

United States Army
Fort Monmouth, New Jersey

**Underground Storage Tank
Closure and Site Investigation
Report**

***Building 914
Main Post-West Area***

**NJDEP UST Registration No. 81533-152
Dicar No. 98-03-18-0902-12**

March 2000

**UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT**

BUILDING 914

**MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 81533-152**

MARCH 2000

PREPARED FOR:

**UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
BUILDING 167
FORT MONMOUTH, NJ 07703**

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PROJECT NO. 4435-043

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EXECUTIVE SUMMARY

UST Closure

On March 18, 1998, a steel underground storage tank (UST) was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) closure procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-152 (Fort Monmouth ID No. 914), was located south of Building 914. UST No. 0081533-152 was a 1,080-gallon #2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes. Numerous holes were noted in the UST. Soils at the location of the holes were dark in color and appeared to be contaminated. Based on the inspection of the UST, Directorate of Public Works (DPW) concluded that a discharge was associated with this UST. The NJDEP hotline was notified and the case was assigned DICAR No. 98-03-18-0902-12.

Approximately 62 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 929.34 mg/kg, except for sample E that had a TPHC concentration of 8,078.82 mg/kg. The sample locations could not be further remediated due to a sanitary sewer main. A VOA analysis (EPA Method 8260) was completed on sample E and all known compounds searched for in the analysis were below the NJDEP soil cleanup criteria. Groundwater was encountered at 4.0 feet below ground surface and free product was observed on groundwater.

All post excavation soil samples collected from the UST excavation at Building 914 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition.

In response to the observation of free product on groundwater, two (2) groundwater samples were collected at Building 914. On October 30, 1998, and November 30, 1998, Building 914 was sampled for volatile organic compounds calibrated for xylene plus 15

tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's).

All groundwater analytical results were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment of UST No. 81533-152 at Building 914.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-152, was closed at Building 914 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on March 18, 1998. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,080-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-152 complied with all applicable Federal, State, and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP approved Decommissioning/Closure Plan were posted onsite for inspection. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 81533-152 proceeded under the approval of the NJDEP Bureau of Federal Case Management (NJDEP-BFCM). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 81533-152 are included in Appendices A and B, respectively.

After removal of the potentially contaminated soil, the site was assessed. Based on inspecting the UST, field screening of remaining subsurface soils, and reviewing analytical results of soil samples and groundwater samples, the DPW has concluded that no significant historical discharges are associated with the UST or associated piping.

This UST Closure and Site Investigation Report has been prepared by Versar, to assist the U.S. Army DPW in complying with the NJDEP regulations. The applicable regulations at the date of closure were the *Interim Closure Requirements for Underground Storage Tank Systems* (N.J.A.C. 7:14B-1 et seq. October 1990 and revisions dated November 1, 1991).

This report was prepared using information collected at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling and groundwater investigation, are presented in the final section of this report.

1.2 SITE DESCRIPTION

Building 914 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-152 was located south of Building 914 and appurtenant copper piping ran approximately twelve (12) feet north from the excavation to Building 914. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 914. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The Main Post, Charles Wood, and the Evans areas are located in what may be referred to as the Outer Coastal Plain subprovince, or the Outer Lowlands.

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, and gravel. These formations typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapecza, 1989). These sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

The formations record several major transgressive/regressive cycles and contain units which are generally thicker to the southeast and reflect a deeper water environment. More than 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are usually aquifers (e.g., Englishtown and Kirkwood Formations, and the Cohansey Sand) while the transgressive deposits act as confining units (e.g., the Merchantville, Marshalltown, and Navesink Formations). The individual thicknesses for these units vary greatly (i.e., from several feet to several hundred feet). The Coastal Plain deposits thicken to the southeast from the Fall Line to greater than 6,500 feet in Cape May County (Brown and Zapecza, 1990).

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey, medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

The Tinton sand conformably overlies the Red Bank Sand and ranges from a clayey medium to very coarse grained feldspathic quartz and glauconite sand to a glauconitic coarse sand. The color varies from dark yellowish orange or light brown to moderate brown and from light olive to grayish olive. Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard).

Hydrogeology

The water table aquifer in the Main Post area is identified as part of the "composite confining units," or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation.

Based on records of wells drilled in the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank and Tinton Sands may produce 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

Due to the proximity of the Atlantic Ocean to Fort Monmouth, shallow groundwater may be tidally influenced and may flow toward creeks and brooks as the tide goes out, and away from creeks and brooks as the tide comes in. However, an abundance of clay lenses and sand deposits were noted in borings installed throughout Fort Monmouth. Therefore, the direction of shallow groundwater should be determined on a case-by-case basis.

Shallow groundwater is locally influenced within the Main Post area by the following factors:

- tidal influence (based on proximity to the Atlantic Ocean, rivers, and tributaries)
- topography
- nature of the fill material within the Main Post area
- presence of clay and silt lenses in the natural overburden deposits
- local groundwater recharge areas (i.e., streams, lakes)

Due to the fluvial nature of the overburden deposits (i.e., sand and clay lenses), shallow groundwater flow direction is best determined on a case-by-case basis. This is consistent with lithologies observed in borings installed within the Main Post area, which primarily consisted of fine-to-medium grained sands, with occasional lenses or laminations of gravel silt and/or clay.

Building 914 is located approximately 600 feet south of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 914 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involved with, or were affected by, the decommissioning of the UST system were minimized. All areas, which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- The contractor performing the closure prior to excavation activities identified all underground obstructions (utilities, etc.).
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 250 gallons of liquid from the UST and its associated piping were pumped directly into a Casie Protank truck where it was then transported to Casie Ecology Oil Salvage, Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Vineland, NJ. Refer to Appendix C for a copy of the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. Numerous holes were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Soils were stained and appeared to be contaminated. Approximately 62 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 929.34 mg/kg, except for sample E that had a TPHC concentration of 8,078.82 mg/kg. The sample locations could not be further remediated due to a sanitary sewer main. A VOA analysis (EPA Method 8260) was completed on sample E and all known compounds searched for in the analysis were below the NJDEP soil cleanup criteria. Groundwater was encountered at 4.0 feet below ground surface and free product was observed on groundwater.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The tank was transported in compliance with all applicable regulations and laws to Mazza and Sons, Inc., Metal Recyclers. Please refer to Appendix D for the UST Disposal Certificate and Appendix G for photographs of the tank.

The UST was labeled prior to transport with the following information:

- Site of origin
- Contact person
- NJDEP UST Facility ID number
- Former contents
- Destination site
- Date

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, approximately 62 cubic yards of potentially contaminated soil were removed from the UST excavation. All potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to the soil staging area. Soils that did not exhibit signs of contamination were used as backfill following the removal of the UST. Groundwater was encountered at 4.0 feet below ground surface and free product was observed on groundwater.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory, a NJDEP-certified testing laboratory. All sampling was performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator according to the methods described in the NJDEP *Field Sampling Procedures Manual* (1992). Sampling frequency and parameters analyzed complied with the NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (October 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. The Fort Monmouth DPW Environmental Office maintains all records of the Site Investigation activities.

The following Parties participated in Closure and Site Investigation Activities:

- Subsurface Evaluator: Charles Appleby
Employer: U.S. Army, Fort Monmouth
Phone Number: (908) 532-0989
NJDEP Certification No.: 002056
- Analytical Laboratory: U.S. Army Fort Monmouth Environmental laboratory
Contact Person: Daniel K. Wright
Phone Number: (908) 532-4359
NJDEP Company Certification No.: 13461
- Hazardous Waste Hauler: Casie Protank
Contact Person: Bob Corsiglia
Phone Number: (609) 696-4401
NJDEP Company Certification No.: 16931

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Approximately 62 cubic yards of potentially petroleum contaminated soil were removed from the excavated area and transported to the Fort Monmouth petroleum contaminated soil holding area. Groundwater was encountered at 4.0 feet below ground surface and free product was observed on groundwater.

2.3 SOIL SAMPLING

On April 8, 1998, following the removal of the UST, associated piping, and approximately 62 cubic yards of potentially contaminated soil, post-excavation soil samples A, B, C, D, E, F, G, H, I, and DUP B were collected from a total of nine (9) locations of the UST excavation. Excavation floor samples A, B, and DUP B were collected at a depth of 7.5 feet bgs. Sidewall samples C, D, E, F, G, and H were collected at a depth of 4.5 feet bgs. Piping sample I was collected along the former piping length of the excavation, which was approximately twelve (12) feet in length. The piping sample was collected at a depth of 1.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids. Based on preliminary TPHC results, a VOA analysis (EPA Method 8260) was completed on sample E.

U.S. Army personnel in accordance with the NJDEP Technical Requirements and the NJDEP Field Sampling Procedures Manual performed the site assessment. A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using NJDEP *Field Sampling Procedures Manual* (1992) standard sampling procedures. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

2.4 GROUNDWATER SAMPLING

On October 30, 1998, and November 30, 1998, Building 914 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation*. Refer to Appendix F for the field sampling documentation.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected on April 8, 1998 from a total of nine (9) locations. All samples were analyzed for TPHC and total solids. In addition, sample E was analyzed for VOA. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling locations are shown on Figure 4. The VOA analysis for sample E was compared to the NJDEP residential direct contact soil cleanup criteria and is included as Table 3. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected on April 8, 1998, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria.

3.2 GROUNDWATER SAMPLING RESULTS

No compounds were detected in the samples collected from Building 914 on October 30, 1998 and November 30, 1998.

A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 4 and the groundwater sampling locations are shown on Figure 5. The analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey.

Groundwater samples collected on October 30, 1998, and November 30, 1998, were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 914 were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soil with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected at Building 914 on October 30, 1998, and November 30, 1998, groundwater quality at Building 914 was either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment of UST No. 81533-152 at Building 914.

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TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 914, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 1 of 2

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
B	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
F	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
H	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
I	4/8/98	4/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUP B	4/8/98	4/9/98	Soil	Post-excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 914, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 2 of 2

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
4092.01	10/30/98	11/2/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4092.02	10/30/98	11/2/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4018.05	11/30/98	12/1/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4018.06	11/30/98	12/1/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:

*VOCs: Volatile Organic Compounds plus 15 tentatively identified compounds

*SVOCs: Semivolatile organic compounds plus 15 tentatively identified compounds

**PPNDP: Passively Placed Narrow Diameter Point

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 914, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

Page 1 of 2

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/7.5=	3464.01	4/8/98	4/9/98	Total Solid	--	--	85.52 %	--	--
				TPHC	175	yes	ND	10,000	No
B/7.5=	3464.02	4/8/98	4/9/98	Total Solid	--	--	81.43 %	--	--
				TPHC	192	Yes	ND	10,000	No
C/4.5=	3464.03	4/8/98	4/9/98	Total Solid	--	--	79.42 %	--	--
				TPHC	189	Yes	ND	10,000	No
D/4.5=	3464.04	4/8/98	4/9/98	Total Solid	--	--	85.04 %	--	--
				TPHC	179	yes	ND	10,000	No
E/4.5=	3464.05	4/8/98	4/9/98	Total Solid	--	--	85.73 %	--	--
				TPHC	180	yes	8078.82	10,000	No
F/4.5=	3464.06	4/8/98	4/9/98	Total Solid	--	--	85.55 %	--	--
				TPHC	173	yes	929.34	10,000	No
G/4.5=	3464.07	4/8/98	4/9/98	Total Solid	--	--	88.29 %	--	--
				TPHC	175	Yes	570.59	10,000	No
H/4.5=	3464.08	4/8/98	4/9/98	Total Solid	--	--	92.48 %	--	--
				TPHC	160	yes	358.00	10,000	No
I/1.0=	3464.09	4/8/98	4/9/98	Total Solid	--	--	86.49 %	--	--
				TPHC	176	yes	ND	10,000	No
DUPB/7.5=	3464.10	4/8/98	4/9/98	Total Solid	--	--	82.82 %	--	--
				TPHC	189	yes	ND	10,000	No

Note:

* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

ND Not detected above stated method detection limit

TPHC Total Petroleum Hydrocarbons

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) SOILDate Sampled: 4/8/98Location: 914Lab Sample ID: 3464.05(SAMPLE E)

CONCENTRATION UNITS:
(ug/L or ug/Kg)

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
107028	Acrolein	2500	U	NA	NA
107131	Acrylonitrile	2500	U	1000	5000
75650	tert-Butyl alcohol	4700	U	NA	NA
1634044	Methyl-tert-Butyl ether	1100	U	NA	NA
108203	Di-isopropyl ether	730	U	NA	NA
	Dichlorodifluoromethane	1500	U	NA	NA
74-87-3	Chloromethane	360	U	520000	1000000(d)
75-01-4	Vinyl Chloride	1100	U	2000	7000
74-83-9	Bromomethane	730	U	79000	1000000(d)
75-00-3	Chloroethane	1100	U	NA	NA
75-69-4	Trichlorofluoromethane	730	U	NA	NA
75-35-4	1, 1-Dichloroethene	360	U	8000	150000
67-64-1	Acetone	730	U	1000000(d)	1000000(d)
75-15-0	Carbon Disulfide	360	U	NA	NA
75-09-2	Methylene Chloride	730	U	49000	210000
156-60-5	trans-1,2-Dichloroethene	730	U	1000000(d)	1000000(d)
75-35-3	1,1-Dichloroethane	360	U	570000	1000000(d)
108-05-4	Vinyl Acetate	1100	U	NA	NA
78-93-3	2-Butanone	1100	U	1000000(d)	1000000(d)
156-59-2	cis-1,2-Dichloroethene	360	U	79000	1000000(d)
67-66-3	Chloroform	360	U	19000(k)	28000(k)
75-55-6	1,1,1-Trichloroethane	360	U	NA	NA
56-23-5	Carbon Tetrachloride	730	U	2000(k)	4000(k)
71-43-2	Benzene	360	U	3000	13000
107-06-2	1,2-Dichloroethane	730	U	6000	24000

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) SOILDate Sampled: 4/8/98Location: 914Lab Sample ID: 3464.05(SAMPLE E)

CONCENTRATION UNITS:
(ug/L or ug/Kg)

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
79-01-6	Trichloroethene	360	U	23000	54000(k)
78-87-5	1, 2-Dichloropropane	360	U	10000	43000
75-27-4	Bromodichloromethane	360	U	11000(g)	46000(g)
110-75-8	2-Chloroethyl vinyl ether	730	U	NA	NA
10061-01-5	cis-1,3-Dichloropropene	360	U	NA	NA
108-10-1	4-Methyl-2-Pentanone	730	U	1000000(d)	1000000(d)
108-88-3	Toluene	360	U	1000000(d)	1000000(d)
10061-02-6	trans-1,3-Dichloropropene	730	U	NA	NA
79-00-5	1,1,2-Trichloroethane	730	U	22000	420000
127-18-4	Tetrachloroethene	360	U	4000(k)	6000(k)
591-78-6	2-Hexanone	730	U	NA	NA
126-48-1	Dibromochloromethane	730	U	NA	NA
108-90-7	Chlorobenzene	360	U	37000	680000
100-41-4	Ethylbenzene	730		1000000(d)	1000000(d)
1330-20-7	m+p-Xylenes	2900		NA	NA
1330-20-7	o-Xylene	730	U	NA	NA
100-42-5	Styrene	730	U	23000	97000
75-25-2	Bromoform	730	U	86000	370000
79-34-5	1,1,2,2-Tetrachloroethane	730	U	34000	70000(k)
541-73-1	1,3-Dichlorobenzene	1100	U	5100000	10000000(c)
106-46-7	1,4-Dichlorobenzene	1100	U	570000	10000000(c)
95-50-1	1,2-Dichlorobenzene	1100	U	5100000	10000000(c)

