 UJ	12 U	12 U	12 U	10 U	10 U
Styrene	----------	11 UJ	12 U	12 U	12 U	10 U	10 U
Xylenes (total)	1200	11 UJ	12 U	12 U	12 U	10 U	10 U
Total Volatile Organic Compounds (Total VOC's)	-------	ND	ND	ND	ND	1	ND
Total Tentatively Identified Compounds (Total TIC's)	-------	ND	ND	ND	ND	ND	ND

NOTES:

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1%
(NYSDEC TAGM, 04/95). "------" indicates no criteria provided for this compound.

(2) Bold values indicate exceedance of the Generic Soil Cleanup Value.

(3) U indicates analyte was not detected at or below the Contract
Required Detection Limit (CRDL), or the compound is not detected
due to qualification through the method or field blank.

(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis.

(8) ND indicates values were not detected.

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniforms
Remedial Design
Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1](ug/kg)	GP18(5-8) 10/07/98 (Phase II)	GP18(5-8)DL 10/07/98 (Phase II)	GP19(0-2) 10/07/98 (Phase II)	GP20(0-2) 10/07/98 (Phase II)	GP21(10-11) 10/07/98 (Phase II)	GP21(10-11)DL 10/07/98 (Phase II)
Chloromethane	----------	12 U	120 U	120 U	120 U	35	9100 U
Bromomethane	----------	12 U	120 U	120 U	120 U	14 U	9100 U
Vinyl chloride	120	12 U	120 U	120 U	120 U	340 E	9100 U
Chloroethane	1900	12 U	120 U	38 JB	120 U	14 U	9100 U
Methylene chloride	100	12 U	50 JB	170	33 JB	14 U	9100 U
Acetone	110	12 U	120 U	27 J	120 U	89	9100 U
Carbon disulfide	2700	5 J	120 U	120 U	120 U	6 J	9100 U
1,1-Dichloroethene	----------	12 U	120 U	120 U	120 U	14 J	9100 U
1,1-Dichloroethane	----------	12 U	120 U	17 J	120 U	52	9100 U
1,2-Dichloroethene (Total)	300	9 J	120 U	120 U	120 U	540	9100 U
2-Butanone	300	12 U	120 U	120 U	120 U	14 U	9100 U
Chloroform	300	12 U	120 U	120 U	120 U	14 U	9100 U
1,2-Dichloroethane	100	12 U	120 U	23 J	120 U	14 U	9100 U
1,1,1-Trichloroethane	760	12 U	120 U	120 U	120 U	14 J	9100 U
Carbon tetrachloride	600	12 U	120 U	120 U	120 U	14 U	9100 U
Bromodichloromethane	----------	12 U	120 U	120 U	120 U	14 U	9100 U
1,2-Dichloropropane	----------	12 U	120 U	120 U	120 U	14 U	9100 U
cis-1,3-Dichloropropene	----------	12 U	120 U	27 J	120 U	14 U	9100 U
Trichloroethene	700	12 U	13 J	120 U	120 U	19	9100 U
Benzene	60	12 U	120 U	120 U	120 U	12 J	9100 U
Dibromochloromethane	----------	12 U	120 U	120 U	120 U	14 U	9100 U
trans-1,3-Dichloropropene	----------	12 U	120 U	120 U	120 U	14 U	9100 U
1,1,2-Trichloroethane	----------	12 U	120 U	120 U	120 U	14 U	9100 U
Bromoform	----------	12 U	120 U	120 U	120 U	14 U	9100 U
4-Methyl-2-pentanone	1000	12 U	120 U	120 U	120 U	14 U	9100 U
2-Hexanone	----------	12 U	120 U	120 U	120 U	14 U	9100 U
Tetrachloroethene	1400	18	930 B	650 B	78 JB	150	1500 JD
1,1,2,2-Tetrachloroethane	600	12 U	120 U	120 U	120 U	14 U	9100 U
Toluene	1500	170	210	100 J	12 J	1100 E	5500 JD
Chlorobenzene	1700	12 U	120 U	120 U	120 U	14 U	9100 U
Ethylbenzene	5500	90	320	350	120 U	810 E	12000 D
Styrene	----------	12 U	120 U	32 J	120 U	14 U	9100 U
Xylenes (total)	1200	600	1900	1600	33 J	3100 E	62000 D
Total Volatile Organic Compounds (Total VOC's)	-------	892	3423	3034	156	6281	81000
Total Tentatively Identified Compounds (Total TIC's)	-------	61548	404370	91190	15880	13830	2067000

NOTES

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1%
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(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis

(8) ND indicates values were not detected.

Table 2

Summary of Soil Volatile Organic Analysis

Active Industrial Uniforms
Remedial Design
Phase I and Phase II Investigations

Volatiles - (ug/kg)	Generic Soil Cleanup Objectives[1](ug/kg)	GP22(0-4) 10/07/98 (Phase II)	GP22(0-4)DL 10/07/98 (Phase II)	GP23(7-8) 10/07/98 (Phase II)	GP23(7-8)DL 10/07/97 (Phase II)	GP24(6-8) 10/07/98 (Phase II)	GP24(6-8)DL 10/07/98 (Phase II)
Chloromethane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Bromomethane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Vinyl chloride	120	8 J	77000 U	120 U	3700 U	12 U	1500 U
Chloroethane	1900	12 U	77000 U	120 U	3700 U	12 U	1500 U
Methylene chloride	100	12 U	77000 U	26 JB	3700 U	12 U	1500 U
Acetone	110	12 U	77000 U	120 U	3700 U	12 U	1500 U
Carbon disulfide	2700	12 U	77000 U	120 U	3700 U	5 J	1500 U
1,1-Dichloroethene	----------	830 E	77000 U	120 U	3700 U	12 U	1500 U
1,1-Dichloroethane	----------	720 E	77000 U	120 U	3700 U	32	1500 U
1,2-Dichloroethene (Total)	300	**5700** E	77000 U	120 U	3700 U	26	1500 U
2-Butanone	300	12 U	77000 U	120 U	3700 U	12 U	1500 U
Chloroform	300	12 U	77000 U	120 U	3700 U	12 U	1500 U
1,2-Dichloroethane	100	12 U	77000 U	120 U	3700 U	12 U	1500 U
1,1,1-Trichloroethane	760	**11000** E	77000 U	120 U	3700 U	12 U	1500 U
Carbon tetrachloride	600	12 U	77000 U	120 U	3700 U	12 U	1500 U
Bromodichloromethane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
1,2-Dichloropropane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
cis-1,3-Dichloropropene	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Trichloroethene	700	**11000** E	77000 U	120 U	3700 U	11 J	1500 U
Benzene	60	12 U	77000 U	120 U	3700 U	12 U	1500 U
Dibromochloromethane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
trans-1,3-Dichloropropene	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
1,1,2-Trichloroethane	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Bromoform	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
4-Methyl-2-pentanone	1000	12 U	77000 U	120 U	3700 U	12 U	1500 U
2-Hexanone	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Tetrachloroethene	1400	**32000** E	**760000** D	250 B	420 JD	12 U	1500 U
1,1,2,2-Tetrachloroethane	600	12 U	77000 U	120 U	3700 U	12 U	1500 U
Toluene	1500	**3400** E	77000 U	1100	**1600** JD	960 E	**1800**
Chlorobenzene	1700	12 U	77000 U	120 U	3700 U	12 U	1500 U
Ethylbenzene	5500	1000 E	77000 U	2800 E	**5200** D	1000 E	4900
Styrene	----------	12 U	77000 U	120 U	3700 U	12 U	1500 U
Xylenes (total)	1200	**3800** E	77000 U	**11000** E	**22000** D	4200 E	**22000**
Total Volatile Organic Compounds (Total VOC's)	-------	69458	760000	15176	29220	6234	28700
Total Tentatively Identified Compounds (Total TIC's)	-------	17240	ND	84020	1098000	6100	396000

NOTES

(1) Soil Cleanup Objectives utilize soil organic carbon content of 1%
(NYSDEC TAGM, 04/95) "------" indicates no criteria provided for this compound.

(2) Bold values indicate exceedance of the Generic Soil Cleanup Value

(3) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(4) J is the associated numerical value that is an estimated quantity

(5) B indicates that the compound was also detected in the laboratory blank.

(6) E, reported value estimated due to quantitation above the calibration range

(7) D represents values from diluted sample analysis

(8) ND indicates values were not detected.

Table 3
Summary of TCLP Sample Results
Active Industrial Uniform
Predesign Study

	Sample ID:	GP22(2-6)		GP22(2-6)DL	GP18(5-8)
	Collection Date:	10/07/98		10/07/98	10/07/98
	TCLP Standard				
Parameter					
Volatiles TCLP- (ug/L)					
Vinyl chloride	200	10	U	1000 U	10 U
1,1-Dichloroethene	700	5	J	1000 U	10 U
2-Butanone	200000	10	U	1000 U	10 U
Chloroform	6000	10	U	1000 U	10 U
1,2-Dichloroethane	500	10	U	1000 U	10 U
Carbon tetrachloride	5000	10	U	1000 U	10 U
Trichloroethene	500	820	E	710 JD	10 U
Benzene	500	10	U	1000 U	10 U
Tetrachloroethene	700	3700	E	16000 D	10 U
Chlorobenzene	100000	2	J	1000 U	10 U
SemiVolatiles TCLP- (ug/L)					
Pyridine	5000	10	U		
1,4-Dichlorobenzene	7500	10	U		
2-Methylphenol	---	10	U		
3-Methylphenol/4-Methyl	---	10	U		
Hexachloroethane	3000	10	U		
Nitrobenzene	2000	10	U		
Hexachlorobutadiene	500	10	U		
2,4,6-Trichlorophenol	2000	10	U		
2,4,5-Trichlorophenol	400000	25	U		
2,4-Dinitrotoluene	130	10	U		
Hexachlorobenzene	130	10	U		
Pentachlorphenol	100000	25	U		
PCB TCLP- (ug/L)					
Gamma-BHC (Lindane)	400.0	0.10	U		
Heptachlor	8	0.10	U		
Heptachlor epoxide	8	0.10	U		
Endrin	20	0.20	U		
Methoxychlor	10000	1.0	U		
Alpha-Chlordane	30	0.10	U		
Gamma-Chlordane	30	0.10	U		
Toxapohene	500	10	U		
Technical chlordane		2.0	U		
HERB TCLP- (ug/L)					
2,4-D	10000	5.0	U		
2,4,5-TP	1000	2.50	U		
METALS TCLP- (ug/L)					
Arsenic	5000	6.5	BN		
Barium	100000	139	B		
Cadmium	1000	5.2	BN		
Chromium	5000	2.0	BN		
Lead	5000	110	B		
Mercury	200	0.10	U		
Selenium	1000	6.5	BN		
Silver	5000	10.0	U		
Waste Characterization					
Total Cyanide	---	<0.54 mg/kg			
Flash Point	---	>60 C			
pH	---	8			
Total Organic Halides	---	21100 mg/kg			
Total Solids	---	93.40%			
Reactive to Water	---	No			
Releases Cyanide	---	No <100 mg/kg			
Releases Sulfide	---	No <100 mg/kg			

Notes:

U: indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

J: associated numerical value is an estimated quantity

E: value estimated due to quantitation above the calibration range

D: represents values from diluted sample analysis.

ND: values were not detected.

B: entered if the reported value is less than the Contract Required Detection Limit but greater than the Instrument Detection Limit

Table 4
Soil Excavation Estimate
Active Industrial Uniform Remedial Design

	UNSATURATED SOIL					
Dry Well / Geoprobe Location	Void Space Depth in Dry Well (ft. below grade)	Unsaturated Depth (ft. below grade)	Contaminated Unsaturated Soil Thickness (ft.)	Unsaturated Zone Maximum TVOC Lab Result (ppm)	Unsaturated Zone Maximum PID reading (ppm)	Unsaturated Soil Estimated Volume to be Excavated (cubic ft.)
GP-3	0-4	4-10	6	15.35	(8-12')= 622 ppm	301
GP-9	0-8	NA	0	NA	NA	0
GP-18	0	0-8	8	3.42	(5-8')=350 ppm	402
GP-19	0-7	7-10	3	3.03	(7-9')= 182 ppm	151
GP-20	2-8	8-10	2	0.16	(8-10')= 440 ppm	100
GP-21	0-2	2-10	8	81.0	(12-14')= 200 ppm	402
GP-22	0-3	3-10	7	760.0	(7-11')= 1866 ppm	352
GP-23	0-3	3-10.5	7.5	29.22	(7-11')= 186 ppm	377
GP-24	0-3	9-10	1	28.7	(9-11')= 192 ppm	50

	SATURATED SOIL				
Dry Well / Geoprobe Location	Estimated Contaminated Saturated Soil Depth (ft. below grade)	Estimated Contaminated Saturated Soil Depth (ft.)	Saturated Soil Estimated Volume (cubic ft.)	Saturated Zone Maximum TVOC Sample Result (ppm)	Saturated Zone Maximum PID reading (ppm)
GP-3	10-20	10	502	33.23	(14-16')= 164 ppm
GP-9	8 - 18	10	502	86.50	(11-12')= 331 ppm
GP-18	8 - 20	12	603	NA	(8-11')= 420 ppm
GP-19	10-15	5	251	NA	(11-13')= 82 ppm
GP-20	10-16	6	301	NA	(14-16')= 10 ppm
GP-21	10-20	10	502	NA	(14-18')= 160 ppm
GP-22	10-26	16	804	NA	(14-15')= 1100 ppm
GP-23	10.5-19	8.5	427	29.22	(11-13')=165 ppm
GP-24	10-19	9	452	28.70	(11-15')= 140 ppm