SOIL CLEANUP CRITERIA (MG/KG)

(LAST REVISED-7/11/96)

- (A) CRITERIA ARE HEALTH BASED USING AN INCIDENTAL INGESTION EXPOSURE PATHWAY EXCEPT WHERE NOTED BELOW.**
- (B) CRITERIA ARE SUBJECT TO CHANGE BASED ON SITE SPECIFIC FACTORS (E.G., AQUIFER CLASSIFICATION, SOIL TYPE, NATURAL BACKGROUND, ENVIRONMENTAL IMPACTS, ETC.)**
- (C) HEALTH BASED CRITERION EXCEEDS THE 10,000 MG/KG MAXIMUM FOR TOTAL ORGANIC CONTAMINANTS.**
- (D) HEALTH BASED CRITERION EXCEEDS THE 1000 MG/KG MAXIMUM FOR TOTAL VOLATILE ORGANIC CONTAMINANTS**
- (E) CLEANUP STANDARD PROPOSAL WAS BASED ON NATURAL BACKGROUND.**
- (F) HEALTH BASED CRITERION IS LOWER THAN ANALYTICAL LIMITS; CLEANUP CRITERION BASED ON PRACTICAL QUANTITATION LEVEL.**
- (G) CRITERION HAS BEEN RECALCULATED BASED ON NEW TOXICOLOGICAL DATA.**
- (H) THE IMPACT TO GROUND WATER VALUES FOR INORGANIC CONSTITUENTS WILL BE DEVELOPED BASED UPON SITE SPECIFIC CHEMICAL AND PHYSICAL PARAMETERS.**
- (I) ORIGINAL CRITERION WAS INCORRECTLY CALCULATED AND HAS BEEN RECALCULATED.**
- (J) TYPOGRAPHICAL ERROR.**
- (K) CRITERIA BASED ON INHALATION EXPOSURE PATHWAY, WHICH YIELDED A MORE STRINGENT CRITERION THAN THE INCIDENTAL INGESTION EXPOSURE PATHWAY.**
- (L) NEW CRITERION DERIVED USING METHODOLOGY IN THE BASIS AND BACKGROUND DOCUMENT.**
- (M) CRITERION BASED ON ECOLOGICAL (PHYTOTOXICITY) EFFECTS.**
- (N) LEVEL OF THE HUMAN HEALTH BASED CRITERION IS SUCH THAT EVALUATION FOR POTENTIAL ENVIRONMENTAL IMPACTS ON A SITE BY SITE BASIS IS RECOMMENDED.**
- (O) LEVEL OF THE CRITERION IS SUCH THAT EVALUATION FOR POTENTIAL ACUTE EXPOSURE HAZARD IS RECOMMENDED.**

- (P) CRITERION BASED ON THE USEPA INTEGRATED EXPOSURE UPTAKE BIOKINETIC (IEUBK) MODEL UTILIZING THE DEFAULT PARAMETERS. THE CONCENTRATION IS CONSIDERED TO PROTECT 95% OF TARGET POPULATION (CHILDREN) AT A BLOOD LEVEL OF 10 UG/DL.
- (Q) CRITERIA WAS DERIVED FROM A MODEL DEVELOPED BY THE SOCIETY FOR ENVIRONMENTAL GEOCHEMISTRY AND HEALTH (SEGH) AND WAS DESIGNED TO BE PROTECTIVE FOR ADULTS IN THE WORKPLACE.
- (R) INSUFFICIENT INFORMATION AVAILABLE TO CALCULATE IMPACT TO GROUND WATER CRITERIA.

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

X

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 10/30/98 Location: 914 Lab Sample ID: 4018.05(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzene	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET



Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 10/30/98 Location: 914 Lab Sample ID: 4018.05(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

X

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/30/98Location: 914Lab Sample ID: 4018.06(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET



Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 10/30/98 Location: 914 Lab Sample ID: 4018.06(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

X

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 11/30/98 Location: 914 Lab Sample ID: 4092.01(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
Date Sampled: 11/30/98 Location: 914 Lab Sample ID: 4092.01(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

X

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 914Lab Sample ID: 4092.02(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET



Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 11/30/98 Location: 914 Lab Sample ID: 4092.02(Bldg 914)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

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FIGURES

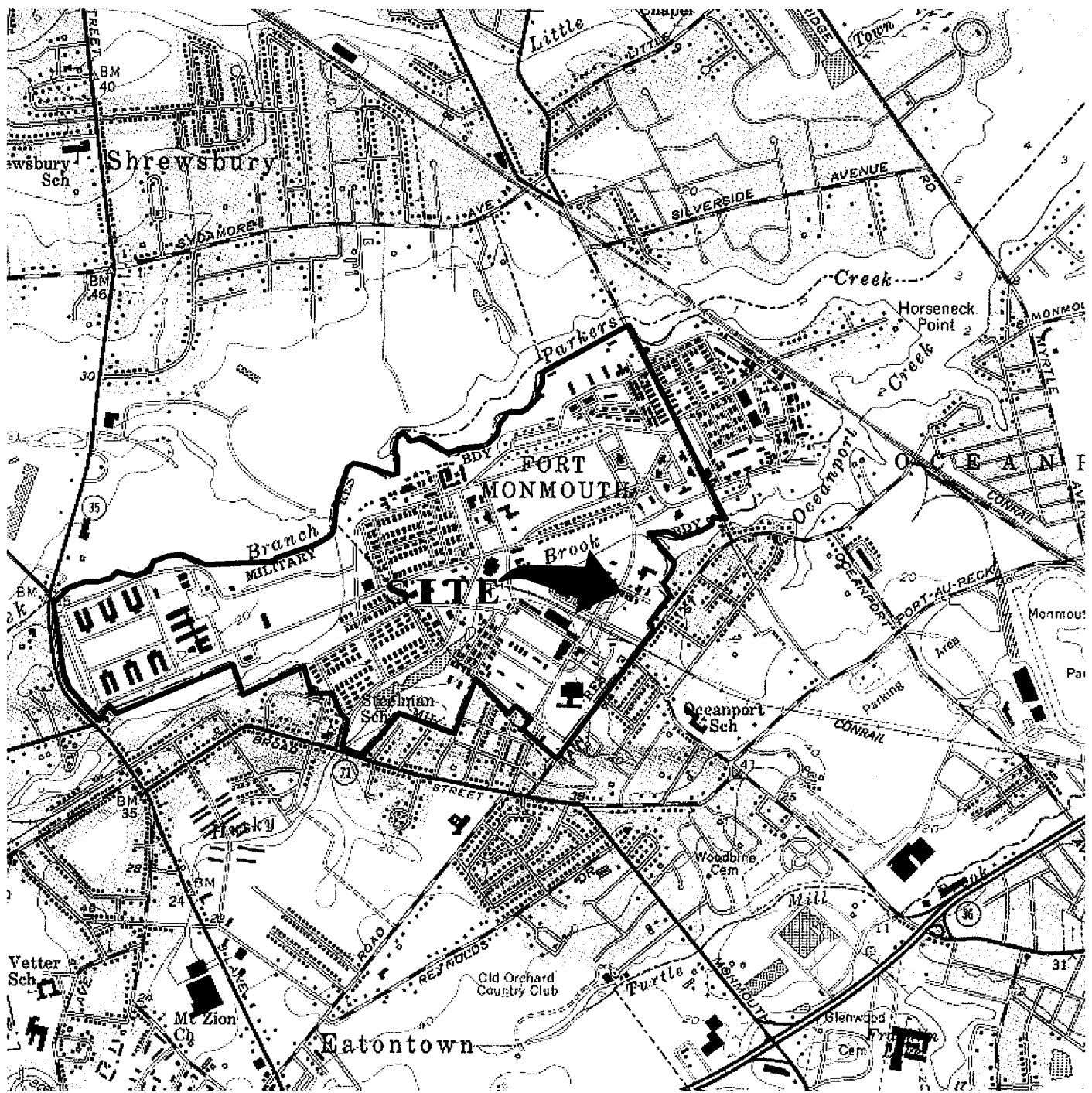


FIGURE 1

LOCATION MAP
 Building 914
 Main-Post West
 Fort Monmouth Army Base
 Monmouth County, NJ

VERSAR
 Engineers, Managers, Scientists, & Planners
 Bristol, PA

Scale: 1" = 2000'

Date: March 1998

LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822



QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

Geologic Map of New Jersey

SEDIMENTARY ROCKS

CENOZOIC

-  Holocene: sand
-  Tertiary: sand, silt, clay

MESOZOIC

-  Cretaceous: sand, silt, clay
-  Jurassic: siltstone, shale, sandstone
-  Triassic: siltstone, shale, sandstone

PALEOZOIC

-  Devonian: conglomerate, sandstone,
-  Silurian: conglomerate, sandstone, shale, limestone
-  Ordovician: shale, limestone
-  Cambrian: limestone, sandstone

IGNEOUS AND METAMORPHIC ROCKS

MESOZOIC

-  Jurassic: basalt
-  Jurassic: diabase

PRECAMBRIAN

-  marble
-  gneiss, granite

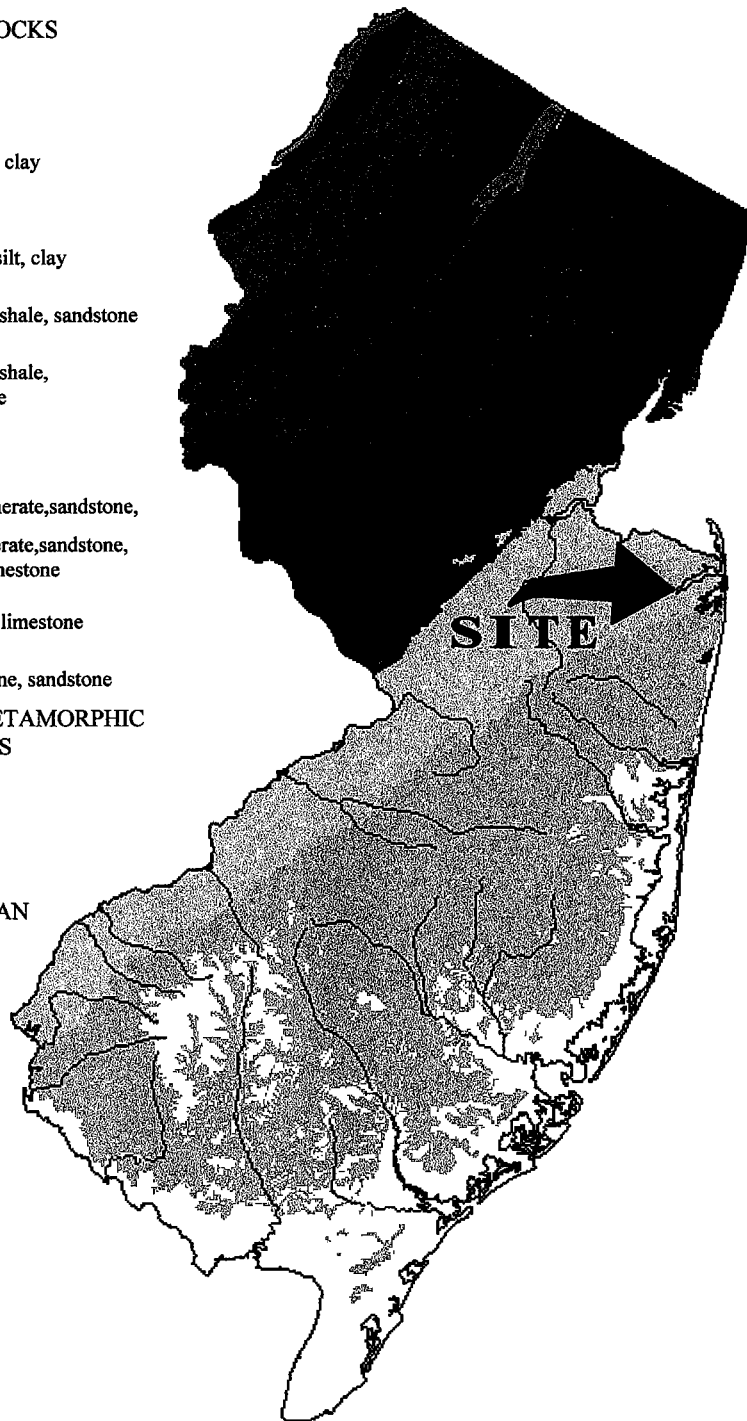


FIGURE 1A
GEOLOGICAL MAP
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
 Engineers, Managers, Scientists & Planners
 Bristol, Pennsylvania

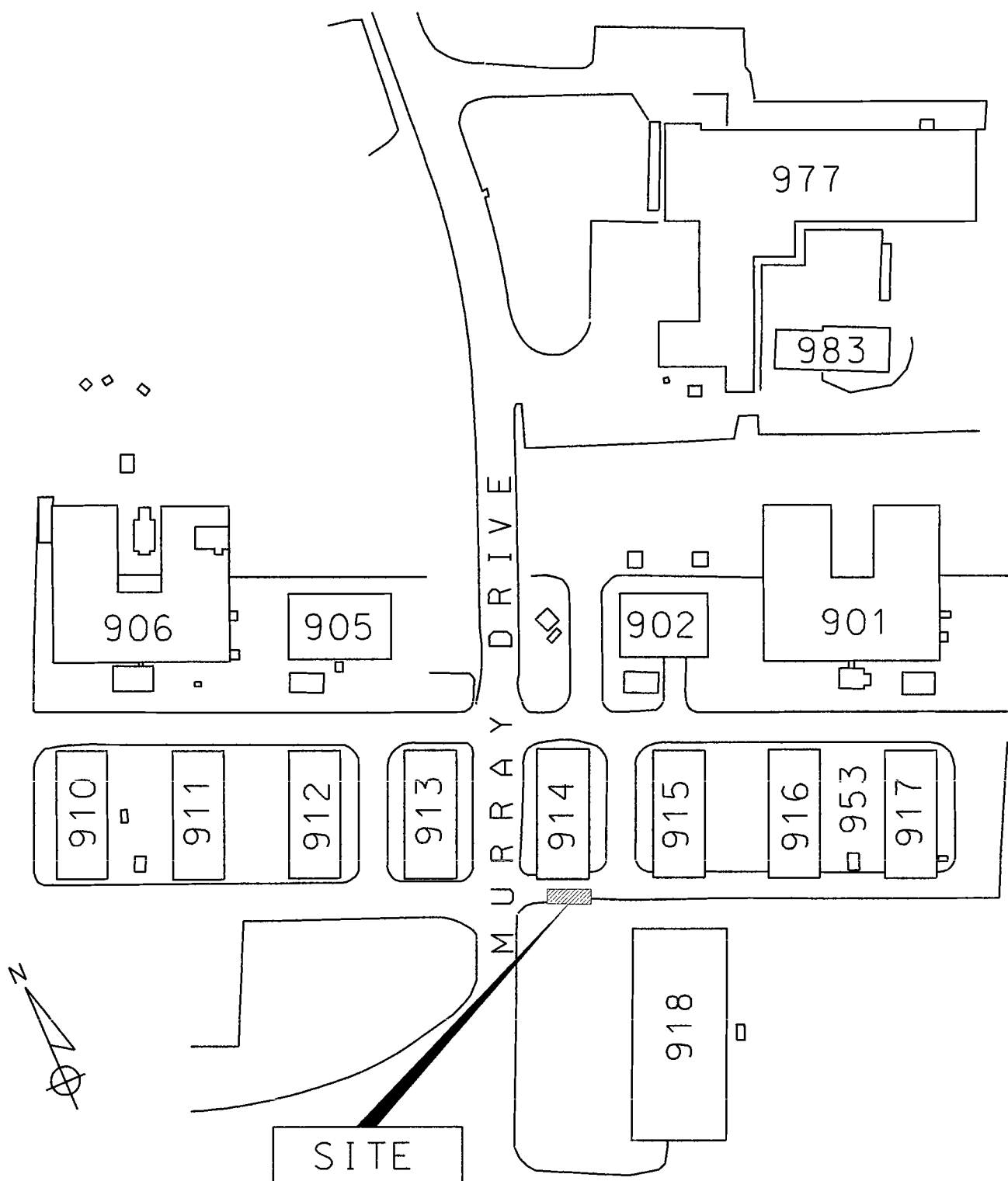


FIGURE 2
 SITE MAP
 BUILDING 914
 FORT MONMOUTH ARMY BASE
 MONMOUTH COUNTY, NJ

VERSAR
 ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
 BRISTOL, PA.

SCALE: 1"=100'

DATE: MARCH 1998

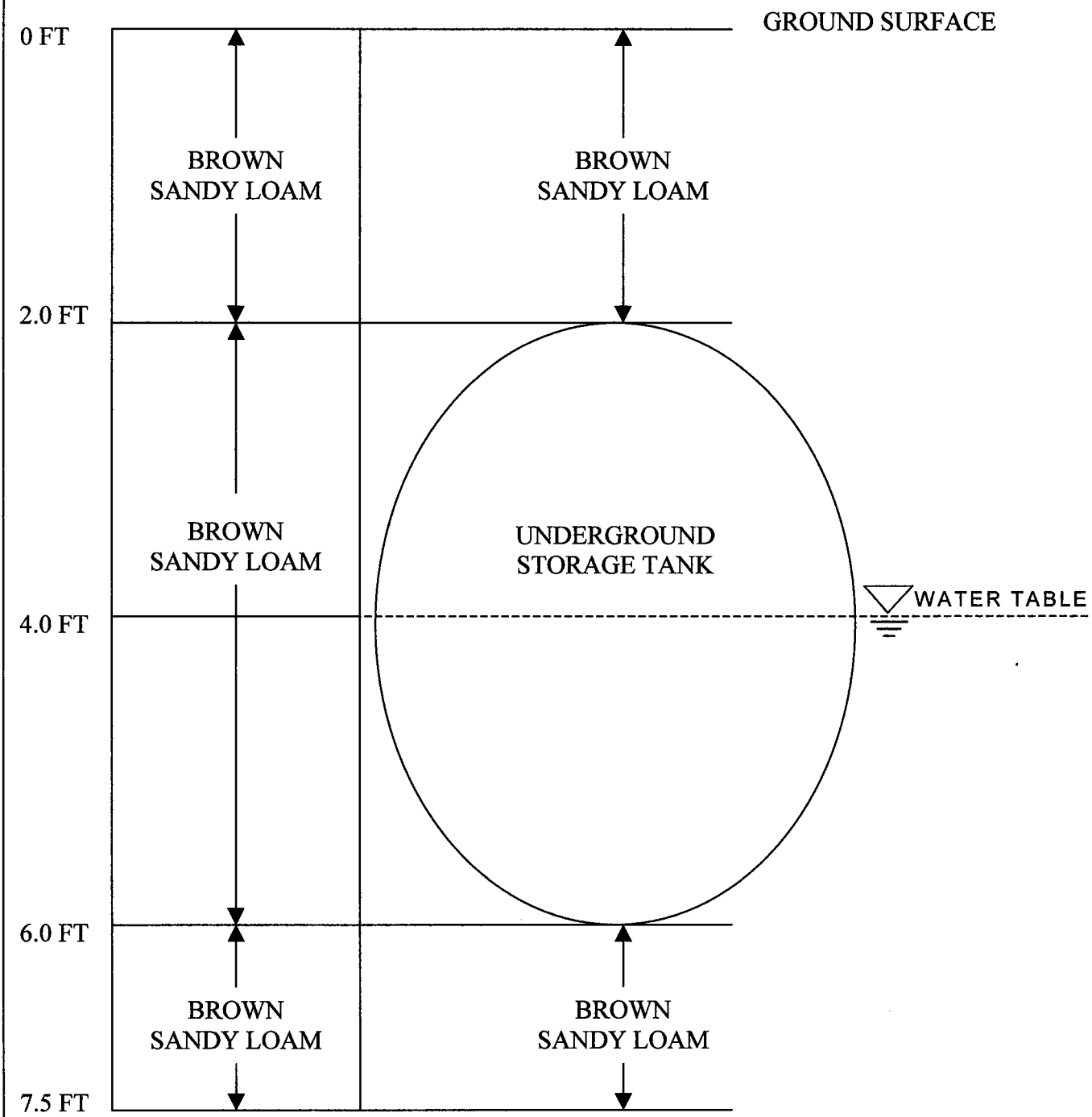
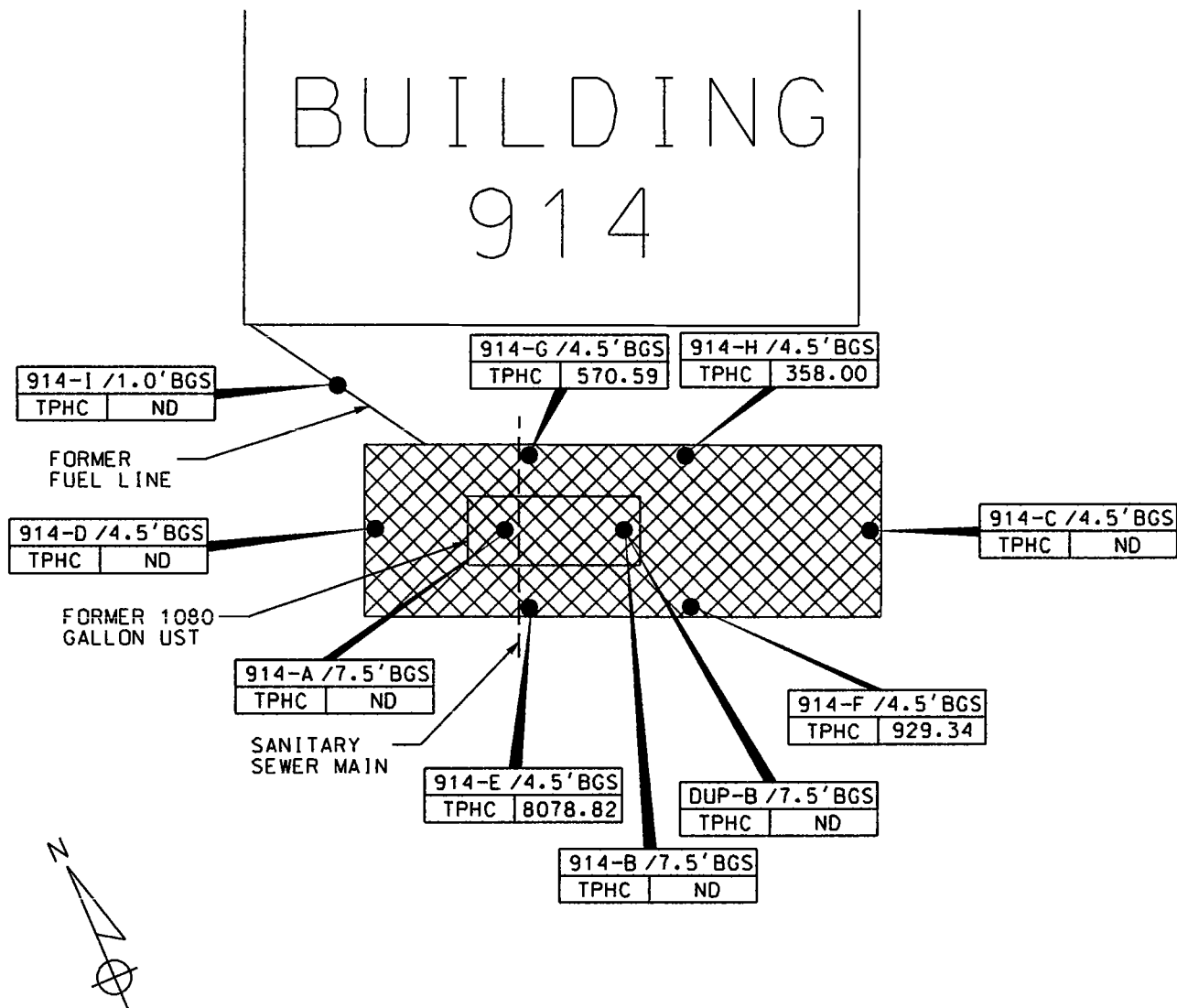


FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 914
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, Pennsylvania

SCALE: NTS

DATE: March 1998



LEGEND



SOIL SAMPLE LOCATION
(APRIL 8, 1998)



LIMIT OF EXCAVATION
(APRIL 8, 1998)

NOTES:

1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

FIGURE 4
SOIL SAMPLING LOCATION MAP
BUILDING 914
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=10'

DATE: MARCH 1998

BUILDING 914

FORMER
FUEL LINE

FORMER 1080
GALLON UST

SANITARY
SEWER MAIN

SAMPLING LOCATION: SAMPLING DEPTH: SAMPLING DATE:	HIGHER OF NJDEP GWQS AND PQL	BLDG 914 6-7' BGS 10/30/98	BLDG 914 6-7' BGS 11/30/98
VOLATILE ORGANIC COMPOUNDS:		ND	ND
SEMIVOLATILE ORGANIC COMPOUNDS:		ND	ND



LEGEND



GROUNDWATER SAMPLE LOCATION
(OCTOBER 30, 1998 AND NOVEMBER 30, 1998)



LIMIT OF EXCAVATION
(APRIL 8, 1998)

NOTES:

1. ND=INDICATES COMPOUND NOT DETECTED
2. NLE= NO LIMIT ESTABLISHED
3. ALL RESULTS IN UG/L
4. BGS = BELOW GROUND SURFACE

FIGURE 5
GROUNDWATER SAMPLING MAP
BUILDING 914
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=10'

DATE: MARCH 1998

APPENDIX A

NJDEP-STANDARD REPORTING FORM



State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0029
ATTN: UST Program
(609) 984-3156

For State Use Only

Date Rec'd. _____
Auth. _____
Routing _____
UST NO. _____

STANDARD REPORTING FORM
for reporting activities at an UST facility:

- | | |
|--|---|
| ☒ General Facility Information Changes | ☐ Sale or Transfer |
| ☒ Closure (Abandonment or Removal) | ☐ Substantial Modification |
| ☐ Temporary Closure | ☐ Financial Responsibility |
| ☐ Change in Service | ☐ Address Change Only |

Check ONLY One Type of Activity - Complete Form For That Activity

(More than one tank can be listed per activity)

*** NOTE *** ALL NEW tank installations at existing registered facilities must submit a Registration Questionnaire for the new tanks.

Answer questions 1 through 5 and others as applicable.

1. Company name and address (as it appears on registration questionnaire):

U.S. ARMY - FORT MONMOUTH
DPW - BUILDING 173
FORT MONMOUTH NJ 07703

2. Facility name and location (if different from above):

MAIN POST

3. Contact person for this activity:

Charles Appleby

Telephone Number: (732) 152

4. The identification number of the affected tank as it appears in Question Number 12 on the Registration Questionnaire:

Bldg 914

0081533

5. Registration Number (if known):

UST - 152

6. For GENERAL FACILITY INFORMATION changes (address, telephone, contact person, etc. - supply NEW information only):

a. Facility name: _____

b. Facility location: _____

c. Owner's mailing address: _____

_____ NJ _____

d. Block: _____ Lot: _____

e. Contact person (facility operator): _____

f. Contact telephone number: () _____ - _____

g. Other (Specify): _____

(OVER)

7. For CLOSURE (abandonment or removal - check all that apply):

a. ☐ Abandonment Date: ____/____/____ Case No: _____

Attach the necessary implementation schedule (3 copies) and all documentation needed for abandonment per N.J.A.C. 7:14B-9.1 (d).

b. ☒ Removal Date: 3/18/98 Case No. 98-03-18-900-12

Attach the necessary implementation schedule (3 copies).

8. For CHANGES IN HAZARDOUS SUBSTANCES STORED (check all that apply):

a. ☐ Temporary Closure (12 month maximum time - see N.J.A.C. 7:14B-9.1(b)). Remove all hazardous substances; leave tank in place.

b. ☐ Change in service from a regulated substance to a non-regulated substance. Tank must be cleaned and site assessment performed per N.J.A.C. 7:14B-9.1(e).

c. ☐ Changes in service from one regulated hazardous substance to another regulated hazardous substance.

Tank No. _____ Old _____ New _____

Tank No. _____ Old _____ New _____

Tank No. _____ Old _____ New _____

(Attach additional sheets if more space is needed)

9. For TRANSFER OF OWNERSHIP: Effective Date: ____/____/____

a. New Owner (operator) _____

b. New Facility Name _____

_____ NJ _____

_____ County _____

c. Closing Attorney _____ Tele: (____) _____

10. For SUBSTANTIAL MODIFICATIONS (to include any retrofitted activity - e.g. the addition of spill/overfill protection, monitoring systems, cathodic protection, etc.):

a. Type of Modification _____ Date: ____/____/____

b. * NOTE * Substantial modifications require a permit under N.J.A.C. 7:14B-10.

11. For changes in FINANCIAL RESPONSIBILITY to (check appropriate changes and attach copies of new information):

a. Policy Type: ☐

d. Company/Carrier: ☐

b. Policy Number: ☐

e. Expiration Date: ☐

c. Other: ☐

(Specify)

NOTE: ALL appropriate and applicable permits, licenses and certificates required by the above activity(ies) from any local, state and/or federal agencies must be obtained separately from this notification.

CERTIFICATION

This registration form shall be signed by the highest ranking individual at the facility with overall responsibility for that facility (N.J.A.C. 7:14B-2.3 (a) 1).