Table 5

Summary of Geoprobe Groundwater Samples
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP1(10-14) (Phase I) 07/13/98	GP1(10-14)DL (Phase I) 07/13/98	GP3 (10-14) (Phase I) O7/13/98	GP3(10-14)DL (Phase I) O7/13/98	GP4(10-14) (Phase I) 07/13/98	GP5(10-14) (Phase I) O7/13/98	GP6(10-14) (Phase I) 07/14/98	GP8(12-16) (Phase I) 07/14/98
Chloromethane	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Bromomethane	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	10 U	2000 U	16	2000 U	10 U	10 U	10 U	10 U
Chloroethane	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Methylene chloride	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Acetone	50	10 UJ	2000 UJ	10 UJ	2000 U	10 U	10 UJ	10 UJ	10 UJ
Carbon disulfide	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	10 UJ	2000 U	10 J	2000 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	2000 U	17	2000 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (Total)	5	13	2000 U	1500 E	1900 JD	10 U	2 J	1 J	4 J
2-Butanone	50	10 UJ	2000 UJ	10 UJ	2000 U	10 U	10 UJ	10 UJ	10 UJ
Chloroform	7	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5	4 J	2000 U	120	2000 U	10 U	3 J	10 U	10 U
Carbon tetrachloride	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Bromodichloromethane	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Trichloroethene	5	110	2000 U	1700 E	2100 D	10 U	4 J	10 U	6 J
Benzene	1	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Dibromochloromethane	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Bromoform	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	50	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
2-Hexanone	50	10 UJ	2000 UJ	10 UJ	2000 U	10 U	10 UJ	10 UJ	10 UJ
Tetrachloroethene	5	2000 E	26000 D	2700 E	9400 D	12 U	45	10 U	17 U
1,1,2,2-Tetrachloroethane	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Toluene	5	10 U	2000 U	5 J	2000 U	10 U	10 U	10 U	10 U
Chlorobenzene	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	2000 U	20	2000 U	10 U	10 U	10 U	10 U
Styrene	5	10 U	2000 U	10 U	2000 U	10 U	10 U	10 U	10 U
Xylenes (total)	5	2 J	2000 U	59	2000 U	10 U	10 U	10 U	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	2129	26000	6147	13400	ND	54	1	27
Total Tentatively Identified Compounds (Total TIC's)	----------	107	ND	436	ND	18	146	10	59

NOTES:

(1) Bold values indicate GA groundwater standard exceedances.

(2) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(3) J is the associated numerical value that is an estimated quantity.

(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range.

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected.

Table 5

Summary of Geoprobe Groundwater Samples
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP9 (12-16) (Phase I) 07/14/98	GP10(12-16) (Phase I) 07/14/98	GP11(20-24) (Phase I) 07/14/98	GP11(20-24)DPL (Phase I) 07/16/98	GP11(12-16) (Phase I) 07/16/98	GP11(12-16)DL (Phase I) 07/16/98	GP12(16-20) (Phase I) 07/16/98
Chloromethane	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Bromomethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Vinyl chloride	2	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Chloroethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Methylene chloride	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Acetone	50	10 UJ	6 J	10 UJ	10 UJ	50 UJ	1000 UJ	10 UJ
Carbon disulfide	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,1-Dichloroethene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,1-Dichloroethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,2-Dichloroethene (Total)	5	8 J	96	10 U	10 U	880 D	690 DJ	1 J
2-Butanone	50	10 UJ	10 UJ	10 UJ	10 UJ	50 UJ	1000 UJ	10 UJ
Chloroform	7	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,2-Dichloroethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,1,1-Trichloroethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Carbon tetrachloride	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,2-Dichloropropane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
cis-1,3-Dichloropropene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Trichloroethene	5	2 J	11	10 U	10 U	2600 ED	2300 DJ	10 U
Benzene	1	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Dibromochloromethane	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Bromoform	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
4-Methyl-2-pentanone	50	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
2-Hexanone	50	10 UJ	10 UJ	10 UJ	10 UJ	50 UJ	1000 UJ	10 UJ
Tetrachloroethene	5	13 U	10 U	10 U	10 U	12000 ED	20000 DJ	13 U
1,1,2,2-Tetrachloroethane	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Toluene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Chlorobenzene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Styrene	5	10 U	10 U	10 U	10 U	50 U	1000 UJ	10 U
Xylenes (total)	5	10 U	4 J	10 U	10 U	50 U	1000 UJ	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	23	ND	ND	ND	15480	22990	1
Total Tentatively Identified Compounds (Total TIC's)	----------	36	31	ND	ND	ND	ND	ND

NOTES

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(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected.

Table 5

Summary of Geoprobe Groundwater Samples

Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP12(26-30) (Phase I) 07/16/98	GP13(16-20) (Phase I) 07/16/98	GP13(16-20)DL (Phase I) 07/16/98	GP13(26-30) (Phase I) 07/16/98	GP13(26-30) DL (Phase I) 07/16/98	GP14(12-16) (Phase I) 07/16/98	GP14(24-30) (Phase I) 07/16/98	GP14(24-30)DL (Phase I) 07/16/98	GP14(36-40) (Phase I) 07/16/98
Chloromethane	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Bromomethane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Vinyl chloride	2	10 U	50 U	100 UJ	**26 DJ**	250 UJ	10 UJ	**59 D**	500 UJ	500 U
Chloroethane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Methylene chloride	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Acetone	50	10 UJ	50 UJ	100 UJ	50 UJ	250 UJ	10 UJ	50 UJ	500 UJ	500 UJ
Carbon disulfide	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
1,1-Dichloroethene	5	10 U	50 U	100 UJ	**8 DJ**	250 UJ	10 UJ	**10 DJ**	500 UJ	500 U
1,1-Dichloroethane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	**27 DJ**	500 UJ	500 U
1,2-Dichloroethene (Total)	5	**2 J**	**810 D**	**710 DJ**	**720 D**	**560 DJ**	10 UJ	**4800 ED**	**3700 DJ**	**9600 D**
2-Butanone	50	10 UJ	50 UJ	100 UJ	50 UJ	250 UJ	10 UJ	50 UJ	500 UJ	500 UJ
Chloroform	7	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
1,2-Dichloroethane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
1,1,1-Trichloroethane	5	10 U	**9 DJ**	100 UJ	50 U	250 UJ	10 UJ	**99 D**	500 UJ	**160 DJ**
Carbon tetrachloride	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Bromodichloromethane	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
1,2-Dichloropropane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
cis-1,3-Dichloropropene	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Trichloroethene	5	**4 J**	**840 D**	**820 DJ**	**1100 ED**	**920 DJ**	10 UJ	**11 DJ**	500 UJ	500 U
Benzene	1	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Dibromochloromethane	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
trans-1,3-Dichloropropene	0.4	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
1,1,2-Trichloroethane	1	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Bromoform	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
4-Methyl-2-pentanone	50	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
2-Hexanone	50	10 UJ	50 UJ	100 UJ	50 UJ	250 UJ	10 UJ	50 UJ	500 UJ	500 UJ
Tetrachloroethene	5	18 U	**1400 ED**	**1500 DJ**	**3300 ED**	**3300 DJ**	10 UJ	50 U	500 UJ	500 U
1,1,2,2-Tetrachloroethane	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Toluene	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Chlorobenzene	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Ethylbenzene	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Styrene	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Xylenes (total)	5	10 U	50 U	100 UJ	50 U	250 UJ	10 UJ	50 U	500 UJ	500 U
Total Volatile Organic Compounds (Total VOC's)	----------	6	3059	3030	5154	4780	ND	5006	3700	9760
Total Tentatively Identified Compounds (Total TIC's)	----------	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

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(3) J is the associated numerical value that is an estimated quantity

(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected

Table 5

Summary of Geoprobe Groundwater Samples

Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP15(12-16) (Phase I) 07/15/98	GP15(24-30) (Phase I) 7/1161998	GP15(24-30)DL (Phase I) 07/16/98	GP15(36-40) (Phase I) 07/16/98	GP16(12-16) (Phase I) 07/15/98	GP17(12-16) (Phase I) 07/15/98	FIELDBLANK (Phase I) 07/14/98	TB-03 (Phase I) 07/14/98
Chloromethane	50	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Bromomethane	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	10 U	39 DJ	500 UJ	20 U	10 U	10 U	10 U	10 U
Chloroethane	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Methylene chloride	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Acetone	50	10 UJ	50 UJ	500 UJ	20 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Carbon disulfide	50	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	10 U	11 DJ	500 UJ	5 DJ	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	10 U	23 DJ	500 UJ	10 DJ	10 U	10 U	10 U	10 U
1,2-Dichloroethene (Total)	5	10 U	6200 ED	5600 DJ	320 D	10 U	10 U	10 U	10 U
2-Butanone	50	10 UJ	50 UJ	500 UJ	20 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Chloroform	7	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5	10 U	83 D	500 UJ	11 DJ	10 U	10 U	10 U	10 U
Carbon tetrachloride	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Bromodichloromethane	50	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Trichloroethene	5	10 U	11 DJ	500 UJ	15 DJ	10 U	10 U	10 U	10 U
Benzene	1	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Dibromochloromethane	50	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Bromoform	50	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	50	10 UJ	50 U	500 UJ	20 UJ	10 UJ	10 UJ	10 U	10 U
2-Hexanone	50	10 UJ	50 UJ	500 UJ	20 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Tetrachloroethene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	5 J	10 U
1,1,2,2-Tetrachloroethane	5	10 UJ	50 U	500 UJ	20 UJ	10 UJ	10 UJ	10 U	10 U
Toluene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Chlorobenzene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Styrene	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Xylenes (total)	5	10 U	50 U	500 UJ	20 U	10 U	10 U	10 U	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	ND	6367	5600	361	ND	ND	5	ND
Total Tentatively *Identified* Compounds (Total TIC's)	----------	ND	ND	ND	ND	21	48	ND	ND

NOTES

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(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range.

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected.

Table 5
Summary of Geoprobe Groundwater Samples
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP29(26-30) (Phase II) 10/05/98	GP29(36-40) (Phase II) 10/05/98	GP29(46-50) (Phase II) 10/05/98	GP30(26-30) (Phase II) 10/05/98	GP30(36-40) (Phase II) 10/05/98	GP30(36-40)DL (Phase II) 10/05/98	GP30(46-50) (Phase II) 10/05/98
Chloromethane	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Bromomethane	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Vinyl chloride	2	**5 J**	10 U	10 U	**12**	1 J	20 U	10 U
Chloroethane	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Methylene chloride	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Acetone	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Carbon disulfide	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
1,1-Dichloroethene	5	10 U	**2 J**	2 J	10 U	4 J	4 JD	10 U
1,1-Dichloroethane	5	10 U	**2 J**	3 J	1 J	**11**	**10** JD	10 U
1,2-Dichloroethene (Total)	5	**29**	10 U	1 J	**180**	**100**	**95** D	**2 J**
2-Butanone	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Chloroform	7	10 U	10 U	10 U	10 U	10 U	20 U	10 U
1,2-Dichloroethane	5	10 U	1 J	10 U	10 U	10 U	20 U	10 U
1,1,1-Trichloroethane	5	10 U	10 U	**2 J**	10 U	**2 J**	20 U	10 U
Carbon tetrachloride	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
1,2-Dichloropropane	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
cis-1,3-Dichloropropene	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Trichloroethene	5	**2 J**	10 U	10 U	**5 J**	**190**	**170** D	**2 J**
Benzene	1	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Dibromochloromethane	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	10 U	10 U	10 U	20 U	10 U
1,1,2-Trichloroethane	1	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Bromoform	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
4-Methyl-2-pentanone	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
2-Hexanone	50	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Tetrachloroethene	5	10 U	10 U	1 J	**3 J**	**220** E	**200** D	**4 J**
1,1,2,2-Tetrachloroethane	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Toluene	5	10 U	10 U	10 U	10 U	1 J	20 U	10 U
Chlorobenzene	5	10 U	10 U	10 U	10 U	2 J	20 U	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Styrene	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Xylenes (total)	5	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	36	5	9	201	311	479	8
Total Tentatively Identified Compounds (Total TIC's)	----------	ND	8	6	ND	ND	ND	ND

NOTES:

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Table 5

Summary of Geoprobe Groundwater Samples

Volatile Organic Analysis

Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP31(26-30) (Phase II) 10/05/98	GP31(26-30)DL (Phase II) O7/13/98	GP31(36-40) (Phase II) 10/05/98	GP31(36-40)DL (Phase II) 10/05/98	GP31(46-50) (Phase II) 10/05/98	GP32(26-30) (Phase II) 10/08/98	GP32(26-30)DL (Phase II) 10/08/98	GP32(36-40) (Phase II) 10/08/98
Chloromethane	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Bromomethane	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Vinyl chloride	2	12	200 U	67	500 U	10 U	10 U	5 JD	16
Chloroethane	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Methylene chloride	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Acetone	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Carbon disulfide	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
1,1-Dichloroethene	5	2 J	200 U	16	500 U	5 J	10 U	25 U	2 J
1,1-Dichloroethane	5	4 J	200 U	38	500 U	10 J	10 U	25 U	260 E
1,2-Dichloroethene (Total)	5	1600 E	1600 D	5200 E	8500 D	5 J	220 E	210 D	10 U
2-Butanone	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Chloroform	7	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
1,2-Dichloroethane	5	10	200 U	10 U	500 U	10 U	10 U	25 U	10 U
1,1,1-Trichloroethane	5	10 U	200 U	140	120 JD	9 J	10 U	25 U	10 U
Carbon tetrachloride	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Bromodichloromethane	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
1,2-Dichloropropane	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
cis-1,3-Dichloropropene	5	13	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Trichloroethene	5	10 U	200 U	18	500 U	9 J	5 J	4 JD	6 J
Benzene	1	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Dibromochloromethane	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
trans-1,3-Dichloropropene	0.4	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
1,1,2-Trichloroethane	1	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Bromoform	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
4-Methyl-2-pentanone	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
2-Hexanone	50	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Tetrachloroethene	5	2 J	200 U	2 J	500 U	2 J	13	3 JD	5 J
1,1,2,2-Tetrachloroethane	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Toluene	5	1 J	200 U	1 J	500 U	10 U	10 U	25 U	10 U
Chlorobenzene	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Ethylbenzene	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Styrene	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Xylenes (total)	5	10 U	200 U	10 U	500 U	10 U	10 U	25 U	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	1644	1600	5482	8620	40	238	222	289
Total Tentatively Identified Compounds (Total TIC's)	----------	ND	ND	ND	ND	14	7	ND	ND

NOTES:

(1) Bold values indicates GA groundwater standard exceedances.