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

Signature: James Ott

Name (print or type): JAMES OTT

Title: DIRECTOR - DEPT OF PUBLIC WORKS Date: 3/18/98

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APPENDIX B

SITE ASSESSMENT SUMMARY

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New JerseyFacility Street Address : Directorate of Public Works Building 173Municipality: Oceanport County: MonmouthBlock: _____ Lot(s): _____ Telephone Number : 732-532-6224**B. Owner (RP)'s Name:** _____

Street Address: _____ City : _____

State: _____ Zip: _____ Telephone Number : _____

C. (Check as appropriate)☐ Site Investigation

Report (SIR) \$500 Fee

☐ Remedial Investigation

Report (RIR) \$1000 Fee

☒ NA – Federal Agreement**D. (Complete all that apply)**

- Assigned Case Manager : Ian Curtis, Federal Case Manager
- UST Registration Number : 81533-152 (7 digits)
- Incident Report Number 98 - 03 - 18 - 0902 - 12 (10 or 12 digits)
- Tank Closure Number : Federal Case Manager

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26EYes No

Name: Charles Appleby Signature: See signed subsurface removal log UST Cert. No.: 2056Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: NA-U.S. ArmyFirm Address: Directorate of Public Works Building 173 City: Fort MonmouthState: NJ Zip: 07703 Telephone Number : 732-532-6224

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)] as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): James Ott Title: Directorate of Public Works

Signature: _____

Company Name: U.S. Army Fort MonmouthDate: 7/4/00

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 914 REG.#: - CLOSURE#: -
 DATE: 4/8/98 TOA: 1130 AM TOD: 1415
 GOV. SSE: C. Appleby NJDEP CERT.#: 2056
 REMOVAL CONTRACTOR: Gary Deman Inc. NJDEP CERT.#: -
 CLOSURE SUPERVISOR: Gary Deman Inc.
 WEATHER: Cool - 65°F overcast

ACTIVITY	YES / NO
THE SUPERVISOR (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	yes
THE SSE WAS ON-SITE DURING UST REMOVAL AND <u>SITE SCREENING AND SAMPLING ACTIVITIES</u>	yes
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	yes
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	NA
A DISCHARGE WAS REPORTED TO THE NJDEP (609-292-7172), CASE# <u>-</u>	Done
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK <u>yes</u>	yes
GROUNDWATER WAS ENCOUNTERED AT <u>5</u> FEET BG, A SHEEN <u>(WAS)</u> (WAS NOT) OBSERVED ON GW	yes
IF <u>OVA</u> /Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	yes
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN) <u>yes</u>	yes
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	yes
ALL SAMPLING WAS BIASED TOWARD HIGHEST <u>OVA</u> /FID RECORDED SITES IAW 7:26E-3.6 et seq.	yes
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA
THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	No
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM <u>Both</u>	-
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	

CHECK ALL BOXES, LEAVE NO BLANKS

I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

SIGNATURE: [Signature] DATE: 4/8/98

ca\ms\ust\removal\sitessls.doc

- Dirty Site w/ oil on ground - due to utilities below grade additional excavation is not possible.
- TPHC + VOCs taken at all locations - VOCs + 15 to be run on all samples.
- Placement of a heavy tarp will be done prior to backfilling.
- SSE left Site to Inspect Sme Inc. UST pull for ~10mm diam Sampling Attached.

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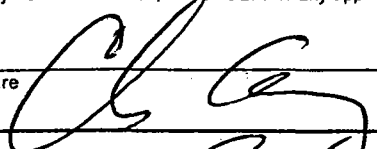
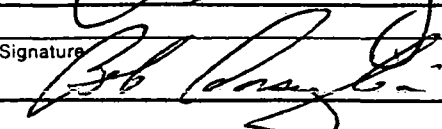
APPENDIX C
WASTE MANIFEST

CASIE PROTANK

ENVIRONMENTAL SERVICES

914

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. NJ 321002059712322		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. Army Com: Elec. Command Main Post Bldg 173/Attn: Fort Monmouth NJ 07703				A. Non-hazardous Manifest Document Number NHZ020 16448	
4. Generator's Phone (732) 532-6223		6. US EPA ID Number		B. State Generator's ID c/o James Shirghior Joe Fallon	
5. Transporter 1 Company Name Casie Ecology Oil Salvage, Inc.		NJ 045995693		C. State Trans. ID 16931	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone (609) 696-4401	
9. Designated Facility Name and Site Address Casie Ecology Oil Salvage, Inc. T/A 3209 N. Mill Rd / Casie Protank Vineland NJ 08360		10. US EPA ID Number NJ 045995693		E. State Trans. ID	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers	
				No.	Type
				13. Total Quantity	
				14. Unit Wt/Vol	
a. Combustible liquid, n.o.s. (Fuel Oil) NA1993, PGIII				001 T T 3370 00001 G I D 7 2	
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above L, T %oil/sed. %wtr.				K. Handling Codes for Wastes Listed Above	
a.		c.		a.	
b.		d.		b.	
15. Special Handling Instructions and Additional Information a. 24 Hr. Emergency Response #609 696-4401 K. Ambrosia NAERG# 127					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.					
Printed/Typed Name Charles Appleby SELF-MANAGED		Signature 		Month Day Year 07/01/98	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature 		Month Day Year 07/01/98	
Printed/Typed Name Bob Corbett		Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month Day Year	

1-GENERATOR COPY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

CASIE / PROTA.IK

ENVIRONMENTAL SERVICES

914

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. N J 0 2 1 0 0 2 0 5 9 7 1 1 3 0 7 3		2. Page 1 of 1	
3. Generator's Name and Mailing Address Main Post Attn: SELFM-RV-EV U.S. Army Com. Elec. Command c/o Joe Fallon/Bldg Fort Monmouth NJ 07703		A. Non-hazardous Manifest Document Number NHZ020 17382		B. State Generator's ID SAME	
4. Generator's Phone (732) 532-6223		6. US EPA ID Number		C. State Trans. ID 1 6 9 3 1	
5. Transporter 1 Company Name Casie Ecology Oil Salvage, Inc.		7. Transporter 2 Company Name		D. Transporter's Phone ((609)) 696-4401	
9. Designated Facility Name and Site Address Casie Ecology Oil Salvage, Inc. T/A 3209 N. Mill Rd / Casie Protank Vineland NJ 08360		10. US EPA ID Number N J 0 2 1 0 0 2 0 5 9 7 1 1 3 0 7 3		E. State Trans. ID X 0 1 5 9 7 1 6	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total	
		No. Type		Quantity	
a. Combustible liquid, n.o.s. (Fuel Oil) NA1993, PGIII		0 0 1 T T		1990	
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above L 90% oil / sed. 10% wtr.		K. Handling Codes for Wastes Listed Above			
a.		a.		c.	
b.		b.		d.	
15. Special Handling Instructions and Additional Information a. 24 Hr. Emergency Response #609 696-4401 K. Ambrosia ERG# 128					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.					
Printed/Typed Name Joseph M. Fallon		Signature <i>Joseph M. Fallon</i>		Month Day Year 10/13/98	
17. Transporter 1 Acknowledgement of Receipt of Materials		18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed/Typed Name Don Scoleri		Signature <i>Don Scoleri</i>		Month Day Year 10/13/98	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month Day Year	

1-GENERATOR COPY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

APPENDIX D

UST DISPOSAL CERTIFICATE

914

MAZZA & SONS, INC.

Metal Recyclers
3230 Shafto Rd.
Tinton Falls, NJ
(908) 922-9292

NO. _____

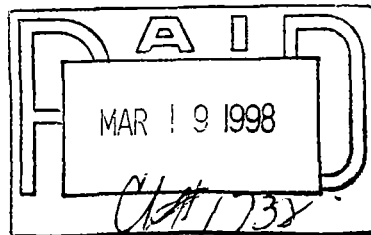
DATE. 19 MAR 98

Customer's Name Tecon Vinell

Address _____

Weight	Price
Cast Iron	
Steel	
<u>1/2" x 1/2"</u>	<u>27.00</u>
Lt. Iron	
Copper #1	
Copper #2	

22460 LB
21560
900



Weight	Price
Lt. Copper	
Brass	
Alum Clean	
Lead	
Stainless	
Battery	
	<u>\$ 27.00</u>

TOTAL AMOUNT:

Weigher _____

Customer [Signature]

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APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 914

Project # 3464
Date Rec. 04/08/98
Date Compl. 04/10/98
Released by:



Daniel K. Wright
Laboratory Director

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Continuing Calibration Summary	9-10
Surrogate Results Summary	11
MS/MSD Results Summary	12
Quality Control Spike Summary	13
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Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1mL autosampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

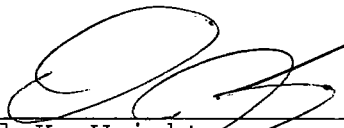
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	<u>No</u>	<u>Yes</u>
1. Method Detection Limits provided.	<u>—</u>	<u>✓</u>
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank. _____ _____	<u>✓</u>	<u>—</u>
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	<u>—</u>	<u>✓</u>
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	<u>—</u>	<u>✓</u>
5. IR Spectra submitted for standards, blanks, & samples	<u>—</u>	<u>NA</u>
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	<u>—</u>	<u>✓</u>
7. Analysis holding time met. (If not met, list number of days exceeded for each sample) _____ _____	<u>—</u>	<u>✓</u>
Additional Comments: _____ _____ _____		

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.



Daniel K. Wright
Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: <u>C. Appleby - DPW</u>		Project No: <u>98-0001</u>		Analysis Parameters								Comments:		
Phone #:		Location: <u>B. 914</u>		TPAC OG SOLIDS MUNSELL VORTEX								* = SAMPLES KEPT BELOW 4°C.		
() DERA (X) JOMA () Other:		Samplers Name / Company: <u>GARY DIMARTINIS - TUS</u>		Sample #									Remarks / Preservation Method	
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles									
3464. 01	914-A	4-8-98	1348	SOIL	2	X	X	X	X				3	EXC. FLOOR @ 7.5' *
02	B		1337										60	↓
03	C		1314										1	SIDE WALL @ 4.5'
04	D		1357										ND	
05	E		1330										50	
06	F		1318										20	
07	G		1410										15	
08	H		1323										1	↓
09	I		1404										ND	Piping Run @ 1.0'
10	DUP		—	↓	↓	↓	↓	↓	↓				—	FIELD DUPLICATE
11	TB	↓	—	METHANOL	1								—	TRIP BLANK ↓
NOTE: OUA #A52114 CALIBRATED w/ 95 ppm CH ₄ & ZERO (0) AIR @ 1300 HRS ON 4/8/98 by G. DiMartinis.														
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):				
		4-8-98 1515												
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):				
Report Type: () Full, (X) Reduced, () Standard, () Screen / non-certified						Remarks: <u>DEDICATED SAMPLING TOOLS USED.</u>								
Turnaround time: () Standard 4 wks, (X) Rush <u>3</u> Days, () ASAP Verbal <u> </u> Hrs.														

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT
AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

- | | |
|--|-------------------------------------|
| 1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted | ☒ |
| 2. Table of Contents submitted | ☒ |
| 3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted | ☒ |
| 4. Document paginated and legible | ☒ |
| 5. Chain of Custody submitted | ☒ |
| 6. Samples submitted to lab within 48 hours of sample collection | ☒ |
| 7. Methodology Summary submitted | ☒ |
| 8. Laboratory Chronicle and Holding Time Check submitted | ☒ |
| 9. Results submitted on a dry weight basis | ☒ |
| 10. Method Detection Limits submitted | ☒ |
| 11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP | ☒ |

Laboratory Manager or Environmental Consultant's Signature

Date 5/15/94

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP
Methods for further guidance

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - EPA Method 8260 Soil
Bldg. 914
UST
98-0001

Project # 3464
Date Rec. 04/08/98
Date Compl. 04/10/98
Released by:



Daniel K. Wright
Laboratory Director

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Method Summary

EPA SW-846 Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of methanol soil sample is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified
(Field Samples and Method Blanks)
2. Retention times for chromatograms provided
3. GC/MS Tune Specifications
 - a. BFB Meet Criteria
 - b. DFTPP Meet Criteria
4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series
5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series
6. GC/MS Calibration Requirements
 - a. Calibration Check Compounds Meet Criteria
 - b. System Performance Check Compounds Meet Criteria
7. Blank Contamination - If yes, List compounds and concentrations in each blank:
 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction _____
8. Surrogate Recoveries Meet Criteria

If not met, list those compounds and their recoveries which fall outside the acceptable range:

 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction _____

If not met, were the calculations checked and the results qualified as "estimated"?
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria
(If not met, list those compounds and their recoveries which fall outside the acceptable range)
 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction _____

Y

Y

Y

Y

Y

Y

Y

N

Y

Y

GC/MS Analysis Conformance/Non-Conformance Summary (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria

(If not met, list those compounds which fall outside the acceptable range)

- a. VOA Fraction _____
- b. B/N Fraction _____
- c. Acid Fraction _____

11. Extraction Holding Time Met

If not met, list number of days exceeded for each sample: _____

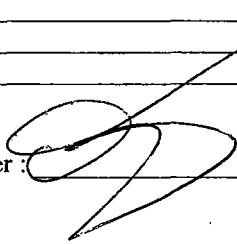
12. Analysis Holding Time Met

If not met, list number of days exceeded for each sample: _____

Additional Comments:

Laboratory Manager :

Date:


8/17/98



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV Fort Monmouth, NJ 07703

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: <u>C. Appleby - DPW</u>		Project No: <u>98-0001</u>		Analysis Parameters								Comments: * = SAMPLES KEPT BELOW 4°C.	
Phone #:		Location: <u>B. 914</u>											
() DERA (X) OMA () Other: _____		Samplers Name / Company: <u>GARY D. MARTIN - TUS</u>		Sample #									Remarks / Preservation Method
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles	TPAC	2% Solids	MUNSELL	VORTEX			QUA	
3464. 01	914-A	4-8-98	1348	SOIL	2	X	X	X	X			3	EXC. FLOOR @ 7.5' *
02	B		1337									60	↓
03	C		1314									1	SIDE WALL @ 4.5'
04	D		1357									ND	
05	E		1330									50	
06	F		1318									20	
07	G		1410									15	
08	H		1323									1	↓
09	I		1404									ND	Piping Run @ 1.0'
10	DUP		—	↓	↓	↓	↓	↓	↓			—	FIELD DUPLICATE
11	TB	↓	—	METHANOL	1	↓	↓	↓	X			—	TRIP BLANK
NOTE: OUA #A52114 CALIBRATED w/ 95 ppm CH ₄ & ZERO (0) AIR @ 1300 HRS ON 4/8/98 by G. DiMartino.													
Relinquished by (signature): <u>[Signature]</u>		Date/Time: <u>4-8-98 1515</u>		Received by (signature): <u>[Signature]</u>		Relinquished by (signature):		Date/Time:		Received by (signature):			
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):			
Report Type: () Full, (X) Reduced, () Standard, () Screen / non-certified						Remarks: <u>DEDICATED SAMPLING TOOLS USED.</u>							
Turnaround time: () Standard 4 wks, (X) Rush <u>3</u> Days, () ASAP Verbal _____ Hrs.													

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK47

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK47

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03506.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene		250	U
100-41-4	Ethylbenzene		500	U
1330-20-7	m+p-Xylenes		750	U
1330-20-7	o-Xylene		500	U
10061-02-6	trans-1,3-Dichloropropene		500	U
79-00-5	1,1,2-Trichloroethane		500	U
127-18-4	Tetrachloroethene		250	U
591-78-6	2-Hexanone		500	U
126-48-1	Dibromochloromethane		500	U
108-90-7	Chlorobenzene		250	U
100-42-5	Styrene		500	U
75-25-2	Bromoform		500	U
79-34-5	1,1,2,2-Tetrachloroethane		500	U
107028	Acrolein		1800	U
107131	Acrylonitrile		1800	U
75650	tert-Butyl alcohol		3200	U
1634044	Methyl-tert-Butyl ether		750	U
108203	Di-isopropyl ether		500	U
	Dichlorodifluoromethane		1000	U
74-87-3	Chloromethane		250	U
75-01-4	Vinyl Chloride		750	U
74-83-9	Bromomethane		500	U
75-00-3	Chloroethane		750	U
75-69-4	Trichlorofluoromethane		500	U
75-35-4	1,1-Dichloroethene		250	U
67-64-1	Acetone		500	U
75-15-0	Carbon Disulfide		250	U
75-09-2	Methylene Chloride		500	U
156-60-5	trans-1,2-Dichloroethene		500	U
75-35-3	1,1-Dichloroethane		250	U
108-05-4	Vinyl Acetate		750	U
78-93-3	2-Butanone		750	U
	cis-1,2-Dichloroethene		250	U
67-66-3	Chloroform		250	U
75-55-6	1,1,1-Trichloroethane		250	U
56-23-5	Carbon Tetrachloride		500	U
71-43-2	Benzene		250	U
107-06-2	1,2-Dichloroethane		500	U
79-01-6	Trichloroethene		250	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK47

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK47

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03506.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
78-87-5	1,2-Dichloropropane	250	U	
75-27-4	Bromodichloromethane	250	U	
110-75-8	2-Chloroethyl vinyl ether	500	U	
10061-01-5	cis-1,3-Dichloropropene	250	U	
108-10-1	4-Methyl-2-Pentanone	500	U	
541-73-1	1,3-Dichlorobenzene	750	U	
106-46-7	1,4-Dichlorobenzene	750	U	
95-50-1	1,2-Dichlorobenzene	750	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBK48

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBK48

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03520.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	500	U
1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	500	U
126-48-1	Dibromochloromethane	500	U
108-90-7	Chlorobenzene	250	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
107028	Acrolein	1800	U
107131	Acrylonitrile	1800	U
75650	tert-Butyl alcohol	3200	U
1634044	Methyl-tert-Butyl ether	750	U
108203	Di-isopropyl ether	500	U
	Dichlorodifluoromethane	1000	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	750	U
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	750	U
75-69-4	Trichlorofluoromethane	500	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	500	U
156-60-5	trans-1,2-Dichloroethene	500	U
75-35-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl Acetate	750	U
78-93-3	2-Butanone	750	U
	cis-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	500	U
71-43-2	Benzene	250	U
107-06-2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	250	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBLK48

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK48

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03520.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	500	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	500	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
95-50-1	1,2-Dichlorobenzene	750	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

A

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.01

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03509.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.48 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-88-3	Toluene	340	U
100-41-4	Ethylbenzene	680	U
1330-20-7	m+p-Xylenes	1000	U
1330-20-7	o-Xylene	680	U
10061-02-6	trans-1,3-Dichloropropene	680	U
79-00-5	1,1,2-Trichloroethane	680	U
127-18-4	Tetrachloroethene	340	U
591-78-6	2-Hexanone	680	U
126-48-1	Dibromochloromethane	680	U
108-90-7	Chlorobenzene	340	U
100-42-5	Styrene	680	U
75-25-2	Bromoform	680	U
79-34-5	1,1,2,2-Tetrachloroethane	680	U
107028	Acrolein	2400	U
107131	Acrylonitrile	2400	U
75650	tert-Butyl alcohol	4400	U
1634044	Methyl-tert-Butyl ether	1000	U
108203	Di-isopropyl ether	680	U
	Dichlorodifluoromethane	1400	U
74-87-3	Chloromethane	340	U
75-01-4	Vinyl Chloride	1000	U
74-83-9	Bromomethane	680	U
75-00-3	Chloroethane	1000	U
75-69-4	Trichlorofluoromethane	680	U
75-35-4	1,1-Dichloroethene	340	U
67-64-1	Acetone	680	U
75-15-0	Carbon Disulfide	340	U
75-09-2	Methylene Chloride	680	U
156-60-5	trans-1,2-Dichloroethene	680	U
75-35-3	1,1-Dichloroethane	340	U
108-05-4	Vinyl Acetate	1000	U
78-93-3	2-Butanone	1000	U
	cis-1,2-Dichloroethene	340	U
67-66-3	Chloroform	340	U
75-55-6	1,1,1-Trichloroethane	340	U
56-23-5	Carbon Tetrachloride	680	U
71-43-2	Benzene	340	U
107-06-2	1,2-Dichloroethane	680	U
79-01-6	Trichloroethene	340	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

A

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.01

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03509.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.48 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	340	U
75-27-4	Bromodichloromethane	340	U
110-75-8	2-Chloroethyl vinyl ether	680	U
10061-01-5	cis-1,3-Dichloropropene	340	U
108-10-1	4-Methyl-2-Pentanone	680	U
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	1000	U
95-50-1	1,2-Dichlorobenzene	1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

B

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.02

Sample wt/vol: 7.5 (g/ml) G Lab File ID: V03510.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 18.57 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-88-3	Toluene	410	U
100-41-4	Ethylbenzene	820	U
1330-20-7	m+p-Xylenes	1200	U
1330-20-7	o-Xylene	820	U
10061-02-6	trans-1,3-Dichloropropene	820	U
79-00-5	1,1,2-Trichloroethane	820	U
127-18-4	Tetrachloroethene	410	U
591-78-6	2-Hexanone	820	U
126-48-1	Dibromochloromethane	820	U
108-90-7	Chlorobenzene	410	U
100-42-5	Styrene	820	U
75-25-2	Bromoform	820	U
79-34-5	1,1,2,2-Tetrachloroethane	820	U
107028	Acrolein	2900	U
107131	Acrylonitrile	2900	U
75650	tert-Butyl alcohol	5300	U
1634044	Methyl-tert-Butyl ether	1200	U
108203	Di-isopropyl ether	820	U
	Dichlorodifluoromethane	1600	U
74-87-3	Chloromethane	410	U
75-01-4	Vinyl Chloride	1200	U
74-83-9	Bromomethane	820	U
75-00-3	Chloroethane	1200	U
75-69-4	Trichlorofluoromethane	820	U
75-35-4	1,1-Dichloroethene	410	U
67-64-1	Acetone	820	U
75-15-0	Carbon Disulfide	410	U
75-09-2	Methylene Chloride	820	U
156-60-5	trans-1,2-Dichloroethene	820	U
75-35-3	1,1-Dichloroethane	410	U
108-05-4	Vinyl Acetate	1200	U
78-93-3	2-Butanone	1200	U
	cis-1,2-Dichloroethene	410	U
67-66-3	Chloroform	410	U
75-55-6	1,1,1-Trichloroethane	410	U
56-23-5	Carbon Tetrachloride	820	U
71-43-2	Benzene	410	U
107-06-2	1,2-Dichloroethane	820	U
79-01-6	Trichloroethene	410	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

B

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 3464.02

Sample wt/vol: 7.5 (g/ml) G Lab File ID: V03510.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 18.57 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
78-87-5	1,2-Dichloropropane		410	U
75-27-4	Bromodichloromethane		410	U
110-75-8	2-Chloroethyl vinyl ether		820	U
10061-01-5	cis-1,3-Dichloropropene		410	U
108-10-1	4-Methyl-2-Pentanone		820	U
541-73-1	1,3-Dichlorobenzene		1200	U
106-46-7	1,4-Dichlorobenzene		1200	U
95-50-1	1,2-Dichlorobenzene		1200	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

C

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.03

Sample wt/vol: 10.2 (g/ml) G Lab File ID: V03511.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 20.58 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene	310	U	
100-41-4	Ethylbenzene	620	U	
1330-20-7	m+p-Xylenes	930	U	
1330-20-7	o-Xylene	620	U	
10061-02-6	trans-1,3-Dichloropropene	620	U	
79-00-5	1,1,2-Trichloroethane	620	U	
127-18-4	Tetrachloroethene	310	U	
591-78-6	2-Hexanone	620	U	
126-48-1	Dibromochloromethane	620	U	
108-90-7	Chlorobenzene	310	U	
100-42-5	Styrene	620	U	
75-25-2	Bromoform	620	U	
79-34-5	1,1,2,2-Tetrachloroethane	620	U	
107028	Acrolein	2200	U	
107131	Acrylonitrile	2200	U	
75650	tert-Butyl alcohol	4000	U	
1634044	Methyl-tert-Butyl ether	930	U	
108203	Di-isopropyl ether	620	U	
	Dichlorodifluoromethane	1200	U	
74-87-3	Chloromethane	310	U	
75-01-4	Vinyl Chloride	930	U	
74-83-9	Bromomethane	620	U	
75-00-3	Chloroethane	930	U	
75-69-4	Trichlorofluoromethane	620	U	
75-35-4	1,1-Dichloroethene	310	U	
67-64-1	Acetone	620	U	
75-15-0	Carbon Disulfide	310	U	
75-09-2	Methylene Chloride	620	U	
156-60-5	trans-1,2-Dichloroethene	620	U	
75-35-3	1,1-Dichloroethane	310	U	
108-05-4	Vinyl Acetate	930	U	
78-93-3	2-Butanone	930	U	
	cis-1,2-Dichloroethene	310	U	
67-66-3	Chloroform	310	U	
75-55-6	1,1,1-Trichloroethane	310	U	
56-23-5	Carbon Tetrachloride	620	U	
71-43-2	Benzene	310	U	
107-06-2	1,2-Dichloroethane	620	U	
79-01-6	Trichloroethene	310	U	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

C

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.03

Sample wt/vol: 10.2 (g/ml) G Lab File ID: V03511.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 20.58 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
78-87-5	1,2-Dichloropropane	310	U	
75-27-4	Bromodichloromethane	310	U	
110-75-8	2-Chloroethyl vinyl ether	620	U	
10061-01-5	cis-1,3-Dichloropropene	310	U	
108-10-1	4-Methyl-2-Pentanone	620	U	
541-73-1	1,3-Dichlorobenzene	930	U	
106-46-7	1,4-Dichlorobenzene	930	U	
95-50-1	1,2-Dichlorobenzene	930	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

D

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.04

Sample wt/vol: 9.0 (g/ml) G Lab File ID: V03512.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.96 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene	330	U	
100-41-4	Ethylbenzene	650	U	
1330-20-7	m+p-Xylenes	980	U	
1330-20-7	o-Xylene	650	U	
10061-02-6	trans-1,3-Dichloropropene	650	U	
79-00-5	1,1,2-Trichloroethane	650	U	
127-18-4	Tetrachloroethene	330	U	
591-78-6	2-Hexanone	650	U	
126-48-1	Dibromochloromethane	650	U	
108-90-7	Chlorobenzene	330	U	
100-42-5	Styrene	650	U	
75-25-2	Bromoform	650	U	
79-34-5	1,1,2,2-Tetrachloroethane	650	U	
107028	Acrolein	2300	U	
107131	Acrylonitrile	2300	U	
75650	tert-Butyl alcohol	4300	U	
1634044	Methyl-tert-Butyl ether	980	U	
108203	Di-isopropyl ether	650	U	
	Dichlorodifluoromethane	1300	U	
74-87-3	Chloromethane	330	U	
75-01-4	Vinyl Chloride	980	U	
74-83-9	Bromomethane	650	U	
75-00-3	Chloroethane	980	U	
75-69-4	Trichlorofluoromethane	650	U	
75-35-4	1,1-Dichloroethene	330	U	
67-64-1	Acetone	650	U	
75-15-0	Carbon Disulfide	330	U	
75-09-2	Methylene Chloride	650	U	
156-60-5	trans-1,2-Dichloroethene	650	U	
75-35-3	1,1-Dichloroethane	330	U	
108-05-4	Vinyl Acetate	980	U	
78-93-3	2-Butanone	980	U	
	cis-1,2-Dichloroethene	330	U	
67-66-3	Chloroform	330	U	
75-55-6	1,1,1-Trichloroethane	330	U	
56-23-5	Carbon Tetrachloride	650	U	
71-43-2	Benzene	330	U	
107-06-2	1,2-Dichloroethane	650	U	
79-01-6	Trichloroethene	330	U	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

D

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.04

Sample wt/vol: 9.0 (g/ml) G Lab File ID: V03512.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.96 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	330	U
75-27-4	Bromodichloromethane	330	U
110-75-8	2-Chloroethyl vinyl ether	650	U
10061-01-5	cis-1,3-Dichloropropene	330	U
108-10-1	4-Methyl-2-Pentanone	650	U
541-73-1	1,3-Dichlorobenzene	980	U
106-46-7	1,4-Dichlorobenzene	980	U
95-50-1	1,2-Dichlorobenzene	980	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

E

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.05

Sample wt/vol: 8.0 (g/ml) G Lab File ID: V03513.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.27 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-88-3	Toluene	360	U
100-41-4	Ethylbenzene	1800	
1330-20-7	m+p-Xylenes	2900	
1330-20-7	o-Xylene	730	U
10061-02-6	trans-1,3-Dichloropropene	730	U
79-00-5	1,1,2-Trichloroethane	730	U
127-18-4	Tetrachloroethene	360	U
591-78-6	2-Hexanone	730	U
126-48-1	Dibromochloromethane	730	U
108-90-7	Chlorobenzene	360	U
100-42-5	Styrene	730	U
75-25-2	Bromoform	730	U
79-34-5	1,1,2,2-Tetrachloroethane	730	U
107028	Acrolein	2500	U
107131	Acrylonitrile	2500	U
75650	tert-Butyl alcohol	4700	U
1634044	Methyl-tert-Butyl ether	1100	U
108203	Di-isopropyl ether	730	U
	Dichlorodifluoromethane	1500	U
74-87-3	Chloromethane	360	U
75-01-4	Vinyl Chloride	1100	U
74-83-9	Bromomethane	730	U
75-00-3	Chloroethane	1100	U
75-69-4	Trichlorofluoromethane	730	U
75-35-4	1,1-Dichloroethene	360	U
67-64-1	Acetone	730	U
75-15-0	Carbon Disulfide	360	U
75-09-2	Methylene Chloride	730	U
156-60-5	trans-1,2-Dichloroethene	730	U
75-35-3	1,1-Dichloroethane	360	U
108-05-4	Vinyl Acetate	1100	U
78-93-3	2-Butanone	1100	U
	cis-1,2-Dichloroethene	360	U
67-66-3	Chloroform	360	U
75-55-6	1,1,1-Trichloroethane	360	U
56-23-5	Carbon Tetrachloride	730	U
71-43-2	Benzene	360	U
107-06-2	1,2-Dichloroethane	730	U
79-01-6	Trichloroethene	360	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