(2) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(3) J is the associated numerical value that is an estimated quantity

(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected.

Table 5

Summary of Geoprobe Groundwater Samples
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards(ug/L)	GP32(36-40)DL (Phase II) 10/08/98	GP32(46-50) (Phase II) 10/08/98	GP33(26-30) (Phase II) 10/08/98	GP33(36-40) (Phase II) 10/08/98	GP33(46-50) (Phase II) 10/08/98	GP34(36-40) (Phase II) 10/08/98	TB10/8 (Phase II) 10/08/98	FB10/8 (Phase II) 10/08/98
Chloromethane	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	**14 JD**	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	25 U	10 U	10 U	10 U	10 U	10 U	1 JB	10 U
Acetone	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	6 J
Carbon disulfide	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	25 U	**5 J**	10 U	2 J	10 U	2 J	10 U	10 U
1,1-Dichloroethane	5	25 U	**35**	**6 J**	**14**	10 U	**14**	10 U	10 U
1,2-Dichloroethene (Total)	5	**260 D**	**29**	**21**	**44**	10 U	**44**	10 U	10 U
2-Butanone	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	7	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5	25 U	**6 J**	1 J	2 J	10 U	3 J	10 U	10 U
Carbon tetrachloride	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	5	**6 JD**	**82**	**10**	**45**	10 U	**43**	10 U	10 U
Benzene	1	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	5	2 JD	**22**	**9 J**	**33**	10 U	**31**	10 U	10 U
1,1,2,2-Tetrachloroethane	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	5	25 U	10 U	10 U	3 J	1 J	2 J	10 U	10 U
Chlorobenzene	5	25 U	1 J	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	5	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	5	25 U	10 U	10 U	1 J	10 U	1 J	10 U	10 U
Total Volatile Organic Compounds (Total VOC's)	----------	282	180	47	144	1.	140	1	6
Total Tentatively Identified Compounds (Total TIC's)	----------	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

(1) Bold values indicates GA groundwater standard exceedances.

(2) U indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

(3) J is the associated numerical value that is an estimated quantity

(4) B indicates that the compound was also detected in the laboratory blank.

(5) E, reported value estimated due to quantitation above the calibration range

(6) D represents values from diluted sample analysis.

(7) ND indicates values were not detected.

Table 6
Existing Monitoring Wells-Groundwater
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards (ug/L)	MW-2S 07/14/98	MW-20S 07/14/98	MW-2SDL 07/14/98	MW-20SDL 07/14/98	MW-4S 07/14/98	MW-4SDL 07/14/98	MW-4D 07/14/98	MW-4DDL 07/14/98	MW-5S 07/14/98
Chloromethane	5	8 J	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Bromomethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Vinyl chloride	2	10 U	50 U	100 UJ	100 UJ	4 J	620 UJ	1 J	250 UJ	10 UJ
Chloroethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Methylene chloride	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 UJ	250 UJ	10 UJ
Acetone	50	10 UJ	50 U	100 UJ	100 UJ	10 UJ	620 UJ	10 U	250 UJ	10 UJ
Carbon disulfide	50	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
1,1-Dichloroethene	5	10 U	50 U	100 UJ	100 UJ	2 J	620 UJ	2 J	250 UJ	10 UJ
1,1-Dichloroethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	6 J	250 UJ	10 UJ
1,2-Dichloroethene (Total)	5	120	120 D	130 DJ	130 DJ	2200 E	2800 DJ	3 J	250 UJ	10 UJ
2-Butanone	50	10 UJ	50 U	100 UJ	100 UJ	10 UJ	620 UJ	10 UJ	250 UJ	10 UJ
Chloroform	7	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
1,2-Dichloroethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
1,1,1-Trichloroethane	5	2 J	50 U	100 UJ	100 UJ	7 J	620 UJ	2 J	250 UJ	10 UJ
Carbon tetrachloride	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Bromodichloromethane	50	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
1,2-Dichloropropane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
cis-1,3-Dichloropropene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Trichloroethene	5	580 E	620 D	620 JD	660 DJ	2700 E	5900 DJ	36	36 JD	10 UJ
Benzene	.7	17	18 JD	20 JD	21 JD	10 U	620 UJ	10 U	250 UJ	10 UJ
Dibromochloromethane	50	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
trans-1,3-Dichloropropene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
1,1,2-Trichloroethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Bromoform	50	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
4-Methyl-2-pentanone	50	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
2-Hexanone	50	10 UJ	50 U	100 UJ	100 UJ	10 UJ	620 UJ	10 UJ	250 UJ	10 UJ
Tetrachloroethene	5	1100 E	1300 ED	1500 JD	1500 DJ	2500 E	6800 DJ	1500 E	1900 DJ	6 J
1,1,2,2-Tetrachloroethane	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Toluene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Chlorobenzene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Ethylbenzene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Styrene	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Xylenes (total)	5	10 U	50 U	100 UJ	100 UJ	10 U	620 UJ	10 U	250 UJ	10 UJ
Total Volatile Organic Compounds (Total VOC's)	———	1827	2058	2270	2311	7413	15500	1550	1936	6
Total Tentatively Identified Compounds (Total TIC's)	———	690	800	ND	900	17	ND	ND	ND	8

NOTE:
(1) Bold values indicates GA groundwater standard exceedances.
(2) U indicates analyte was not detected at or below the Contract Required Detection Limit(CRDL),the compound is not detected due to qualification through the method or field blank.
(3) J is the associated numerical value that is an estimated quantity
(4) B indicates that the compound was also detected in the laboratory blank.
(5) E, reported value estimated due to quantitation above the calibration range
(6) D represents values from diluted sample analysis.
(7) ND indicates values were not detected.

Table 6
Existing Monitoring Wells-Groundwater
Volatile Organic Analysis
Active Industrial Uniform Remedial Design

Volatiles - (ug/L)	GA Groundwater Standards (ug/L)	M W- 8D 07/14/98	MW-9S 07/14/98	FIELDBLANK 07/14/98	TRIPBLANK 07/14/98
Chloromethane	5	10 UJ	10 U	10 UJ	10 UJ
Bromomethane	5	10 UJ	10 U	10 UJ	10 UJ
Vinyl chloride	2	10 UJ	10 U	10 UJ	10 UJ
Chloroethane	5	10 UJ	10 U	10 UJ	10 UJ
Methylene chloride	5	10 UJ	10 U	10 UJ	10 UJ
Acetone	50	10 UJ	10 UJ	10 UJ	10 UJ
Carbon disulfide	50	10 UJ	10 UJ	10 UJ	10 UJ
1,1-Dichloroethene	5	1 J	10 U	10 UJ	10 UJ
1,1-Dichloroethane	5	9 J	10 U	10 UJ	10 UJ
1,2-Dichloroethene (Total)	5	8 J	13	10 UJ	10 UJ
2-Butanone	50	10 UJ	10 UJ	10 UJ	10 UJ
Chloroform	7	10 UJ	10 U	10 UJ	10 UJ
1,2-Dichloroethane	5	10 UJ	10 U	10 UJ	10 UJ
1,1,1-Trichloroethane	5	1 J	10 U	10 UJ	10 UJ
Carbon tetrachloride	5	10 UJ	10 U	10 UJ	10 UJ
Bromodichloromethane	50	10 UJ	10 U	10 UJ	10 UJ
1,2-Dichloropropane	5	10 UJ	10 U	10 UJ	10 UJ
cis-1,3-Dichloropropene	5	10 UJ	10 U	10 UJ	10 UJ
Trichloroethene	5	5 J	2 J	10 UJ	10 UJ
Benzene	.7	10 UJ	10 U	10 UJ	10 UJ
Dibromochloromethane	50	10 UJ	10 U	10 UJ	10 UJ
trans-1,3-Dichloropropene	5	10 UJ	10 U	10 UJ	10 UJ
1,1,2-Trichloroethane	5	10 UJ	10 U	10 UJ	10 UJ
Bromoform	50	10 UJ	10 U	10 UJ	10 UJ
4-Methyl-2-pentanone	50	10 UJ	10 U	10 UJ	10 UJ
2-Hexanone	50	10 UJ	10 UJ	10 UJ	10 UJ
Tetrachloroethene	5	10 J	3 J	10 UJ	10 UJ
1,1,2,2-Tetrachloroethane	5	10 UJ	10 U	10 UJ	10 UJ
Toluene	5	10 UJ	10 U	10 UJ	10 UJ
Chlorobenzene	5	10 UJ	10 U	10 UJ	10 UJ
Ethylbenzene	5	10 UJ	10 U	10 UJ	10 UJ
Styrene	5	10 UJ	10 U	10 UJ	10 UJ
Xylenes (total)	5	10 UJ	10 U	10 UJ	10 UJ
Total Volatile Organic Compounds (Total VOC's)	.....	34	18	0	0
Total Tentatively Identified Compounds (Total TIC's)	———	ND	18		

NOTE:
(1) Bold values indicates GA groundwater standard exceedances.
(2) U indicates analyte was not detected at or below the Contract Required Detection Limit(CRDL),the compound is not detected due to qualification through the method or field blank.
(3) J is the associated numerical value that is an estimated quantity
(4) B indicates that the compound was also detected in the laboratory blank.
(5) E, reported value estimated due to quantitation above the calibration range
(6) D represents values from diluted sample analysis.
(7) ND indicates values were not detected.

Table 7
Summary of Groundwater Samples
Inorganic Analysis
Active Industrial Uniform
Remedial Design Study

Total Metals(ug/l)	*GP32(36-40) 10/08/98*	*GP33(36-40) 10/08/98*	*Bowling Alley Air Stripper Influent 10/8/98*	*MW-2S (Existing Well)*	*MW-4S (Existing Well)*
Aluminum	10.7 B	18.4 B	34.1 B	66.5 B	1810
Antimony	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
Arsenic	1.4 U	1.4 U	3.0 B	1.5 B	28.5
Barium	38.0 B	75.1 B	21.0 B	20.4 B	65.1 B
Beryllium	0.21 U	0.21 U	0.89 B	0.2 U	0.35 B
Cadmium	0.31 U	0.31 U	0.64 B	0.3 U	9.5
Calcium	19900	134000	18200	26800	28600
Chromium	1.2 B	1.1 B	0.83 B	0.6 U	5.2 B
Cobalt	6.6 B	5.7 B	2.0 U	2 U	16.7 B
Copper	1.5 U	2.3 B	2.7 B	1.8 B	13.3 B
Iron	2370	4030	1370	301	25000
Lead	1.4 B	0.9 U	1.2 B	0.9 U	8.3
Magnesium	3170 B	74900	3180 B	4100 B	4220 B
Manganese	10100	6670	2830	853	1650
Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	7.9 B	12.1 B	2.8 U	2.8 U	12.4 B
Potassium	3510 B	39100	2740 B	3010 B	3390 B
Selenium	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Silver	2.2 B	1.5 B	0.61 U	0.6	1.2 B
Sodium	21800	675,000	22,000	25,800	8,270
Thallium	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Vanadium	1.8 U	1.8 U	1.8 U	1.8 U	13.3 B
Zinc	37.8	85.6	15.2 B	20.4	163
Wet Chemistry (mg/L)					
CHLORIDE	37.1	1710	32.4	42.1	39.8
SUSPENDED SOLIDS	<10	<10	<10	<10	29
TOTAL ALKALINITY	80.8	64.6	39.2	55.8	65.3
TOTAL DISSOLVED S	167	2960	130	182	294
Field Parameters					
Temperature (C)	16.2	16.1	NA	16	16.6
Salinity (%)	0.01	0.3	NA	0.01	0
pH	6.28	6.347	NA	6.17	6.07
Turbidity (NTU)	4	425	NA	4	67
Dissolved Oxygen (mg/l)	2.91	0.37	NA	1.03	1.41
Conductivity (mS/cm)	0.342	5.14	NA	0.340	0.277

*: Standard for sum of iron and manganese.