E

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.05

Sample wt/vol: 8.0 (g/ml) G Lab File ID: V03513.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.27 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	360	U
75-27-4	Bromodichloromethane	360	U
110-75-8	2-Chloroethyl vinyl ether	730	U
10061-01-5	cis-1,3-Dichloropropene	360	U
108-10-1	4-Methyl-2-Pentanone	730	U
541-73-1	1,3-Dichlorobenzene	1100	U
106-46-7	1,4-Dichlorobenzene	1100	U
95-50-1	1,2-Dichlorobenzene	1100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

F

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.06

Sample wt/vol: 8.8 (g/ml) G Lab File ID: V03514.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.45 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene	330	U	
100-41-4	Ethylbenzene	670	U	
1330-20-7	m+p-Xylenes	1000	U	
1330-20-7	o-Xylene	670	U	
10061-02-6	trans-1,3-Dichloropropene	670	U	
79-00-5	1,1,2-Trichloroethane	670	U	
127-18-4	Tetrachloroethene	330	U	
591-78-6	2-Hexanone	670	U	
126-48-1	Dibromochloromethane	670	U	
108-90-7	Chlorobenzene	330	U	
100-42-5	Styrene	670	U	
75-25-2	Bromoform	670	U	
79-34-5	1,1,2,2-Tetrachloroethane	670	U	
107028	Acrolein	2300	U	
107131	Acrylonitrile	2300	U	
75650	tert-Butyl alcohol	4300	U	
1634044	Methyl-tert-Butyl ether	1000	U	
108203	Di-isopropyl ether	670	U	
	Dichlorodifluoromethane	1300	U	
74-87-3	Chloromethane	330	U	
75-01-4	Vinyl Chloride	1000	U	
74-83-9	Bromomethane	670	U	
75-00-3	Chloroethane	1000	U	
75-69-4	Trichlorofluoromethane	670	U	
75-35-4	1,1-Dichloroethene	330	U	
67-64-1	Acetone	670	U	
75-15-0	Carbon Disulfide	330	U	
75-09-2	Methylene Chloride	670	U	
156-60-5	trans-1,2-Dichloroethene	670	U	
75-35-3	1,1-Dichloroethane	330	U	
108-05-4	Vinyl Acetate	1000	U	
78-93-3	2-Butanone	1000	U	
	cis-1,2-Dichloroethene	330	U	
67-66-3	Chloroform	330	U	
75-55-6	1,1,1-Trichloroethane	330	U	
56-23-5	Carbon Tetrachloride	670	U	
71-43-2	Benzene	330	U	
107-06-2	1,2-Dichloroethane	670	U	
79-01-6	Trichloroethene	330	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

F

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.06

Sample wt/vol: 8.8 (g/ml) G Lab File ID: V03514.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.45 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
78-87-5	1,2-Dichloropropane		330	U
75-27-4	Bromodichloromethane		330	U
110-75-8	2-Chloroethyl vinyl ether		670	U
10061-01-5	cis-1,3-Dichloropropene		330	U
108-10-1	4-Methyl-2-Pentanone		670	U
541-73-1	1,3-Dichlorobenzene		1000	U
106-46-7	1,4-Dichlorobenzene		1000	U
95-50-1	1,2-Dichlorobenzene		1000	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

G

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.07

Sample wt/vol: 8.6 (g/ml) G Lab File ID: V03515.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 11.71 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-88-3	Toluene	330	U
100-41-4	Ethylbenzene	660	U
1330-20-7	m+p-Xylenes	990	U
1330-20-7	o-Xylene	660	U
10061-02-6	trans-1,3-Dichloropropene	660	U
79-00-5	1,1,2-Trichloroethane	660	U
127-18-4	Tetrachloroethene	330	U
591-78-6	2-Hexanone	660	U
126-48-1	Dibromochloromethane	660	U
108-90-7	Chlorobenzene	330	U
100-42-5	Styrene	660	U
75-25-2	Bromoform	660	U
79-34-5	1,1,2,2-Tetrachloroethane	660	U
107028	Acrolein	2300	U
107131	Acrylonitrile	2300	U
75650	tert-Butyl alcohol	4300	U
1634044	Methyl-tert-Butyl ether	990	U
108203	Di-isopropyl ether	660	U
	Dichlorodifluoromethane	1300	U
74-87-3	Chloromethane	330	U
75-01-4	Vinyl Chloride	990	U
74-83-9	Bromomethane	660	U
75-00-3	Chloroethane	990	U
75-69-4	Trichlorofluoromethane	660	U
75-35-4	1,1-Dichloroethene	330	U
67-64-1	Acetone	660	U
75-15-0	Carbon Disulfide	330	U
75-09-2	Methylene Chloride	660	U
156-60-5	trans-1,2-Dichloroethene	660	U
75-35-3	1,1-Dichloroethane	330	U
108-05-4	Vinyl Acetate	990	U
78-93-3	2-Butanone	990	U
	cis-1,2-Dichloroethene	330	U
67-66-3	Chloroform	330	U
75-55-6	1,1,1-Trichloroethane	330	U
56-23-5	Carbon Tetrachloride	660	U
71-43-2	Benzene	330	U
107-06-2	1,2-Dichloroethane	660	U
79-01-6	Trichloroethene	330	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

G

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.07

Sample wt/vol: 8.6 (g/ml) G Lab File ID: V03515.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 11.71 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	330	U
75-27-4	Bromodichloromethane	330	U
110-75-8	2-Chloroethyl vinyl ether	660	U
10061-01-5	cis-1,3-Dichloropropene	330	U
108-10-1	4-Methyl-2-Pentanone	660	U
541-73-1	1,3-Dichlorobenzene	990	U
106-46-7	1,4-Dichlorobenzene	990	U
95-50-1	1,2-Dichlorobenzene	990	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

H

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.08

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03522.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 13.51 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene	330	U	
100-41-4	Ethylbenzene	660	U	
1330-20-7	m+p-Xylenes	990	U	
1330-20-7	o-Xylene	660	U	
10061-02-6	trans-1,3-Dichloropropene	660	U	
79-00-5	1,1,2-Trichloroethane	660	U	
127-18-4	Tetrachloroethene	330	U	
591-78-6	2-Hexanone	660	U	
126-48-1	Dibromochloromethane	660	U	
108-90-7	Chlorobenzene	330	U	
100-42-5	Styrene	660	U	
75-25-2	Bromoform	660	U	
79-34-5	1,1,2,2-Tetrachloroethane	660	U	
107028	Acrolein	2300	U	
107131	Acrylonitrile	2300	U	
75650	tert-Butyl alcohol	4300	U	
1634044	Methyl-tert-Butyl ether	990	U	
108203	Di-isopropyl ether	660	U	
	Dichlorodifluoromethane	1300	U	
74-87-3	Chloromethane	330	U	
75-01-4	Vinyl Chloride	990	U	
74-83-9	Bromomethane	660	U	
75-00-3	Chloroethane	990	U	
75-69-4	Trichlorofluoromethane	660	U	
75-35-4	1,1-Dichloroethene	330	U	
67-64-1	Acetone	660	U	
75-15-0	Carbon Disulfide	330	U	
75-09-2	Methylene Chloride	660	U	
156-60-5	trans-1,2-Dichloroethene	660	U	
75-35-3	1,1-Dichloroethane	330	U	
108-05-4	Vinyl Acetate	990	U	
78-93-3	2-Butanone	990	U	
	cis-1,2-Dichloroethene	330	U	
67-66-3	Chloroform	330	U	
75-55-6	1,1,1-Trichloroethane	330	U	
56-23-5	Carbon Tetrachloride	660	U	
71-43-2	Benzene	330	U	
107-06-2	1,2-Dichloroethane	660	U	
79-01-6	Trichloroethene	330	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

H

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.08

Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03522.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 13.51 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	330	U
75-27-4	Bromodichloromethane	330	U
110-75-8	2-Chloroethyl vinyl ether	660	U
10061-01-5	cis-1,3-Dichloropropene	330	U
108-10-1	4-Methyl-2-Pentanone	660	U
541-73-1	1,3-Dichlorobenzene	990	U
106-46-7	1,4-Dichlorobenzene	990	U
95-50-1	1,2-Dichlorobenzene	990	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

I

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.09

Sample wt/vol: 8.9 (g/ml) G Lab File ID: V03523.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 7.52 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene		310	U
100-41-4	Ethylbenzene		610	U
1330-20-7	m+p-Xylenes		920	U
1330-20-7	o-Xylene		610	U
10061-02-6	trans-1,3-Dichloropropene		610	U
79-00-5	1,1,2-Trichloroethane		610	U
127-18-4	Tetrachloroethene		310	U
591-78-6	2-Hexanone		610	U
126-48-1	Dibromochloromethane		610	U
108-90-7	Chlorobenzene		310	U
100-42-5	Styrene		610	U
75-25-2	Bromoform		610	U
79-34-5	1,1,2,2-Tetrachloroethane		610	U
107028	Acrolein		2100	U
107131	Acrylonitrile		2100	U
75650	tert-Butyl alcohol		4000	U
1634044	Methyl-tert-Butyl ether		920	U
108203	Di-isopropyl ether		610	U
	Dichlorodifluoromethane		1200	U
74-87-3	Chloromethane		310	U
75-01-4	Vinyl Chloride		920	U
74-83-9	Bromomethane		610	U
75-00-3	Chloroethane		920	U
75-69-4	Trichlorofluoromethane		610	U
75-35-4	1,1-Dichloroethene		310	U
67-64-1	Acetone		610	U
75-15-0	Carbon Disulfide		310	U
75-09-2	Methylene Chloride		610	U
156-60-5	trans-1,2-Dichloroethene		610	U
75-35-3	1,1-Dichloroethane		310	U
108-05-4	Vinyl Acetate		920	U
78-93-3	2-Butanone		920	U
	cis-1,2-Dichloroethene		310	U
67-66-3	Chloroform		310	U
75-55-6	1,1,1-Trichloroethane		310	U
56-23-5	Carbon Tetrachloride		610	U
71-43-2	Benzene		310	U
107-06-2	1,2-Dichloroethane		610	U
79-01-6	Trichloroethene		310	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

I

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.09

Sample wt/vol: 8.9 (g/ml) G Lab File ID: V03523.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 7.52 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
78-87-5	1,2-Dichloropropane		310	U
75-27-4	Bromodichloromethane		310	U
110-75-8	2-Chloroethyl vinyl ether		610	U
10061-01-5	cis-1,3-Dichloropropene		310	U
108-10-1	4-Methyl-2-Pentanone		610	U
541-73-1	1,3-Dichlorobenzene		920	U
106-46-7	1,4-Dichlorobenzene		920	U
95-50-1	1,2-Dichlorobenzene		920	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.11

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03521.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
108-88-3	Toluene		250	U
100-41-4	Ethylbenzene		500	U
1330-20-7	m+p-Xylenes		750	U
1330-20-7	o-Xylene		500	U
10061-02-6	trans-1,3-Dichloropropene		500	U
79-00-5	1,1,2-Trichloroethane		500	U
127-18-4	Tetrachloroethene		250	U
591-78-6	2-Hexanone		500	U
126-48-1	Dibromochloromethane		500	U
108-90-7	Chlorobenzene		250	U
100-42-5	Styrene		500	U
75-25-2	Bromoform		500	U
79-34-5	1,1,2,2-Tetrachloroethane		500	U
107028	Acrolein		1800	U
107131	Acrylonitrile		1800	U
75650	tert-Butyl alcohol		3200	U
1634044	Methyl-tert-Butyl ether		750	U
108203	Di-isopropyl ether		500	U
	Dichlorodifluoromethane		1000	U
74-87-3	Chloromethane		250	U
75-01-4	Vinyl Chloride		750	U
74-83-9	Bromomethane		500	U
75-00-3	Chloroethane		750	U
75-69-4	Trichlorofluoromethane		500	U
75-35-4	1,1-Dichloroethene		250	U
67-64-1	Acetone		500	U
75-15-0	Carbon Disulfide		250	U
75-09-2	Methylene Chloride		500	U
156-60-5	trans-1,2-Dichloroethene		500	U
75-35-3	1,1-Dichloroethane		250	U
108-05-4	Vinyl Acetate		750	U
78-93-3	2-Butanone		750	U
	cis-1,2-Dichloroethene		250	U
67-66-3	Chloroform		250	U
75-55-6	1,1,1-Trichloroethane		250	U
56-23-5	Carbon Tetrachloride		500	U
71-43-2	Benzene		250	U
107-06-2	1,2-Dichloroethane		500	U
79-01-6	Trichloroethene		250	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.11

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03521.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 0 Date Analyzed: 04/10/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	500	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	500	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
95-50-1	1,2-Dichlorobenzene	750	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

VBK47

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: VBK47
Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03506.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 0 Date Analyzed: 04/09/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

VBK48

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: VBK48
Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03520.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 0 Date Analyzed: 04/10/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

A

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.01
Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03509.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 14.48 Date Analyzed: 04/09/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

B

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.02
Sample wt/vol: 7.5 (g/ml) G Lab File ID: V03510.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 18.57 Date Analyzed: 04/09/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	4.52	3400	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

C

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.03
Sample wt/vol: 10.2 (g/ml) G Lab File ID: V03511.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 20.58 Date Analyzed: 04/09/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	6.67	2000	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

D

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.04
Sample wt/vol: 9.0 (g/ml) G Lab File ID: V03512.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 14.96 Date Analyzed: 04/09/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000311-89-7	Perfluorotributylamine	4.52	1900	JN

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

E

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.05

Sample wt/vol: 8.0 (g/ml) G Lab File ID: V03513.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.27 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 14

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000311-89-7	Perfluorotributylamine	4.52	2200	JN
2. 000108-87-2	Cyclohexane, methyl-	22.37	4200	JN
3.	unknown hydrocarbon	23.32	5400	J
4.	unknown hydrocarbon	23.75	7000	J
5. 000111-65-9	Octane	24.87	7900	JN
6.	unknown hydrocarbon	27.20	3500	J
7.	unknown hydrocarbon	27.71	6000	J
8. 000111-84-2	Nonane	28.71	4400	JN
9. 002051-30-1	Octane, 2,6-dimethyl-	29.84	2200	JN
10.	unknown hydrocarbon	30.73	1700	J
11. 001678-92-8	Cyclohexane, propyl-	30.81	9600	JN
12.	unknown hydrocarbon	31.15	2000	J
13.	unknown	31.48	1200	J
14.	unknown hydrocarbon	31.93	2800	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

F

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3464.06

Sample wt/vol: 8.8 (g/ml) G Lab File ID: V03514.D

Level: (low/med) MED Date Received: 04/08/98

% Moisture: not dec. 14.45 Date Analyzed: 04/09/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 9

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	6.66	2300	J
2.	unknown hydrocarbon	23.75	4900	J
3.	unknown hydrocarbon	27.20	2900	J
4.	unknown hydrocarbon	27.38	4500	J
5.	unknown hydrocarbon	27.71	4600	J
6. 000111-84-2	Nonane	28.71	2900	JN
7.	unknown hydrocarbon	29.51	2200	J
8. 001678-92-8	Cyclohexane, propyl-	30.81	3700	JN
9. 006783-92-2	Cyclohexane, 1,1,2,3-tetramethyl-	31.93	2700	JN