B: This qualifier is used when the analyte is found in the associated blank.

U: Indicates that the compound was analyzed for but not detected.

Attachment A
Boring Logs

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environmental engineers, scientists,
planners & management consultants

BORING # GP-1
Page 1 of 2
Permit #:
Job #:

LOG OF BORING
Project Active Industrial
Location Village of Lindenhurst
Date Drilled 7/13/98
Drilling Co.:
Total Depth 26'
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1130		0-4	4'	0.0-8.0	Brown SILTY SAND, hard, moist		
4								
6	1135		4-8'	4'	0.0-8.0	Tan med.-coarse SAND, loose, moist		
8								
10	1140		8-12	4'	8-11': 0.0-13.0 11'-12': 0.0-4.0	Same as above except water encountered at 10 ft.		Soil sample collected 9-11' 1310: Collect water sample from 10-14' pH=6.47 Temp=20 C Cond= 440 umhos slight sheen noted
12								
14								
16	1145		14-16	2'	0.0	Same as above		
18								
20								
22	1155		20-22	0'		(No recovery after two attempts)		

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environmental engineers, scientists,
planners & management consultants

BORING # GP-1
Page 2 of 2
Permit #:

LOG OF BORING
Project Active Industrial Location Village of Lindenhurst

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
24			24-26'	2'	0	medium to fine SAND, wet, loose		
26						Geoprobe completed at 26 ft.		

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BORING # GP-2
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/13/98 — Drilling Co.:
Total Depth 22' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1332		0-4	4'	0	Brown SILTY SAND, moist, hard		
4								
6	1335		4-8'	4'	0.0-2.1	Brown-tan med.-coarse SAND, moist loose		
8								
10	1340		8-12	4'	8-10':0.0 10-12': 440.0	Same as above except wet		slight PCE odor Soil sample collected from 10-12'
12								
14								
16	1350		14-16	6"		Tan coarse SAND with gravel, loose wet		
18								
20								
22	1400		20-22	6"		Same as above		Soil sample collected from 20-22'
						Geoprobe completed at 22 ft. No groundwater samples taken.		

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BORING # GP-3

LOG OF BORING

Page 1 of 1

Project Active Industrial | Location Village of Lindenhurst | Permit #:

Date Drilled 7/13/98 | Drilling Co.: | Job #:

Total Depth 20' | Method Used: Geoprobe

Inspector Tom Fox | Organic Vapor Inst: PID | Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2						0-4': Void space		
4						through septic manhole geoprobe starts at 4 ft. below grade		
6	0932		4-8'	3'	5-7': 20	Tan brown SILTY SAND, with black staining at 8 ft., moist		PCE odor
8					7-8': 120.0			Soil sample taken 7-8'
10	0940		8-12	2'	622.0	Black stained coarse SAND and GRAVEL, moist		Heavy PCE odor 1000: Collect water sample from 10-14' pH=6.5 Temp=20.1 C Cond= 170 umhos
12								
14								Soil sample taken from 12-14'
16	0945		14-16	1'	164.0	coarse SAND and GRAVEL, wet, loose, PCE odor noted		
18								
20	0950		18-20	2'	2.0-20.0	Same as above		PCE odor
22						Geoprobe completed at 20'.		

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environmental engineers, scientists,
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BORING # GP-4
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/13/98 — Drilling Co.:
Total Depth 20' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0830		0-4	3'	0.0	1-2': Brown silty SAND/FILL 2-4': Brown tan SILTY SAND		
4								
6	0835		4-8	3'	0.0 2.8	5-7': Brown tan SILTY SAND with layers of hard silty clay 7-8': Black organic rich SILTY SAND wet at 8', strong PCE odor.		Soil sample 7'-8'.
8								
10	0837		8-12	3'	150-175	SAA		Soil sample taken 10-12' 0910: Collect water sample from 10-14' pH=6.48 Temp=19.6 C Cond=240 umhos slight PCE odor
12								
14								
16	0845		14-16	1'	0.0	Tan coarse SAND, little gravel, loose no PCE odor		
18								
20	0900		18-20		16-17': 7.0 17-18': 0.0	SAA except more gravel, wet		
						Geoprobe completed at 20'.		

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BORING # GP-5
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/13/98 — Drilling Co.:
Total Depth 22' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1030		0-4	3'	0	Brown-tan SILTY SAND, moist, loose		
4								
6	1032		4-8'	4'	0	Same as above		
8								
10	1036		8-12	2'	0	Brown med.-coarse SAND, little gravel, loose, wet at 10 ft.		Soil sample collected 9-11' 1100: Collect water sample from 10-14' pH=6.48 Temp=20 C Cond= 370 umhos
12								
14								
16	1042		14-16	2'	0	Gray coarse SAND and GRAVEL, loose, wet, appears discolored		
18								
20								
22	1050		20-22	6"	0	Tan coarse SAND and GRAVEL, loose wet, iron staining on quartz gravel		
						Geoprobe completed at 22'.		

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BORING # GP-6
Page 1 of 1

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst — Permit #:
Date Drilled 7/14/98 — Drilling Co.: — Job #:
Total Depth 22' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0805		0-4	3'		Brown SILTY SAND, hard, moist		
4								
6	0810		4-8'	4'		Brown med.-coarse SAND little gravel loose, moist		
8								
10	0818		8-12	4'		Brown-tan med.-coarse SAND, loose wet at 10 ft.		Soil sample collected 8-10' and duplicate Collect water sample from 10-14' pH=6.48 Temp=18 C Cond= 450 umhos
12								
14								
16	0830		14-16	6"		Tan coarse SAND and GRAVEL, loose wet		
18								
20								
22	0840		20-22	6"		Same as above		Collected soil sample from 20-22'
						Geoprobe completed at 22'.		

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BORING # GP-7
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial
Location Village of Lindenhurst
Date Drilled 7/13/98
Drilling Co.:
Total Depth 47 ft.
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1415		0-4	3'	0.0-2.4	Brown SILTY SAND, hard, moist		
4								
6	1420		4-8	3'	0.0-1.6	Brown med. SAND, loose, moist		
8								
10	1425		8-12	3'	8-9':1.6	Brown-tan medium SAND, little gravel loose, wet, PCE odor at 10'-12'		Soil sample taken 9'-12' and MS/MSD
12					9-12':240.0			
14								
16	1435		14-16	2'	>1200.0	Brown-tan med.-coarse SAND and GRAVEL, loose, wet, strong PCE odor		Soil sample taken 14-16'
18								
20								
22	1445		20-22	2'	12.4	Same as above except no PCE odor		
24								

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BORING # GP-7
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Permit #:

LOG OF BORING
Project Active Industrial Location Village of Lindenhurst

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
26			24-26'	2'	187.0	Brown-tan med.-coarse SAND and GRAVEL, loose, wet, strong PCE odor, heavy brown black oil(?) substance 25'-26'		Soil sample taken 24-26'
28								
30								
32			30-32'	2'	56.0	Same as above except DNAPL ganglia???		
34								
36								
38			36-38'	2'	32.0	Same as above except less DNAPL		
40								
42								
44								
46			45-47'	2'	36.0	Tan med.-fine SANDS with heavy DNAPL ganglia staining		Soil sample taken 45-47'
48						Geoprobe completed at 47'		

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BORING # GP-8

LOG OF BORING

Page 1 of 2

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 7/14/98 — Drilling Co.: — Job #:

Total Depth 28 ft. — Method Used: Geoprobe

Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0915		0-4	4'	0.0	Brown SILTY SAND, hard, moist		
4								
6	0920		4-8	4'	0.0	Brown med.-coarse SAND, hard, moist		
8								
10	0930		8-12	3'	0.0-0.1	Tan-brown med.-coarse SANND, loose wet		
12								1052: Collect water sample from 12-16' pH=6.42 Temp=19 C Cond= 320 umhos
14								
16	0938		14-16	6"	1.5	Black stained soil, heavy petroleum odor, med.-coarse SAND and GRAVEL loose		
18	0950		16-18	2'	2.4	Black very coarse SAND and GRAVEL loose, wet, very strong petroleum odor		Soil sample collected from 16-18' with TPH analysis
20								
22	1010		20-22	4"	1.6	Tan-brown veryt coarse SAND and GRAVEL, loose, wet, slight petroleum odor		
24								

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BORING # GP-8
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Permit #:

LOG OF BORING
Project Active Industrial Location Village of Lindenhurst

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
26	1040		26'-28'	2'	0	Tan med.-coarse SAND little gravel, loose, wet		Soil sample taken from 26-28'.
28						Geoprobe completed at 28'		

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BORING # GP-9
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/14/98 — Drilling Co.:
Total Depth 32 ft. — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1300		0-4		0.0	Void space		
4								
6	1330		4-8		0.0	Void space		
8								
10	1338		8-12	2'	10-11': 140 11-12': 331	Black stained coarse SAND and GRAVEL, loose, wet Heavy PCE/ Petroleum odor		Soil sample collected from 11'-12'
12								1440: Collect water sample from 12-16'
14								pH=6.48 Temp=19.4 C Cond= 270 umhos
16	1340		14-16	2'	68	Same as above		
18								
20								
22	1355		20-22	0'	0.0	No recovery		
24			22-24	0.5'	0.8	Black coarse grained SAND, loose, wet		Collected soil sample from 22'-24'

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BORING # GP-9
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Permit #:

LOG OF BORING
Project Active Industrial Location Village of Lindenhurst

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
26								
28								
30								
32	1420		30-32	2'	0.0	Tan medium to coarse SAND, little gravel, loose, wet		Soil sample taken from 30-32'
						Geoprobe completed at 32'		

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BORING # GP-10

LOG OF BORING — Page 1 of 1

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 7/14/98 — Drilling Co.: — Job #:

Total Depth 22 ft. — Method Used: Geoprobe

Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1455		0-4	4'	0.0	Brown SILTY SAND, dry, loose		
4								
6	1500		4-8	4'	0.0	Same as above		
8								
10	1505		8-12	4'	8-10': 30 10-12':199	8-10': Brown SILTY SAND 10-12': Black very smelly PCE/Petro odor, sludge like mixed with sand, wet at 10 ft.		Took soil sample from 10-12' and MS/MSD 1530: Collect water sample from 12-16' pH=6.42 Temp=21.8 C Cond= 180 umhos sheen noted
12								
14								
16	1510		14-16	1'	100.0'	SAA		
18								
20								
22	1520		20-22	2'	6.0	Tan coarse SAND and GRAVEL, slight petroleum odor		Took soil sample from 20-22'
						Geoprobe completed at 22 ft.		

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BORING # GP-11
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/15/98 — Drilling Co.:
Total Depth 24' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No samples taken 0' - 12'.		
12	1045		12-16			No soil samples collected.		Collect water sample from 12-16' pH=6.43 Temp=17 C Cond=390 umhos
14								
16								
18								
20	1115		20-24					Collect water sample from 20-24' pH=6.21 Temp=17 C Cond=280 umhos Blind duplicate collected
22								
24						Geoprobe completed at 24 ft.		
26								

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BORING # GP-12
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LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst — Permit #:
Date Drilled 7/15/98 — Drilling Co.: — Job #:
Total Depth 30' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No sample collected 0' - 16'.		
16	1305		16-20			Water sample collected. No soil samples collected.		Collect water sample from 16-20' pH=5.88 Temp=17 C Cond=190 umhos MS/MSD
18								
20								
22								
24								
26			26-30					Collect water sample from 26-30' pH=6.24 Temp=18 C Cond=300 umhos
28								
30	1340					Geoprobe completed at 30 ft.		
32								

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BORING # GP-12
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial
Location Village of Lindenhurst
Date Drilled 7/15/98
Drilling Co.:
Total Depth 30'
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No sample collected 0' - 16'.		
16	1305		16-20			No soil samples collected.		Collect water sample from 16-20' pH=5.88 Temp=17 C Cond=190 umhos MS/MSD
18								
20								
22								
24								
26			26-30					Collect water sample from 26-30' pH=6.24 Temp=18 C Cond=300 umhos
28								
30	1340					Geoprobe completed at 30 ft.		
32								

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BORING # GP-13
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial
Location Village of Lindenhurst
Date Drilled 7/15/98
Drilling Co.:
Total Depth 30'
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No samples collected 0' -16'.		
16	1415		16-20			No soil samples collected.		Collect water sample from 16-20' pH=6.48 Temp=18 C Cond=250 umhos
18								
20								
22								
24								
26	1450		26-30					Collect water sample from 26-30' pH=6.21 Temp=18 C Cond=350 umhos
28								
30						Geoprobe completed ate 30' b.g.		
32								

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BORING # GP-14
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 7/16/98 — Drilling Co.:
Total Depth 40' — Method Used: Geoprobe — Water elv:
Inspector Tom Fox — Organic Vapor Inst: PID

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No samples collected 0' -12'.		
12	1015		12-16			No soil samples collected.		Collect water sample from 12-16' pH=6.45 Temp=18 C Cond=150 umhos
16								
20								
24	1041							Collect water sample from 24'-30' pH=6.85 Temp=15 C Cond=300 umhos
28								
32								
36	1138							Collect water sample from 36'-40' pH=6.85 Temp=16 C Cond=340 umhos
40						Completed geoprobe at 40 ft.		

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BORING # GP-15

LOG OF BORING

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Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 7/16/98 — Drilling Co.: — Job #:

Total Depth 40' — Method Used: Geoprobe

Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0						No samples collected 0' -12'.		
12	1305		12-16			No soil samples collected.		Collect water sample from 12-16' pH=5.87 Temp=16 C Cond=150 umhos
16								
20								
24	1330		24-30'					Collect water sample from 24'-30' pH=6.80 Temp=14 C Cond=320 umhos
28								
32								
36	1410		36-40'					Collect water sample from 36'-40' pH=6.88 Temp=15 C Cond=340 umhos
40						Completed geoprobe at 40 ft.		

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BORING # GP-16

LOG OF BORING

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Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 7/15/98 — Drilling Co.: — Job #:

Total Depth 22' — Method Used: Geoprobe

Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0808		0-4		0.0	Brown silty SAND, hard, dry		
4								
6	0812		4-8		0.0	Brown-tan med. SAND, loose, moist		
8								
10	0815		8-12		0.0	Brown-tan med. SAND		Soil sample taken 8'-11' Blind duplicate taken.
12								
14								Collect water sample from 12-16' pH=6.43 Temp=19.8 C Cond=350 umhos
16	0820		14-16		0.0	Tan coarse grained SAND w/ gravel, loose, wet		
18								
20								
22	0830		20-22		0.0			
						Geoprobe completed at 22'.		

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BORING # GP-17
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Job #:

LOG OF BORING

Project Active Industrial
Location Village of Lindenhurst
Date Drilled 7/15/98
Drilling Co.:
Total Depth 22'
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0905		0-4	2'	0.0	Brown silty SAND, hard, slightly moist		
4								
6	0910		4-8	2'	0.0	Brown med.-cr. SAND, loose, moist wet at approx. 10' b.g.		
8								
10	0915		8-12	2'	0.0	Tan med-cr. SAND w/ gravel, loose wet		Soil sample taken 8'-11'
12								
14								Collect water sample from 12-16' pH=6.43 Temp=19 C Cond=340 umhos
16	0924		14-16	6"	0.0	Tan med.-cr. grained SAND w/ gravel, loose, wet		
18								
20								
22	0932		20-22		0.0			
						Geoprobe completed at 22'.		

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BORING # GP-18

LOG OF BORING

Page 1 of 1

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 10/7/98 — Drilling Co.: Zebra Env. — Job #:

Total Depth 20' below 4' void — Method Used: Geoprobe

Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	1428		0-4	4	10.0	moist brown SILTY SAND w/ asphalt derived FILL, loose		4' void space in dry well so 0-4' interval is actually 4-8' below grade
2								
4								
	1430		4-8	3	4-5': 10.0 5-8': 350.0	4-5':SAA 5-8':moist to wet black heavily stained soils, very strong PCE/petro odor, wet at 7'		VOA and VOA-TCLP taken from the 5-8' interval
6								
8								
	1435		8-12	3	8-11': 420.0 11-12': 145	8-11': SAA, wet 11-12': wet gray stained VERY CR. SAND and GRAVEL, loose		
10								
12								
14								
16								
18								
	1445		18-20	18"	18.0	SAA		
20								
						End of geoprobe boring.		

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BORING # GP-19

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LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 10/6/98 — Drilling Co.: Zebra Env. — Job #:

Total Depth 12' — Method Used: Geoprobe

Inspector T. Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	1330		0-4	3	0-2': 182.0	0-2': Moist black heavy stained soil strong PCE/petroleum odor, loose		TCL VOA (0-2) 7ft. void so 0-4' interval is actually 7-11 ft. below grade
2					2-4': 78.0	2-4': Tan-gray medium-coarse SAND loose, wet @ 3-4 ft.		
4								
	1340		4-8	4	4-6': 82.0	Wet tan-white medium coarse SAND,		
6					6-8':42.0	loose, increase in gravel at 6-8 ft.		
8								
10								
	1400		10-12	18 inches	1.6	wet very coarse SAND and GRAVEL, loose		
12								
						End of geoprobe boring		

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LOG OF BORING

Project Active Industrial
Location Village of Lindenhurst
Date Drilled 10/6/98
Drilling Co.: Zebra Env.
Total Depth 12'
Method Used: Geoprobe
Inspector T. Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	1115		0-4	3	0-2': 440.0 2-4': 180.0	Moist gray stained medium SAND, little gravel, loose		Top of drywell is 2' below gr. then 6 ft. void from drywell, so 0-4' interval is actually 8-12 ft. b.g.
2								
4	1130		4-8	3	4-6': 120.0 6-8':10.0	4-6':SAA		VOA soil sample taken of 0-2' interval
6						6-8': Wet tan very cr. SAND and GRAVEL, loose		
8								
10	1140		10-12	0		No recovery		
12						End of geoprobe boring		

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BORING # GP-21
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Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/6/98 — Drilling Co.: Zebra Env.
Total Depth 22' — Method Used: Geoprobe
Inspector T. Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	0815		0-4	1.5	7.0	dry brown SILTY SAND, with gravel loose		Drill through the top ot the dry-well then a 2' void, so 0-4' interval is really 2-6' below gr.
2								
4								
	0820		4-8	2	8.0	SAA		
6								
						@ 7-8' moist black stained SAND, heavy PCE/petroleum odor		
8								
	0825		8-12	3.5	10-12': 200.0	Black stained SAND and GRAVEL, loose, heavy PCE/petro odor,		VOA soil sample taken 10-11' interval
10								
						wet @ 12 ft.		
12	0830		12-16	4	160.0	Same as above		
14								
16								
18								
20								
	0850		20-22	1	1.8	Wet tan coarse SAND and GRAVEL, loose		
22								
						End of geoprobe boring		

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BORING # GP-22

LOG OF BORING

Page 1 of 1

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 10/6/98 — Drilling Co.: Zebra Env. — Job #:

Total Depth 25' — Method Used: Geoprobe

Inspector T. Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	0920		0-4	2	1,800.0	Moist black heavy stained soil, lint particles, heavy PCE odor Coarse SAND and GRAVEL		3 ft. void space after drilling through the pool concrete cover, so 0-4' interval is 3-7' below grade
2								
4	0925		4-8	3	1,866.0	Moist black stained coarse SAND and GRAVEL, loose, heavy PCE odor		VOA soil sample taken from 0-4 ft. and full TCLP from 2-6 ft.
6								
8	0935		8-12	4	1,100.0	SAA except wet @ 11 ft.		
10						wet @ 11 ft.		
12								
14								
16								
18								
20								
22								
▼	0945		23-25	2 inches	28	Wet coarse SAND and GRAVEL, slight gray staining		
25						Geoprobe boring ends at 25 ft.		

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BORING # GP-23

LOG OF BORING

Page 1 of 1

Project Active Industrial | Location Village of Lindenhurst | Permit #:

Date Drilled 10/7/98 | Drilling Co.: Zebra Env. | Job #:

Total Depth 20' | Method Used: Geoprobe

Inspector Brian Murtagh | Organic Vapor Inst: PID | Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	1100		0-4	2	1.6	dry brown SILTY SAND, trace to little quartz gravel, loose, mod-poor sorting, no odor.		3 ft. void in dry well, therefore 0-4' interval is actually 3-7' below grade
2								
4								
	1105		4-8	3	186.0	4-5': moist-wet gray brown black SILTY SAND, little-with very cr sand 5-8': wet black stained fine-v coarse SAND, poor sort, loose, strong PCE odor, wet @ 7.5', slight sheen on soil		Took VOA soil sample from 7'-8' interval
6								
8								
	1115		8-12	3	8-10': 165.0 10-12': 80.0	8-10':SAA, 10-12': brown-gray fine coarse SAND, little very coarse sand, trace silt, loose, slight black staining noted on soil sample		Sheen noted on water in the sample tube
10								
12								
14								
16								
18								
	1120		18-20	0.25	3.0	wet medium to very coarse SAND and fine GRAVEL, trace fine sand and silt no staining noted, slight odor noted		
20								
						End of geoprobe boring.		

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BORING # GP-24

LOG OF BORING

Page 1 of 1

Project Active Industrial | Location Village of Lindenhurst | Permit #:

Date Drilled 10/7/98 | Drilling Co.: Zebra Env. | Job #:

Total Depth 20' | Method Used: Geoprobe

Inspector Brian Murtagh | Organic Vapor Inst: PID | Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0955		0-4	3	0.0	dry brown SILTY SAND, trace to little quartz gravel, loose, poor sorting, no odor.		Drill through top of dry well then 3 ft. void space, 0-4 ft. interval is actually 3-7' below grade.
4								
6	1000		4-8	2.5	4-6':0.6 6-8':192.0	4-6': SAA, 6-6.5': black gray stained SILTY CLAY, 6.5-8': black stained fine-coarse SAND, trace gravel, strong PCE/petro odor		Took VOA soil sample from 6'-8' interval
8						sheen on water @ 7'		
10	1010		8-12	3.5	100.0 to 140.0	8-11':wet black stained fine-coarse SAND, strong PCE/petro odor, loose 11-12':wet black stained med-very cr. SAND, little-trace gravel, strong odors		Sheen noted on water in the sample tube
12								
14								
16								
18								
20	1015		18-20	0.75	0.0	wet tan-brown fine to very coarse SAND, little fine gravel, no staining, no odor		
						End of geoprobe boring.		

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BORING # GP-25
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/7/98 — Drilling Co.: Zebra Env.
Total Depth 20' bg — Method Used: Geoprobe
Inspector Brian Murtagh — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	0851		0-4	3	0-2': 2.5 2-4': 4.5	0-0.5': Asphalt, 0.5-4': brown-tan-brwn medium SAND, trace silt, trace gravel, loose, moist, moderate poor sorting		
4								
6	0855		4-8	3.5	2.0	orange-brown fine-med SAND, trace silt, moderate sorting, loose. @ 7.8' soil is moist-wet		
8								
10	0900		8-12	4	8-9': 2.5 9-12': 11.0	8-9': SAA, 9-9.5': gray fine-cr SAND, moist to wet,		
12						9.5-16':wet, black heavy stained fine-med SAND, tr. gravel PCE/petro odor, loose		
14	0905		12-16	2.5	12-14': 5.5 14-16':12.0			
16								
18								
20	0915		18-20	0.5	0.0	wet tan-light brown medium to very coarse SAND, trace fine gravel, trace silt.		
						End of geoprobe boring.		

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BORING # GP-26

LOG OF BORING

Page 1 of 1

Project Active Industrial | Location Village of Lindenhurst | Permit #:

Date Drilled 10/6/98 | Drilling Co.: Zebra Env. | Job #:

Total Depth 16' | Method Used: Geoprobe

Inspector T. Fox | Organic Vapor Inst: PID | Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1300		0-4	3	1.3	Moist brown SILTY SAND, little to no gravel, loose		
4								
6	1305		4-8	4	1.6	Moist tan-red medium SAND, little to no gravel, loose		
8								
10	1310		8-12	3	8-10': 1.3 10-11': 13.0 11-12': 2.2	8-10':moist tan medium SANDS, little gravel, loose 10-11': wet black stained SAND, slight PCE/petro odor, loose		
12						11-16': wet tan-white coarse SAND and GRAVEL, loose		
14	1315		12-16	4	2	SAA		
16								
						End of geoprobe boring.		

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BORING # GP-27
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/6/98 — Drilling Co.: Zebra Env.
Total Depth 20' — Method Used: Geoprobe
Inspector T. Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
	1035		0-4	2	10.0	Dry brown SILTY SAND and GRAVEL, loose		
2								
4								
	1038		4-8	4	4-7': 80.0 7-8':180.0	4-7':Moist brown medium-coarse SAND, loose, PCE odor 7-8':Moist black stained coarse SANDS with gravel, loose, heavy PCE odor		
6								
8								
	1040		8-12	3	120.0	SAA, except wet @ 10 ft.		
10								
12								
	1045		12-16	4	110	SAA		
14								
16								
18								
	1130		18-20	0.5	2	Wet coarse SAND and GRAVEL, loose, slight gray staining		
20								
						End of geoprobe boring.		

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BORING # GP-28
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/7/98 — Drilling Co.: Zebra Env.
Total Depth 20' below grade — Method Used: Geoprobe
Inspector Brian Murtagh — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
2	1205		0-4	3.5	3.0 6.0	1-3':Dry brown-gray SILTY SAND FILL poorly sort., loose 3-4': dry orange-brown SILT, little fine sand, trace qtz gravel		
4								
6	1210		4-8	3	4-6': 6.0 6-8': 14.0	dry tan-orange-brown med.-v.cr. SAND little qtz gravel, trace fn. Sand, poor sorting, loose moist at 8' b.g.		
8								
10	1215		8-12	4	8-9.5': 53.0 9.5-12': 118.0	8-9.5: SAA, 9.5-12: black stained med.-cr. SAND, little v. cr. sand, wet @ approx. 10' strong PCE / petroleum odor		
12								
14	1225		12-16	4	36.0-55.0	wet black stained med.-cr. SAND, little fn. gravel, sheen visible on water strong PCE / petroleum odor		
16								
18								
20	1240		18-20	2'	2.0-3.0	wet slight black stained to gray cr.-v.cr. SAND, little fn.-med. sand, little gravel, slight black staining but no strong PCE/petro odor		
						End of geoprobe boring.		