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

G

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 3464.07
Sample wt/vol: 8.6 (g/ml) G Lab File ID: V03515.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 11.71 Date Analyzed: 04/10/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 4

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	6.69	2800	J
2.	unknown hydrocarbon	27.71	4000	J
3. 001678-92-8	Cyclohexane, propyl-	30.81	3200	JN
4.	unknown hydrocarbon	31.93	1900	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

H

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.08
Sample wt/vol: 8.7 (g/ml) G Lab File ID: V03522.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 13.51 Date Analyzed: 04/10/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
---------	----------	----	------------	---

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

1

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.09
Sample wt/vol: 8.9 (g/ml) G Lab File ID: V03523.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 7.52 Date Analyzed: 04/10/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	RT	EST. CONC.	Q
---------	----------	----	------------	---

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

TB

Lab Name: FMETL NJDEP #: 13461
Project: 980001 Case No.: 3464 Location: B.914 SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: 3464.11
Sample wt/vol: 10.0 (g/ml) G Lab File ID: V03521.D
Level: (low/med) MED Date Received: 04/08/98
% Moisture: not dec. 0 Date Analyzed: 04/10/98
GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
---------	----------	----	------------	---

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

	Indicate* Yes, No, N/A
1. Cover Page, Title Page listing Lab Certification #, facility name & address, & data of report submitted	✓
2. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	✓
3. Summary Table cross-referencing field ID #'s vs. Lab ID #'s Lab ID's submitted	✓
4. Document bound, paginated and legible	✓
5. Chain of Custody submitted	✓
6. Samples submitted to lab within 48 hours of sample collection	✓
7. Methodology Summary submitted	✓
8. Results submitted on a dry weight basis	✓
9. Method Detection Limits	✓
10. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	✓

Laboratory Manager or Environmental Consultant's Signature

Date

Laboratory Certification # 13461

- *Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

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APPENDIX F

GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732)532-6224 FAX: (732)532-3484

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
NJDEP LABORATORY CERTIFICATION # 13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

BLDG. 914

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4018.01	Aqueous	30-Oct-98	10/30/98
Field Blank	4018.02	Aqueous	30-Oct-98 09:20	10/30/98
Bldg. 914 - 6-7'	4018.05	Aqueous	30-Oct-98 10:40	10/30/98
Bldg. 914 - 6-7'	4018.06	Aqueous	30-Oct-98 10:50	10/30/98

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
VOA+15, BN+15


Daniel Wright/Date
Laboratory Director

ENCLOSURE:
CHAIN OF CUSTODY
FIELD DOCUMENTATION
RESULTS

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CHAIN OF CUSTODY

0001



Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

Chain of Custody Record

[illegible]

FIELD DOCUMENTATION

0003

Post Remedial Groundwater Sampling at Former Underground Storage Tank Site [# 2 fuel oil]

FOR BLDG. # 914

1. Methods

The samples at this location were taken from a six inch sump well that was placed in the former u.s.t. excavation. There is app. 8 –12 inches of water in this well during both sampling events. The sump is app. eight feet deep.

3. Purging

- A. Three volumes of the standing water in the point were purged. The amount of water extracted was app. 0.123 gal. Three to five volumes are purged due to the potential for cross contamination of the screen from upper soil horizons. This was accomplished utilizing a peristaltic pump, and utilizing food grade tubing.

4. Sampling

- A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

All samples were preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

The acquisition of samples and water level measurements were performed as recommended and described in the May 1992 edition of NJDEP Field Sampling Procedures Manual.

5. Quality Assurance/Quality Control

A. Decontamination

The associated equipment (bull point, riser pipe, etc.) was decontaminated between borings using the following procedure:

1. Remove all adherent soil material.
2. Wash with a laboratory grade glassware detergent.
3. Rinsed with potable water.
4. Rinse with distilled and deionized ASTM Type II water.

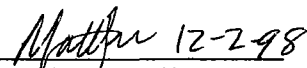
B. Field Blanks

1 Field blank was shared with bldg. 917

C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif.
The sample bottles are certified clean and are sealed upon delivery.

D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura
Employer: U.S. Army, Fort Monmouth
Phone Number: [732] 532-8990
NJDEP License #: J-1486


Mark Laura / Date

METHODOLOGY SUMMARY

Methodology Summary

EPA Method 624

Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5 ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/8270

Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms labeled/Compounds identified
(Field samples and method blanks) yes
2. Retention times for chromatograms provided yes
3. GC/MS Tune Specifications
 - a. BFB Meet Criteria yes
 - b. DFTPP Meet Criteria yes
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series yes
6. GC/MS Calibration requirements
 - a. Calibration Check Compounds Meet Criteria yes
 - b. System Performance Check Compounds Meet Criteria yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank: NO
 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction NA
8. Surrogate Recoveries Meet Criteria yes

If not met, list those compounds and their recoveries, which fall outside the acceptable range:

 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction NA

If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria yes

(If not met, list those compounds and their recoveries, which fall outside the acceptable range)

 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction NA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria
(If not met, list those compounds, which fall outside the acceptable range)

Yes

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

11. Extraction Holding Time Met

Yes

If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met

Yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Field Duplicate performed on Bldg 917 2-11 (4018.03, 04)

Laboratory Manager: _____

Date: _____

12/03/98

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID:4018

Site: Bldg. 914

	Date	Hold Time
Date Sampled	10/30/98	NA
Receipt/Refrigeration	10/30/98	NA
Extractions		
1. Base Neutrals	11/02/98	14 days
Analyses		
1. Volatiles	11/06,07/98	14 days
2. Base Neutrals	11/06/98	40 days

VOLATILE ORGANICS

0013

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit

J : Compound identified below detection limit

B : Compound in both sample and blank

D : Results from dilution of sample

U : Compound searched for but not detected

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam **vb02014.d**
 Operator **Skelton**
 Date Acquired **6 Nov 98 12:13 pm**

Sample Name **VBLK63**
 Field ID **VBLK63**
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

0015

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

VBK63

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4018 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: VBK63
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02014.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: not dec. Date Analyzed: 11/06/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam **vb02028.d**
 Operator **Skelton**
 Date Acquired **6 Nov 98 10:47 pm**

Sample Name **4018.01**
 Field ID **Trip Blank**
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride	12.81	50782	1.38 ug/L	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

0017

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Trip Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4018 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4018.01
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02028.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: not dec. Date Analyzed: 11/06/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam **vb02029.d**
 Operator **Skelton**
 Date Acquired **6 Nov 98 11:31 pm**

Sample Name **4018.02**
 Field ID **Field Blank**
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride	12.81	145347	3.98 ug/L	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

0019

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4018 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4018.02
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02029.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: not dec. Date Analyzed: 11/06/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam vb02031.d
 Operator Skelton
 Date Acquired 7 Nov 98 1:00 am

Sample Name 4018.05
 Field ID Bldg 914 6-7'
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

0021

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg 914

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4018 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4018.05
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02031.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: not dec. Date Analyzed: 11/07/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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BASE NEUTRALS

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name bna01187.d
 Operator Skelton
 Date Acquired 6 Nov 1998 1:32 am

Sample Name **SBLK156**
 Misc Info **SBLK156 A 981102**
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	GW Criteria	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name **bn01187.d**
Operator **Skelton**
Date Acquired **6 Nov 1998 1:32 am**

Sample Name **SBLK156**
Misc Info **SBLK156 A 981102**
Sample Multiplier **1**

121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	
86-73-7	Fluorene			not detected	300	1.93 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73 ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67 ug/L	
120-12-7	Anthracene			not detected	2000	1.79 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83 ug/L	
206-44-0	Fluoranthene			not detected	300	1.85 ug/L	
92-87-5	Benzidine			not detected	50	4.11 ug/L	
129-00-0	Pyrene			not detected	200	1.02 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28 ug/L	
218-01-9	Chrysene			not detected	20	2.32 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13 ug/L	

Qualifiers

E = Value exceeded linear range
D = Value from dilution
B = Compound in related blank
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Sblk156

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4018 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: SBLK156
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01187.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/02/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000301-02-0	9-Octadecenamide, (Z)-	23.25	27	JN
2.	unknown	26.41	51	J

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **bn01189.d**
 Operator **Skelton**
 Date Acquired **6 Nov 1998 2:55 am**

Sample Name **4018.02**
 Misc Info **Field Blank**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	GW Criteria	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name bna01189.d
Operator Skelton
Date Acquired 6 Nov 1998 2:55 am

Sample Name 4018.02
Misc Info Field Blank
Sample Multiplier 1

121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L
86-73-7	Fluorene			not detected	300	1.93	ug/L
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L
120-12-7	Anthracene			not detected	2000	1.79	ug/L
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L
206-44-0	Fluoranthene			not detected	300	1.85	ug/L
92-87-5	Benzidine			not detected	50	4.11	ug/L
129-00-0	Pyrene			not detected	200	1.02	ug/L
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L
218-01-9	Chrysene			not detected	20	2.32	ug/L
117-81-7	bis(2-Ethylhexyl)phthalate	24.71	184841	5.19 ug/L	30	1.29	ug/L
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L

Qualifiers

E = Value exceeded linear range

D = Value from dilution

B = Compound in related blank

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Blank

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4018 Location UST SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 4018.02
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01189.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: decanted: (Y/N) N Date Extracted: 11/02/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	23.25	26	J
2.	unknown	26.41	53	J

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **bna01191.d**
 Operator **Skelton**
 Date Acquired **6 Nov 1998 4:18 am**

Sample Name **4018.06**
 Misc Info **Bldg 914 6-7**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	GW Criteria	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name bna01191.d
Operator Skelton
Date Acquired 6 Nov 1998 4:18 am

Sample Name 4018.06
Misc Info Bldg 914 6-7'
Sample Multiplier 1

121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

Qualifiers

E = Value exceeded linear range
D = Value from dilution
B = Compound in related blank
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg914

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4018 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4018.06
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01191.D
Level: (low/med) LOW Date Received: 10/30/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/02/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000301-02-0	9-Octadecenamide, (Z)-	23.25	25	JN
2.	unknown	26.41	49	J

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT
AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

- | | |
|--|-------------------------------------|
| 1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted | ☒ |
| 2. Table of Contents submitted | ☒ |
| 3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted | ☒ |
| 4. Document paginated and legible | ☒ |
| 5. Chain of Custody submitted | ☒ |
| 6. Samples submitted to lab within 48 hours of sample collection | ☒ |
| 7. Methodology Summary submitted | ☒ |
| 8. Laboratory Chronicle and Holding Time Check submitted | ☒ |
| 9. Results submitted on a dry weight basis | ☒ |
| 10. Method Detection Limits submitted | ☒ |
| 11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP | ☒ |

Laboratory Manager or Environmental Consultant's Signature

Date 12/3/96

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP
Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732)532-6224 FAX: (732)532-3484

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

NJDEP LABORATORY CERTIFICATION # 13461

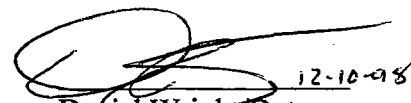


ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

BLDG. 914

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4089.01	Aqueous	30-Nov-98	11/30/98
Field Blank	4089.02	Aqueous	30-Nov-98 09:30	11/30/98
Bldg. 914	4092.01	Aqueous	30-Nov-98 13:30	11/30/98
Bldg. 914	4092.02	Aqueous	30-Nov-98 13:55	11/30/98

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
VOA+15, BN+15


12-10-98
Daniel Wright/Date
Laboratory Director

ENCLOSURE:
CHAIN OF CUSTODY
FIELD DOCUMENTATION
RESULTS

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CHAIN OF CUSTODY

000001



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

[illegible]

NJDEP Certification #13461

Chain of Custody Record

[illegible]

FIELD DOCUMENTATION

000004

Post Remedial Groundwater Sampling at Former Underground Storage Tank Site [# 2 fuel oil]

FOR BLDG. # 914

1. Methods

The samples at this location were taken from a six inch sump well that was placed in the former u.s.t. excavation. There is app. 8 –12 inches of water in this well during both sampling events. The sump is app. eight feet deep.

3. Purging

- A. Three volumes of the standing water in the point were purged. The amount of water extracted was app. 0.123 gal. Three to five volumes are purged due to the potential for cross contamination of the screen from upper soil horizons. This was accomplished utilizing a peristaltic pump, and utilizing food grade tubing.

4. Sampling

- A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

All samples were preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

The acquisition of samples and water level measurements were performed as recommended and described in the May 1992 edition of NJDEP Field Sampling Procedures Manual.

5. Quality Assurance/Quality Control

A. Decontamination

The associated equipment (bull point, riser pipe, etc.) was decontaminated between borings using the following procedure:

1. Remove all adherent soil material.
2. Wash with a laboratory grade glassware detergent.
3. Rinsed with potable water.
4. Rinse with distilled and deionized ASTM Type II water.

000005

B. Field Blanks

1 Field blank was shared with bldg. 917

C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif.
The sample bottles are certified clean and are sealed upon delivery.

D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura
Employer: U.S. Army, Fort Monmouth
Phone Number: [732] 532-8990
NJDEP License #: J-1486

 12-2-98
Mark Laura / Date

000006

METHODOLOGY SUMMARY

000007

Methodology Summary

EPA Method 624

Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5 ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/8270

Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

000009

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms labeled/Compounds identified
(Field samples and method blanks)

yes

2. Retention times for chromatograms provided

yes

3. GC/MS Tune Specifications

- a. BFB Meet Criteria
b. DFTPP Meet Criteria

yes
yes

4. GC/MS Tuning Frequency – Performed every 24 hours for 600
series and 12 hours for 8000 series

yes

5. GC/MS Calibration – Initial Calibration performed before sample
analysis and continuing calibration performed within 24 hours of
sample analysis for 600 series and 12 hours for 8000 series

yes

6. GC/MS Calibration requirements

- a. Calibration Check Compounds Meet Criteria
b. System Performance Check Compounds Meet Criteria

yes
yes

7. Blank Contamination – If yes, List compounds and concentrations in each blank:

NO

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

8. Surrogate Recoveries Meet Criteria

yes

If not met, list those compounds and their recoveries, which fall
outside the acceptable range:

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

If not met, were the calculations checked and the results qualified
as “estimated”?