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BORING # GP-29
Page 1 of 1
Permit #:
Job #:

LOG OF BORING
Project Active Industrial
Location Village of Lindenhurst
Date Drilled 10/6/98
Drilling Co.: Zebra
Total Depth 50'
Method Used: Geoprobe
Inspector Tom Fox
Organic Vapor Inst: PID
Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0 ↓ 26								
	1020		26-30			Collect water sample from 26'-30' pH=6.38 Cond.=0.319 mS/cm DO=0.21 mg/l Temp=17 C Salinity= 0.01 Turb=>999 ntu		
30								
34								
	1000		36-40			Collect water sample from 36'-40' pH=6.13 Cond.=0.320 mS/cm DO=1.40 mg/l Temp=14.5 C Salinity= 0.01 Turb=>999 ntu		
38								
42								
46								
	0940		46-50			Collect water sample from 46'-50' pH=6.47 Cond.=0.383 mS/cm DO=0.68mg/l Temp=14.1 C Salinity= 0.01 Turb=220 ntu		
50						Geoprobe completed at 50 ft.		

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BORING # GP-30
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/6/98 — Drilling Co.: Zebra
Total Depth 50' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0 ↓ 26								
	1245		26-30			Collect water sample from 26'-30' pH=6.45 Cond.=0.310 mS/cm DO=0.65 mg/l Temp=15.5 C Salinity= 0.01 Turb=>999 ntu		
30								
34								
	1215		36-40			Collect water sample from 36'-40' pH=6.41 Cond =0.300 mS/cm DO=0.00 mg/l Temp=14.8 C Salinity= 0.01 Turb=685 ntu		
38								
42								
46								
	1140		46-50			Collect water sample from 46'-50' pH=6.27 Cond.=0.332 mS/cm DO=1.15 mg/l Temp=15 3 C Salinity= 0.01 Turb=75 ntu		
50						Geoprobe completed at 50 ft.		

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BORING # GP-31
Page 1 of 1
Permit #:
Job #:

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst
Date Drilled 10/6/98 — Drilling Co.: Zebra
Total Depth 50' — Method Used: Geoprobe
Inspector Tom Fox — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0 ↓ 26								
	1510		26-30			Collect water sample from 26'-30' pH=6.78 Cond.=1.22 mS/cm DO=0.42 mg/l Temp=15.9 C Salinity= 0.05 Turb= 714 ntu		
30								
34								
	1450		36-40			Collect water sample from 36'-40' pH=6.81 Cond.=4.76 mS/cm DO=0.67 mg/l Temp=15.6 C Salinity= 0.24 Turb=816 ntu		
38								
42								
46								
	1430		46-50			Collect water sample from 46'-50' pH=6.32 Cond.=38.7 mS/cm DO=0.64 mg/l Temp=16.2 C Salinity=2.46 Turb=250 ntu		
50						Geoprobe completed at 50 ft.		

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BORING # GP-32

Page 1 of 1

LOG OF BORING

Project Active Industrial — Location Village of Lindenhurst — Permit #:

Date Drilled 10/8/98 — Drilling Co.: Zebra — Job #:

Total Depth 50' — Method Used: Geoprobe

Inspector B. Murtagh — Organic Vapor Inst: PID — Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0 ↓ 26								
	1055		26-30			Collect water sample from 26'-30' pH=6.78 Cond.=.274 mS/cm DO=1.65 mg/l Temp=16.4 C Salinity= 0.01 Turb= 999 ntu		
30								
34								
	1020		36-40			Collect water sample from 36'-40' pH=6.28 Cond.=.342 mS/cm DO=2.91 mg/l Temp=16.2 C Salinity= 0.01 Turb=4 ntu		
38								
42								
46								
	0950		46-50			Collect water sample from 46'-50' pH=5.99 Cond.=.441 mS/cm DO=1.38 mg/l Temp=16 C Salinity=0.01 Turb=35 ntu		
50						Geoprobe completed at 50 ft.		

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BORING # GP-33

LOG OF BORING

Page 1 of 1

Project Active Industrial | Location Village of Lindenhurst | Permit #:

Date Drilled 10/8/98 | Drilling Co.: Zebra | Job #:

Total Depth 50' | Method Used: Geoprobe

Inspector B. Murtagh | Organic Vapor Inst: PID | Water elv:

Depth (feet)	Sample No.	Blows/6" 140 lbs.	Sample Inter.	Adv/Rec (feet)	Org. Vap (ppm)	Sample Description	Strata Change	Remarks (time)
0 ↓ 26								
	1230		26-30			Collect water sample from 26'-30' pH=6.49 Cond.=1.28 mS/cm DO=0.96 mg/l Temp=15.1 C Salinity= 0.06 Turb= 429 ntu		
30								
34								
	1205		36-40			Collect water sample from 36'-40' pH=6.37 Cond =5.14 mS/cm DO=0.37 mg/l Temp=15.1 C Salinity= 0.30 Turb=425 ntu		
38								
42								
46								
	1145		46-50			Collect water sample from 46'-50' pH=6.15 Cond.=40.9 mS/cm DO=0.80 mg/l Temp=16 C Salinity=2.61 Turb=95 ntu		
50						Geoprobe completed at 50 ft.		

Attachment B
Leaching Pool Schematics

CAMP DRESSER & McKEE

CLIENT _____ JOB NO. _____ COMPUTED BY DM

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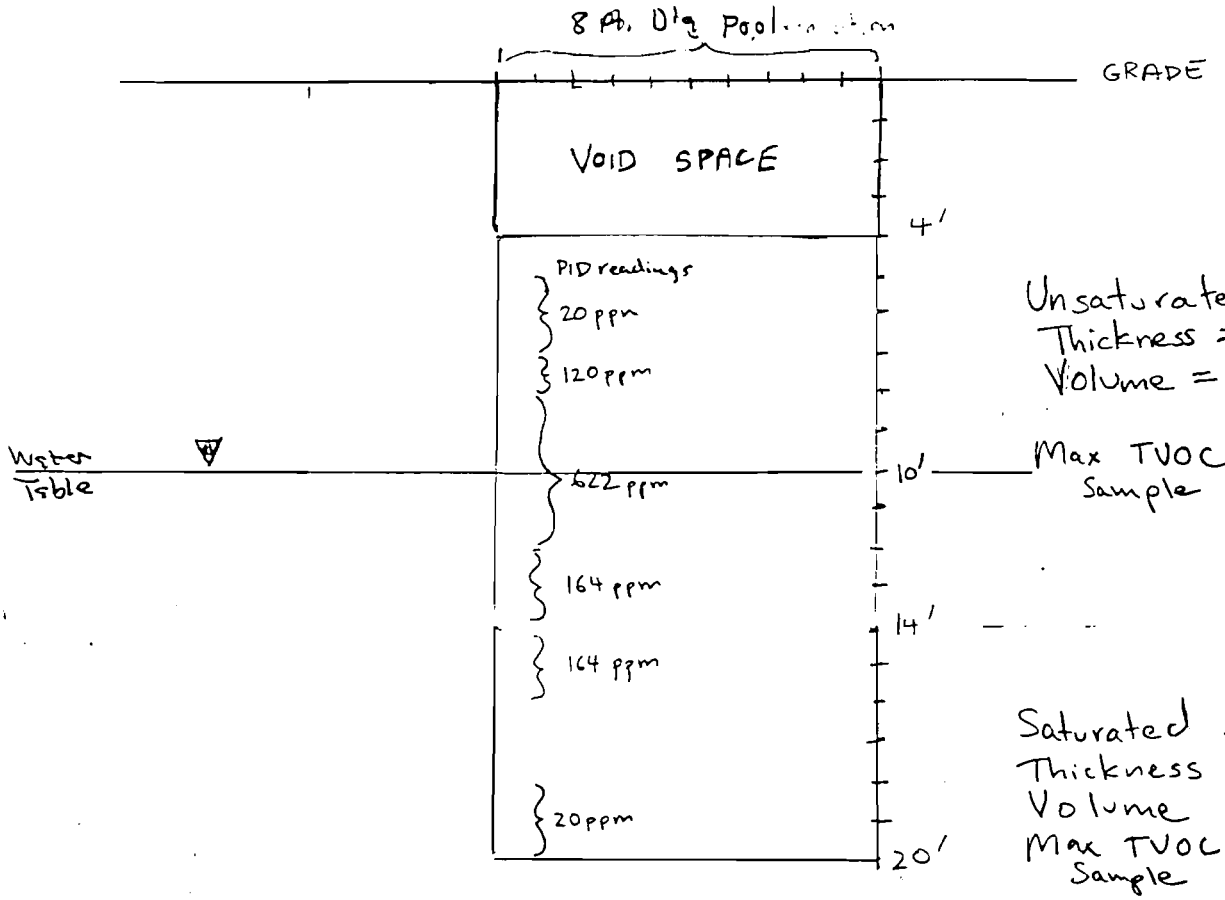
DETAIL _____ CHECKED BY _____ PAGE NO. _____

GP-3



Unsaturated Soil
Thickness = 6 ft.
Volume = 30.2 ft³.

Max TVOC = 15.35 ppm
Sample

Saturated Soil
Thickness = 10 ft
Volume = 503. ft³
Max TVOC = 33.23 ppm
Sample

CAMP DRESSER & McKEE

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PROJECT Active DATE CHECKED _____ DATE _____

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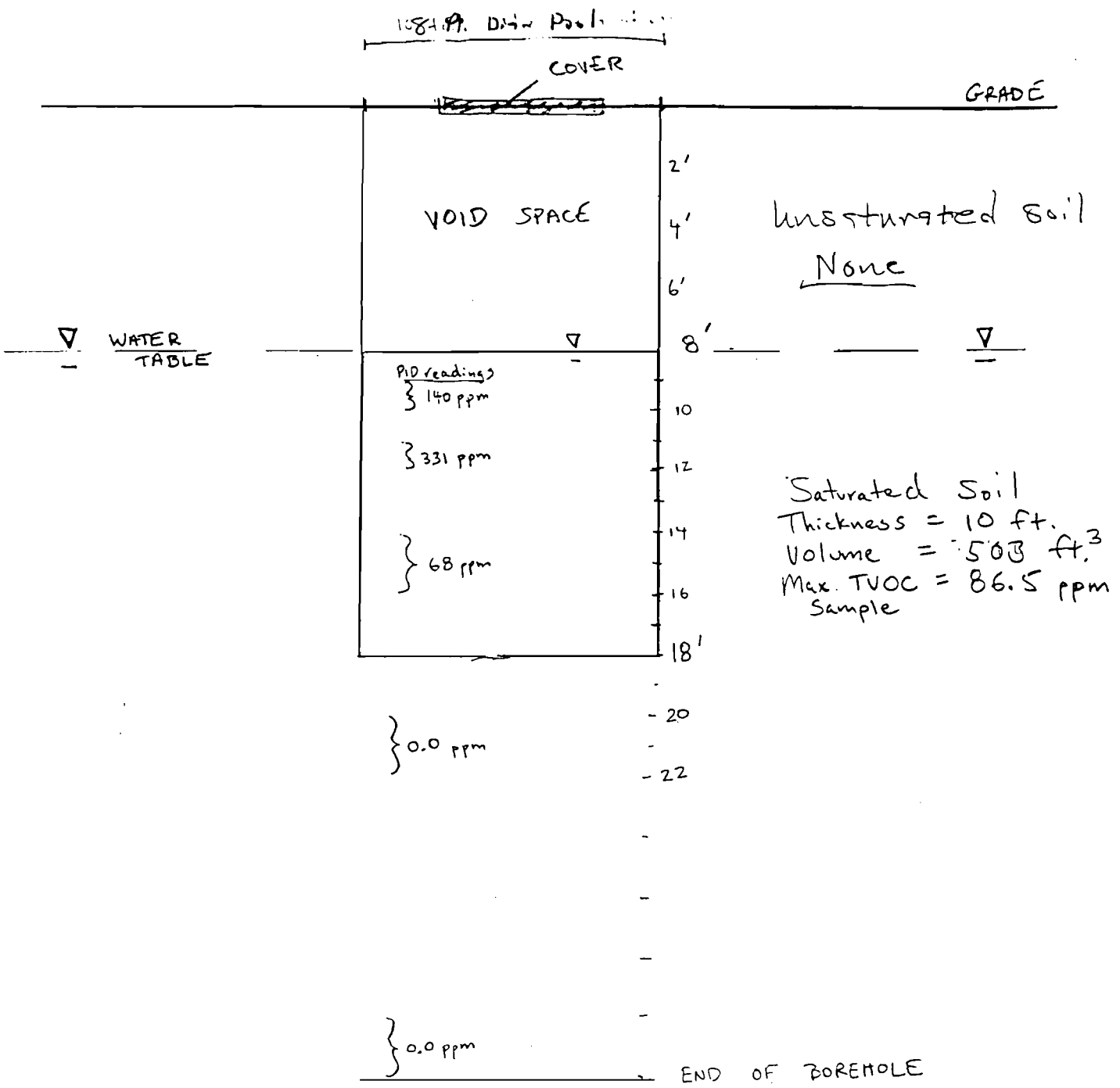
GP-9



Unsaturated Soil

None

Saturated Soil
Thickness = 10 ft.
Volume = 503 ft.^{3}
Max. TVOC = 86.5 ppm
Sample