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria
(If not met, list those compounds and their recoveries, which fall
outside the acceptable range)

yes

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

000010

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria
(If not met, list those compounds, which fall outside the acceptable range)

yes

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

11. Extraction Holding Time Met

yes

If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met

yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Trip + Field blanks are from 4089. All samples taken
on 11/30/98
Field Dup performed on Sldg. 917 10-13' 4093.02 and
4093.01

Laboratory Manager: _____

Date: 12-10-98

000011

LABORATORY CHRONICLE

000012

Laboratory Chronicle

Lab ID: 4092

Site: Bldg 914

	Date	Hold Time
Date Sampled	11/30/98	NA
Receipt/Refrigeration	11/30/98	NA

Extractions

1. Base Neutrals	12/01/98	14 days
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Analyses

1. Volatile Organics	12/01/98	14 days
2. Base Neutrals	12/02,03/98	40 days

000013

VOLATILE ORGANICS

000014

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit

J : Compound identified below detection limit

B : Compound in both sample and blank

D : Results from dilution of sample

U : Compound searched for but not detected

000015

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam vb02266.d
 Operator Skelton
 Date Acquired 1 Dec 98 12:16 pm

Sample Name Vblk69
 Field ID Vblk69
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

000016

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Vb1k69

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4092 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: Vb1k69
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02266.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: not dec. Date Analyzed: 12/01/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam **vb02274.d**
 Operator **Skelton**
 Date Acquired **1 Dec 98 6:31 pm**

Sample Name **4089.01**
 Field ID **Trip Blank**
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

000018

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Trip Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4089 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: 4089.01
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02274.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: not dec. Date Analyzed: 12/01/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam vb02275.d
 Operator Skelton
 Date Acquired 1 Dec 98 7:17 pm

Sample Name 4089.02
 Field ID Field Blank
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

000020

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4089 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: 4089.02
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02275.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: not dec. Date Analyzed: 12/01/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Nam VB02279.D
 Operator Skelton
 Date Acquired 1 Dec 98 10:18 pm

Sample Name 4092.01
 Field ID Bldg914
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

000022

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg. 914

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4092 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: 4092.01
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02279.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: not dec. Date Analyzed: 12/01/98
GC Column: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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BASE NEUTRAL

000049

Semi-Volatile Base Neutral Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **BNA01479.D**
 Operator **Skelton**
 Date Acquired **2 Dec 1998 5:00 pm**

Sample Name **Sbik174**
 Misc Info **Sbik174 A 98120**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
78-59-1	Isophorone			not detected	100	2.31 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	
86-73-7	Fluorene			not detected	300	1.93 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73 ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67 ug/L	
120-12-7	Anthracene			not detected	2000	1.79 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83 ug/L	
206-44-0	Fluoranthene			not detected	300	1.85 ug/L	
92-87-5	Benzidine			not detected	50	4.11 ug/L	
129-00-0	Pyrene			not detected	200	1.02 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28 ug/L	
218-01-9	Chrysene			not detected	20	2.32 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13 ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-

Qualifiers

E = Value exceeded linear range

D = Value from dilution

B = Compound in related blank

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

000050

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Sblk174

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4092 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: Sblk174
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01479.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 12/01/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/02/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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Semi-Volatile Base Neutral Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name bna01492.d
 Operator Skelton
 Date Acquired 3 Dec 1998 2:22 am

Sample Name 4089.02
 Misc Info Field Blank
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
78-59-1	Isophorone			not detected	100	2.31 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	
86-73-7	Fluorene			not detected	300	1.93 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73 ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67 ug/L	
120-12-7	Anthracene			not detected	2000	1.79 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83 ug/L	
206-44-0	Fluoranthene			not detected	300	1.85 ug/L	
92-87-5	Benidine			not detected	50	4.11 ug/L	
129-00-0	Pyrene			not detected	200	1.02 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28 ug/L	
218-01-9	Chrysene			not detected	20	2.32 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13 ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

000052

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET FIELD ID
TENTATIVELY IDENTIFIED COMPOUNDS

Field Blank

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4089 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4089.02
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01492.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 12/01/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/03/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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Semi-Volatile Base Neutral Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **bn01496.d**
 Operator **Skelton**
 Date Acquired **3 Dec 1998 5:16 am**

Sample Name **4092.02**
 Misc Info **Bldg914**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
78-59-1	Isophorone			not detected	100	2.31 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	
86-73-7	Fluorene			not detected	300	1.93 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73 ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67 ug/L	
120-12-7	Anthracene			not detected	2000	1.79 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83 ug/L	
206-44-0	Fluoranthene			not detected	300	1.85 ug/L	
92-87-5	Benzidine			not detected	50	4.11 ug/L	
129-00-0	Pyrene			not detected	200	1.02 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28 ug/L	
218-01-9	Chrysene			not detected	20	2.32 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13 ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg914

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4092 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4092.02
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01496.D
Level: (low/med) LOW Date Received: 11/30/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 12/01/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/03/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT
AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted
2. Table of Contents submitted
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted
4. Document paginated and legible
5. Chain of Custody submitted
6. Samples submitted to lab within 48 hours of sample collection
7. Methodology Summary submitted
8. Laboratory Chronicle and Holding Time Check submitted
9. Results submitted on a dry weight basis
10. Method Detection Limits submitted
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP

✓
✓
✓
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✓
✓
✓

Laboratory Manager or Environmental Consultant's Signature

Date 12/10/94

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP
Methods for further guidance.

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Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

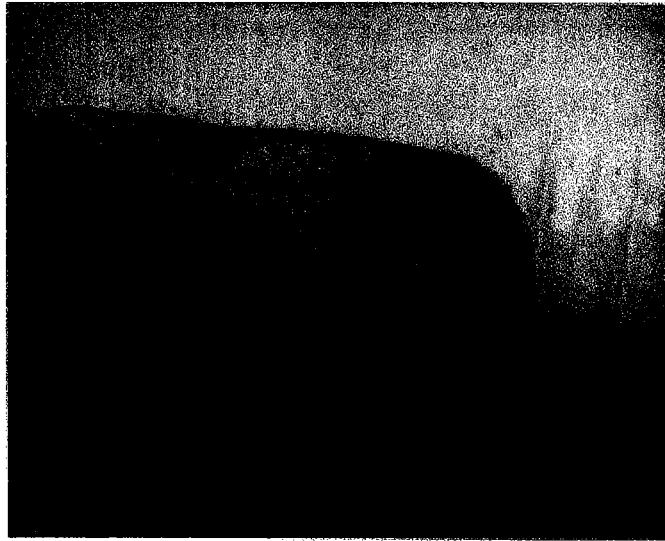


Daniel K. Wright
Laboratory Manager

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APPENDIX G

PHOTOGRAPHS



B. 914
3/19/98



B. 914
3/31/98

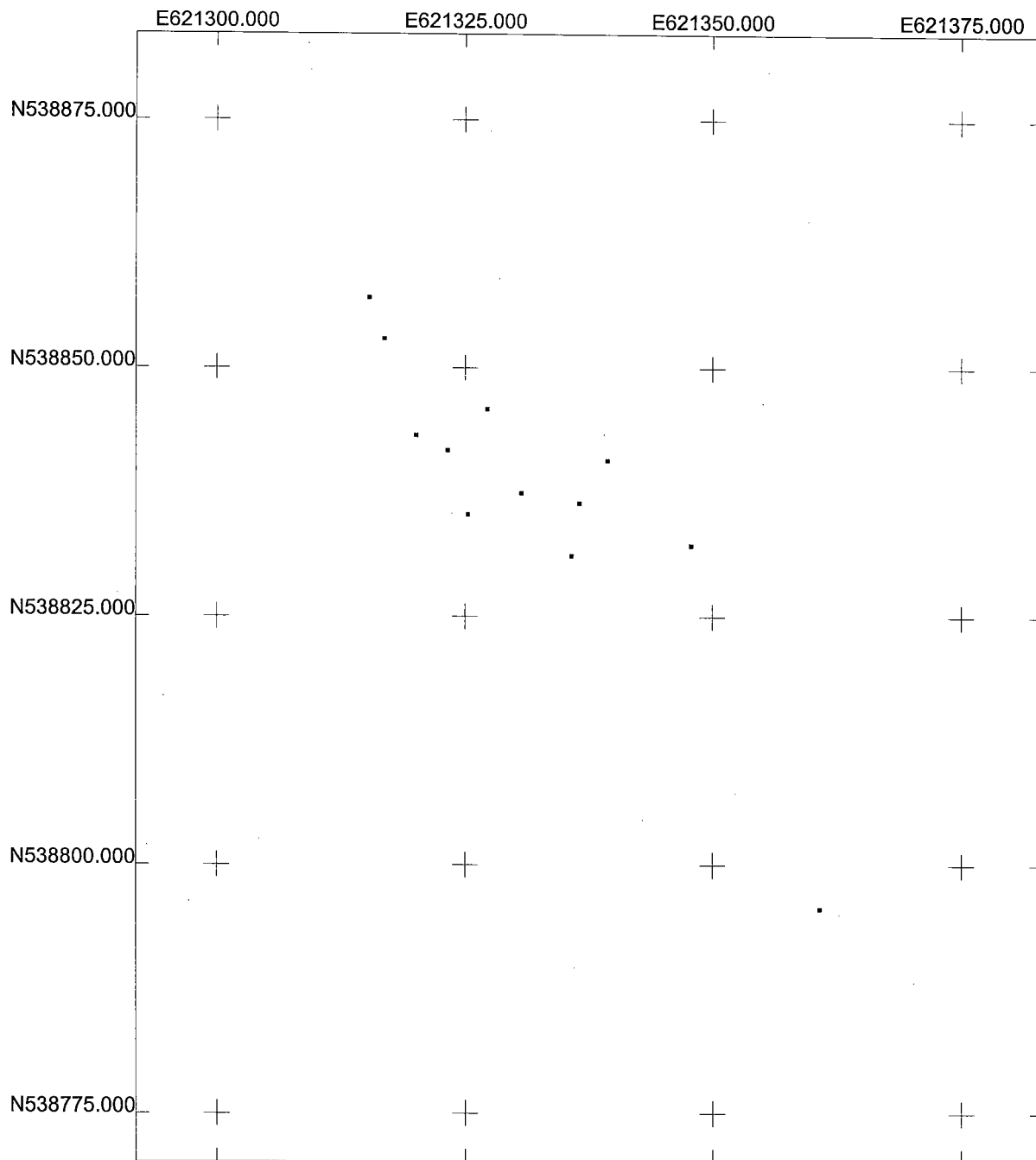
MARCH 18, 1998
PHOTOGRAPHIC LOG
UST NO. 81533-152

Building 914
Main Post-West
Fort Monmouth

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA

APPENDIX H

ELECTRONIC DATA DELIVERABLES



Bldg. 914 UST Site Sample GPS Map

US State Plane 1983
New Jersey (NY East) 2900
NAD 1983 (Conus)



Scale 1:200
0 25.00

US Survey Feet

r010419b.cor
7/11/2000
Pathfinder Office
 **Trimble**

BLDG. 914 UST SITE SAMPLE GPS POSITION & COORDINATES

US STATE PLANE 1983 NJ (NY EAST) 2900 NAD 1983 (CONUS)

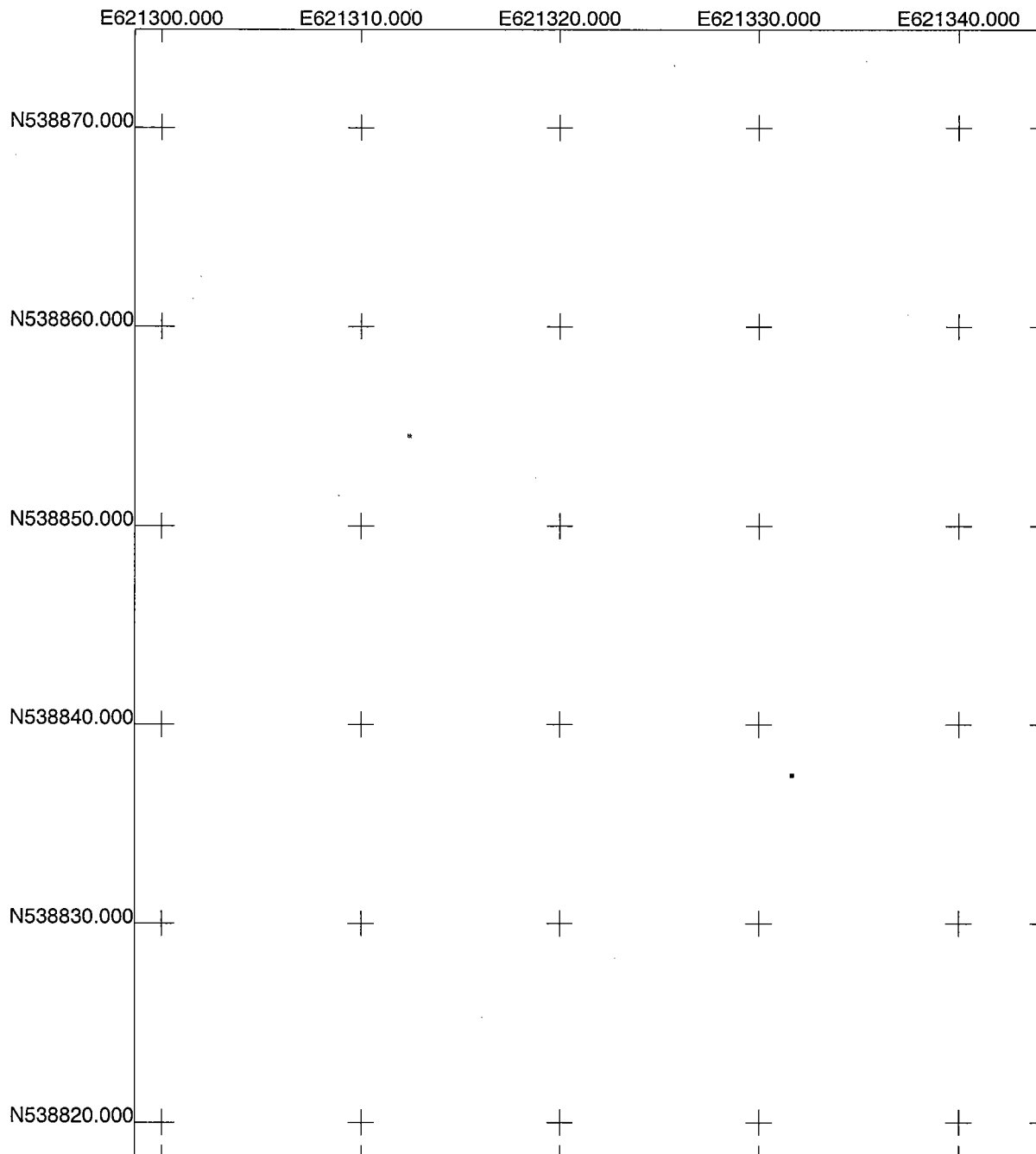
(IN US SURVEY FEET)

SAMPLE POINTS

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
914 A	538841.76	621323.144
914 B	538836.47	621336.48
914 C	538832.241	621347.776
914 D	538843.262	621319.997
914 E	538835.289	621325.202
914 F	538831.145	621335.675
914 G	538845.94	621327.139
914 H	538840.732	621339.327
914 I	538853.015	621316.77

REFERENCE POINTS

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
914 BLDG. CORNER	538857.15	621315.242
914 MW	538837.474	621330.622
918 BLDG CORNER	538795.716	621360.695



Bldg. 914 UST Ground Water Sample GPS Location Map

US State Plane 1983
New Jersey (NY East) 2900
NAD 1983 (Conus)



Scale 1:100
0 12.50

US Survey Feet

r010814agw914.cor
2/10/2000
Pathfinder Office
 **Trimble**

BLDG. 914 UST GROUND WATER SAMPLE GPS POSITION & COORDINATES

US STATE PLANE 1983 NJ (NY EAST) 2900 NAD 1983 (CONUS)

(IN US SURVEY FEET)

SAMPLE POINTS

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
914 GW (GW denotes <u>G</u> round <u>W</u> ater)	538837.495	621331.609

REFERENCE POINT

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
914 POLE	538854.534	621312.399