CAMP DRESSER & McKEE

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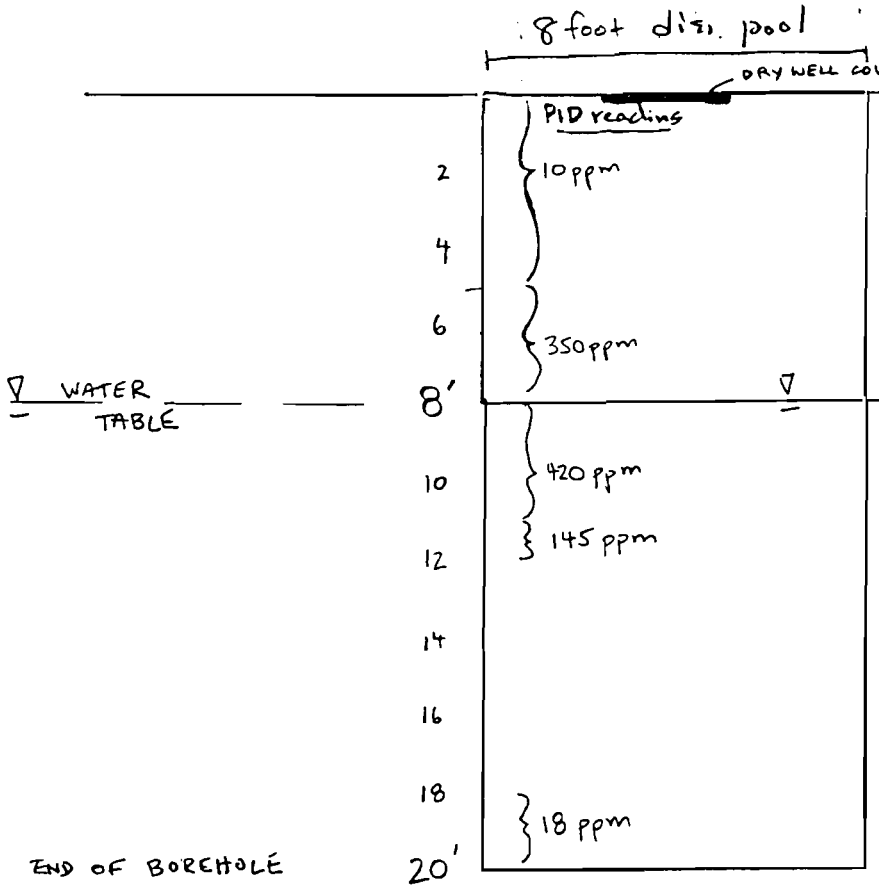
GP-18



Unsaturated Soil
Thickness = 8 feet.
Volume = 402 ft^3

Max TVOC Sample = 3.42 ppm

Saturated Soil
Thickness = 12 feet
Volume = 603 ft^3

Max TVOC Sample = NA

CAMP DRESSER & McKEE

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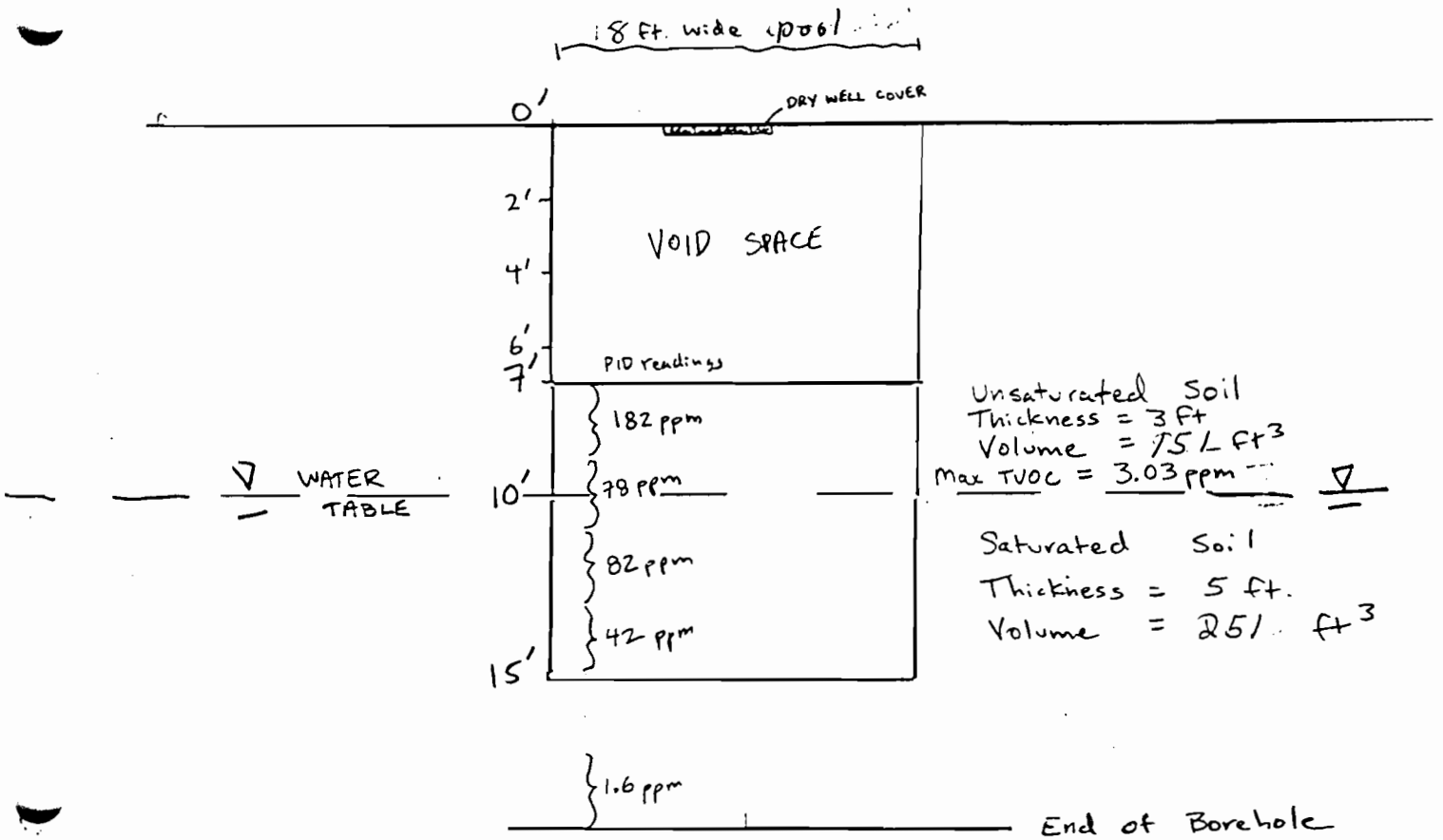
GP-19



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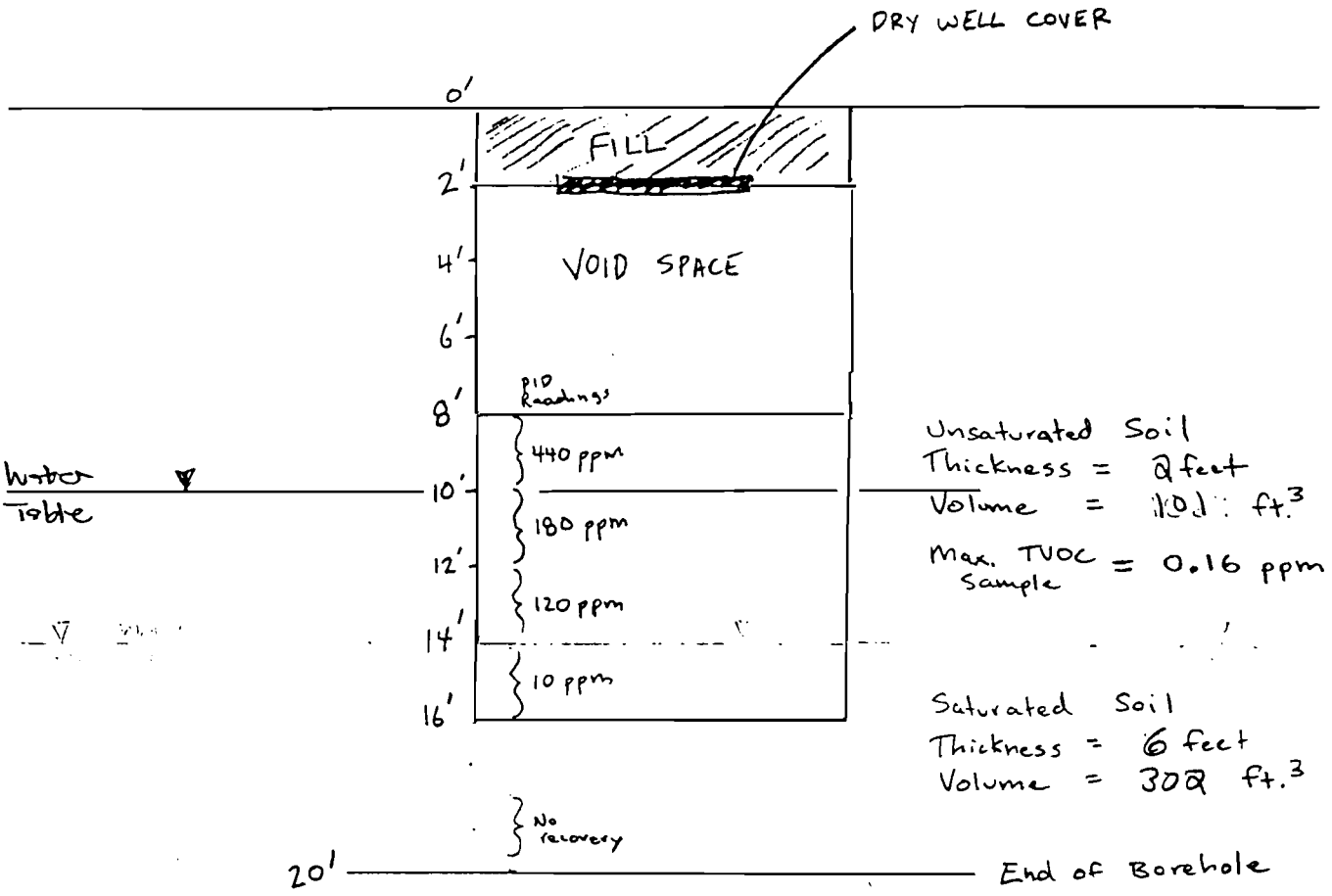
GP-20



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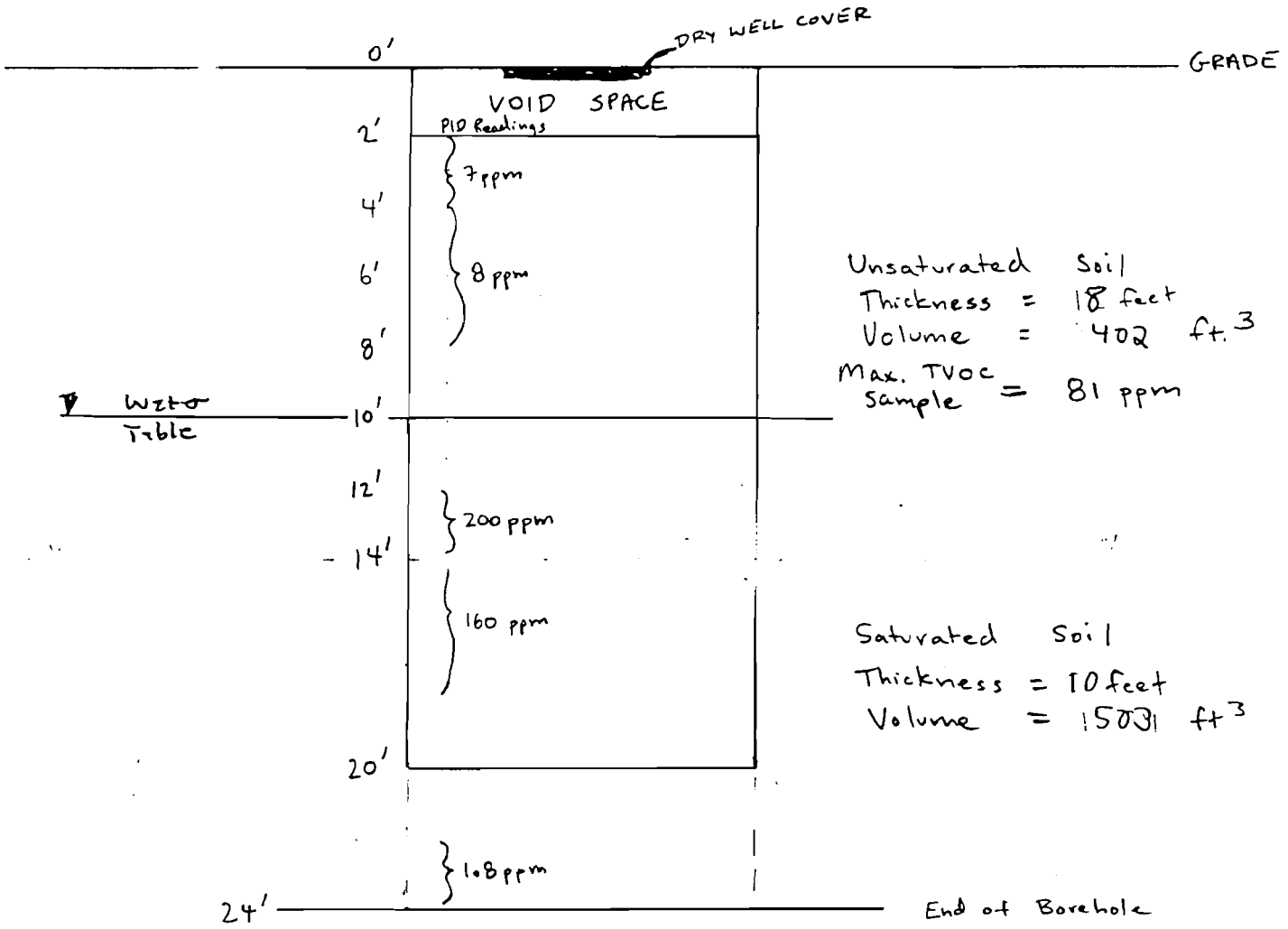
GP-21

8 ft. Dig. Pool



Unsaturated Soil
Thickness = 18 feet
Volume = 402 ft.^{3}
Max. TVOC Sample = 81 ppm

Saturated Soil
Thickness = 10 feet
Volume = 1503 ft^3

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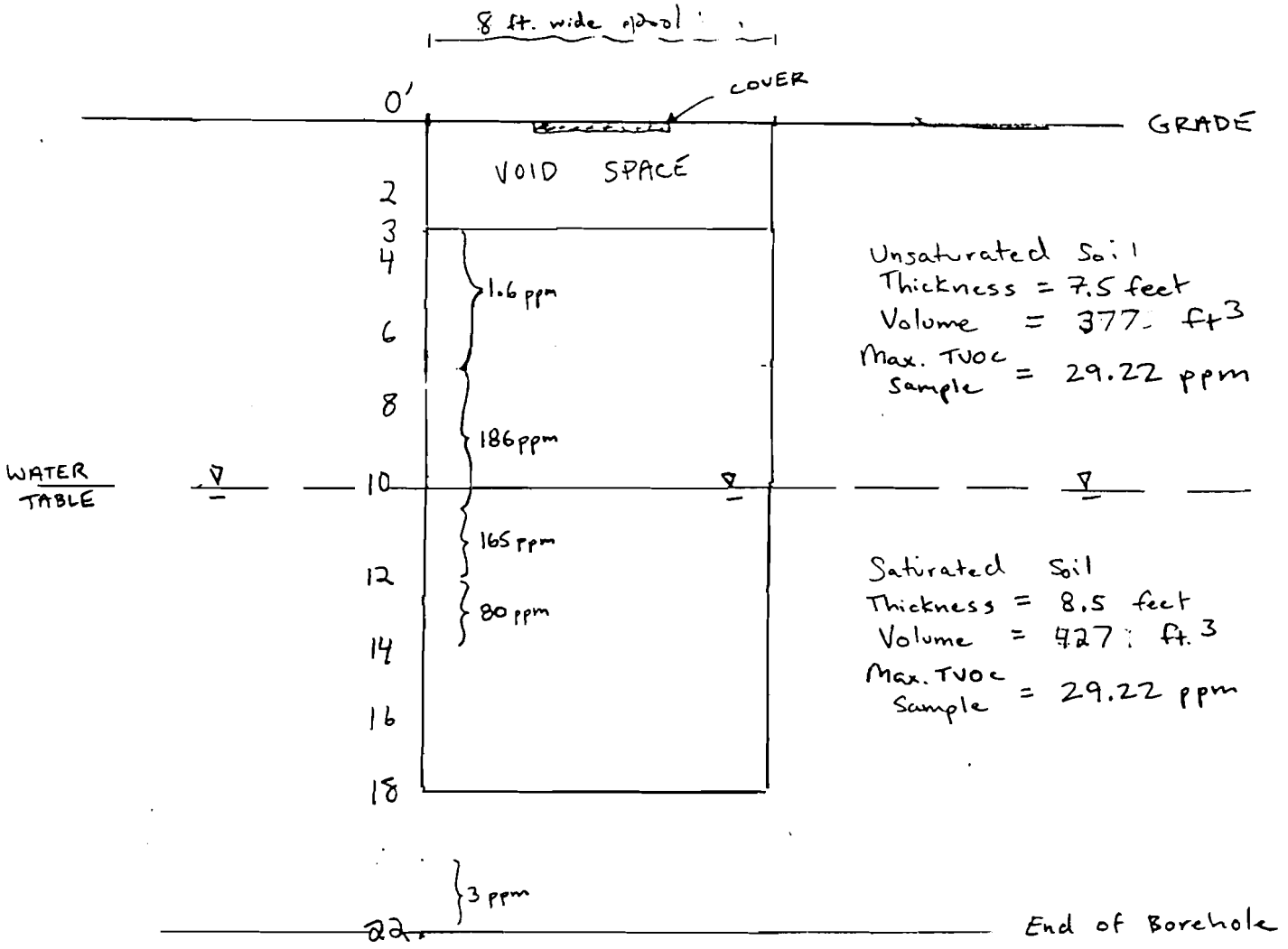
DETAIL _____ CHECKED BY _____ PAGE NO. _____

GP-23



Unsaturated Soil
Thickness = 7.5 feet
Volume = 377 ft^3
Max. TVOC Sample = 29.22 ppm

Saturated Soil
Thickness = 8.5 feet
Volume = 427 ft.^{3}
Max. TVOC Sample = 29.22 ppm

CAMP DRESSER & McKEE

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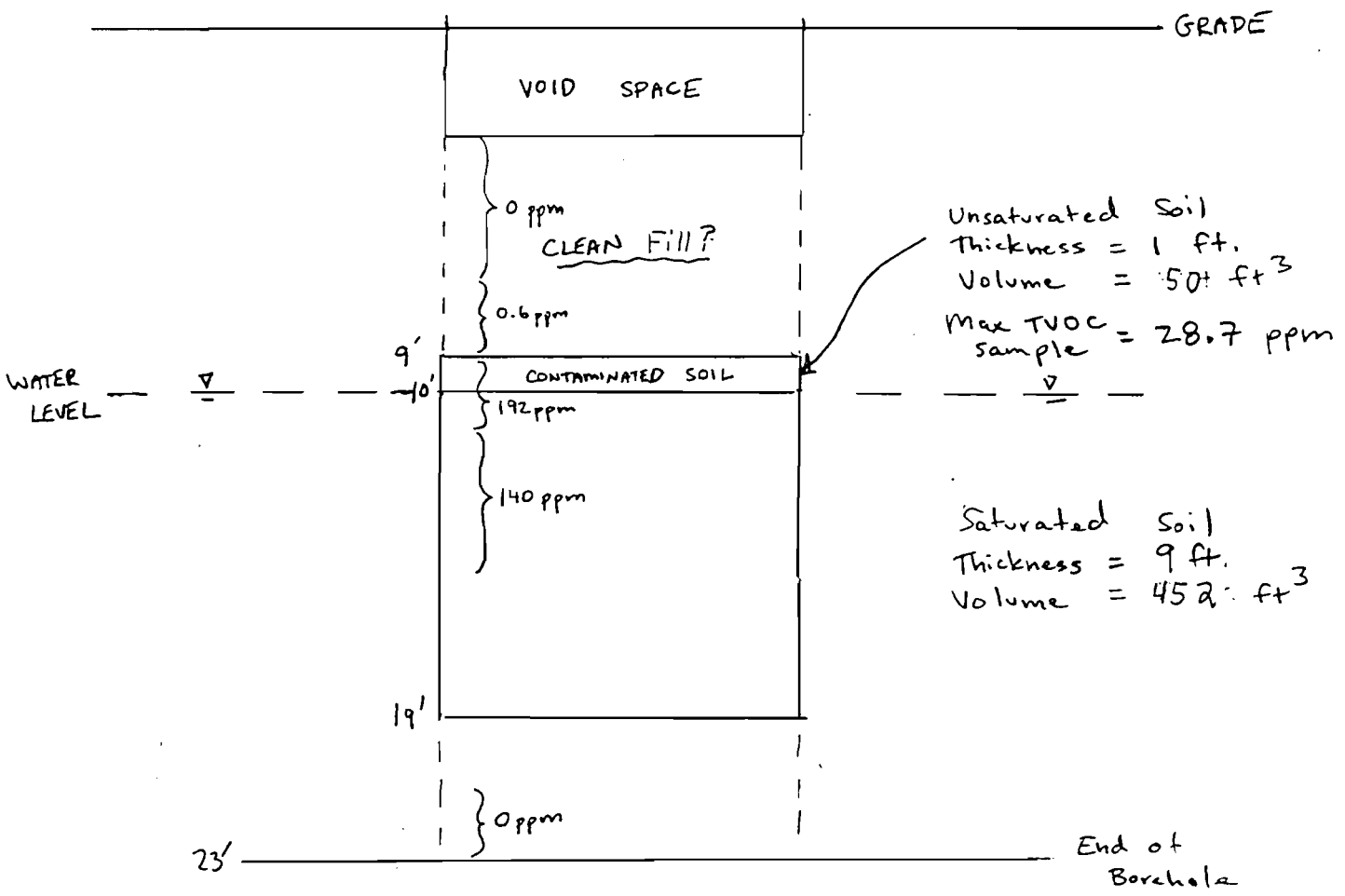
DETAIL _____ CHECKED BY _____ PAGE NO. _____

GP-24



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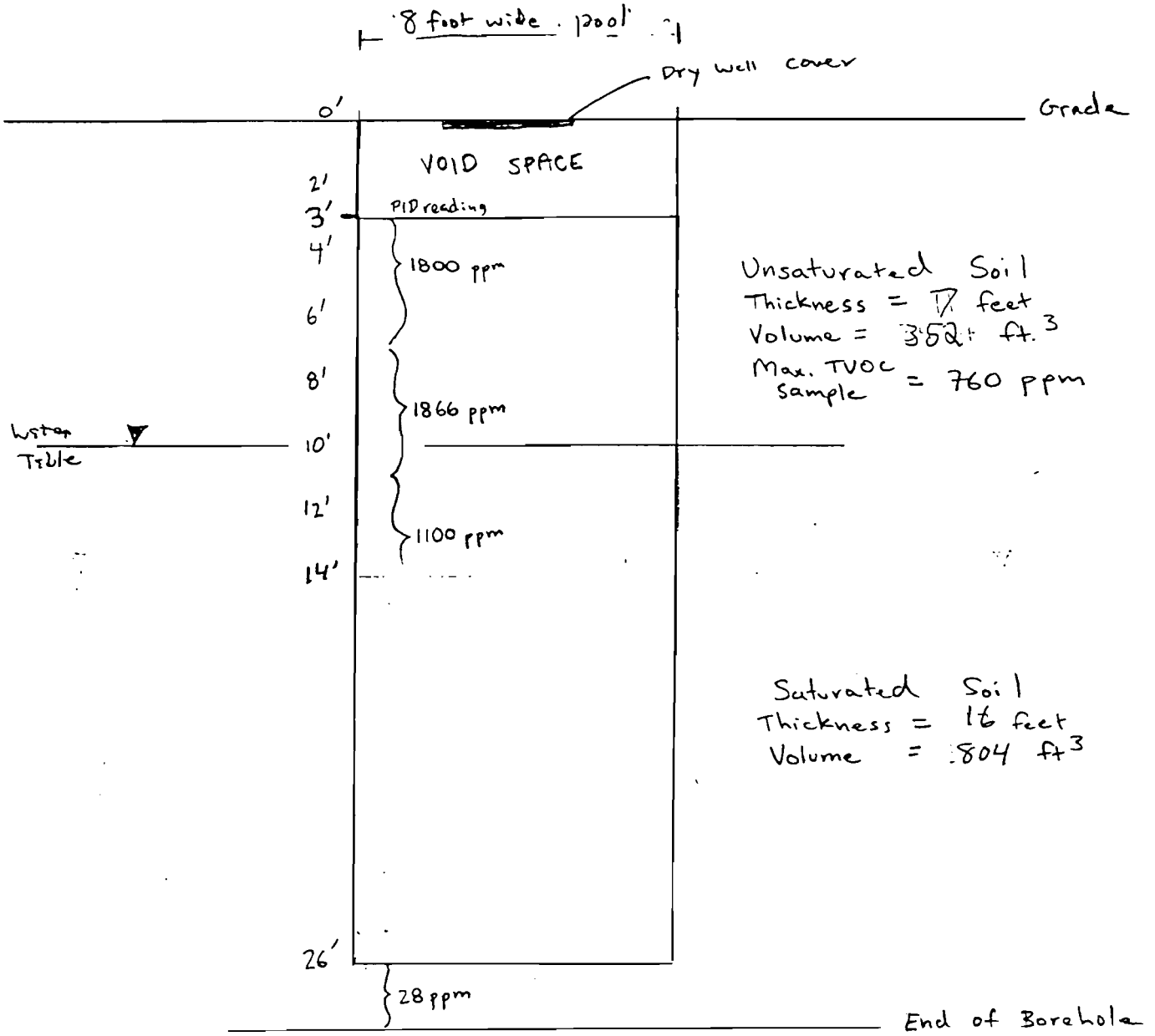
DETAIL _____ CHECKED BY _____ PAGE NO. _____

GP-22



Unsaturated Soil
Thickness = 12 feet
Volume = 352+ ft.^{3}
Max. TVOC Sample = 760 ppm

Saturated Soil
Thickness = 16 feet
Volume = 804 ft.^{3}