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United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

***Building 911
Main Post-West Area***

**NJDEP UST Registration No. 81533-149
Dicar No. 98-01-02-1141-57**

December 1998

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

BUILDING 911

**MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 81533-149**

DECEMBER 1998

PREPARED FOR:

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

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PROJECT NO. 2429-308

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EXECUTIVE SUMMARY

UST Closure

On January 2, 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. 0081533-149 (Fort Monmouth ID No. 911), was located southwest of Building 911. UST No. 0081533-149 was a 1,000-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. 98-01-02-1141-57. Approximately 94 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 644.20 mg/kg, except for sample H and I that had a TPHC concentration of 3,446.79 mg/kg and 3074.60 mg/kg. These sample locations could not be further remediated due to underground utilities. A VOA analysis (EPA Method 8260) was completed on sample H and all known compounds searched for in the analysis were not detected. Fifteen tentatively identified compounds were detected below the method detection limit. Groundwater was encountered at 6.5 feet below ground surface and free product was observed on groundwater.

All post excavation soil samples collected from the UST excavation at Building 911 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 911. On October 29, 1998, and November 30, 1998, Building 911 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. 81533-149 at Building 911.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-149, was closed at Building 911 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on January 2, 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 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-149 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. 81533-149 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BFCM). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 81533-149 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-BUST regulations. The applicable NJDEP-BUST 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 911 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-149 was located southwest of Building 911 and appurtenant copper piping ran approximately eight (8) feet northeast from the excavation to Building 911. 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 911. 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 911 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 911 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 900 gallons of liquid from the UST and its associated piping were pumped directly into a Lionetti Oil Recovery truck where it was then transported to Lionetti Oil Recovery Co., Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, 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 94 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 644.20 mg/kg, except for sample H and I that had a TPHC concentration of 3,446.79 mg/kg and 3074.60 mg/kg. These sample locations could not be further remediated due to underground utilities. A VOA analysis (EPA Method 8260) was completed on sample H and all known compounds searched for in the analysis were not detected. Fifteen tentatively identified compounds were detected below the method detection limit. Groundwater was encountered at 6.5 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 94 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 6.5 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: Dinker Desai
Employer: U.S. Army, Fort Monmouth
Phone Number: (908) 532-0989
NJDEP Certification No.: 0010173
- 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: L & L Oil Service
Contact Person: Gary Lo Bella
Phone Number: (908) 462-1001
NJDEP Company Certification No.: P56601

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. OVA readings taken during the assessment ranged from non-detect to 15 ppm. Approximately 94 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 6.5 feet below ground surface and free product was observed on groundwater.

2.3 SOIL SAMPLING

On January 29, 1998, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, D, E, F, G, H, I, J, K, and DUP C were collected from a total of eleven (11) locations of the UST excavation. Excavation floor samples A, B, C and DUP C were collected at a depth of 8.0 feet bgs. Sidewall samples D, E, F, G, H, and I were collected at a depth of 6.0 feet bgs. Piping samples J and K were collected along the former piping length of the excavation, which was approximately eight (8) feet in length.

The piping samples were collected at a depth of 1.5 feet bgs and 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 H.

On January 30, 1998, due to the detected concentration of TPHC along the west wall of the excavation, approximately 10 cubic yards of potentially contaminated soils were removed. Following removal of this soil, post-excavation soil samples AZ and BZ were collected along the sidewall of the excavation. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

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 29, 1998, and November 30, 1998, Building 911 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 January 29 and 30, 1998 from a total of thirteen (13) locations. All samples were analyzed for TPHC and total solids. In addition, sample H 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 H 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 January 29 and 30, 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

The sample collected from Building 911 on October 29, 1998, contained 1,2-dichlorobenzene at 2.80 ug/l, naphthalene at 5.93 ug/l, and 2-methylnaphthalene at 7.74 ug/l. No other compounds were detected. Methylene chloride was detected in the field blank at a concentration of 5.54 ug/l. No other compounds were detected in the field blank. The methylene chloride concentration exceeds the GWQS on account of laboratory contamination.

No compounds were detected in the sample collected from Building 911 on 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. Fort Monmouth,

Groundwater samples collected on October 29, 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 911 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 911 on October 29, 1998, and November 30, 1998, groundwater quality at Building 911 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. 81533-149 at Building 911.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 911, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 1 of 3

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
B	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
**F	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
H	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
I	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
J	1/29/98	1/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
K	1/29/98	1/29/98	Soil	Post-excavation	TPHC	OQA-QAM-025
DUP C	1/29/98	1/29/98	Soil	Post-excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

** Sample further remediated and resampled

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 911, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 2 of 3

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A2	1/30/98	2/3/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
B2	1/30/98	2/3/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 911, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 3 of 3

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
4016.01	10/29/98	11/4/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4016.02	10/29/98	11/4/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4016.03	10/29/98	11/4/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4016.04	10/29/98	11/4/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4089.01	11/30/98	12/1/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4089.02	11/30/98	12/1/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4091.03	11/30/98	12/1/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4091.04	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 911, 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/8.0=	3302.01	1/29/98	1/29/98	Total Solid	--	--	74.78 %	--	--
				TPHC	209	yes	ND	10,000	No
B/8.0=	3302.02	1/29/98	1/29/98	Total Solid	--	--	73.84 %	--	--
				TPHC	210	Yes	ND	10,000	No
C/8.0=	3302.03	1/29/98	1/29/98	Total Solid	--	--	74.25 %	--	--
				TPHC	201	Yes	ND	10,000	No
D/6.0=	3302.04	1/29/98	1/29/98	Total Solid	--	--	74.46 %	--	--
				TPHC	190	yes	644.20	10,000	No
E/6.0=	3302.05	1/29/98	1/29/98	Total Solid	--	--	79.00 %	--	--
				TPHC	189	yes	350.43	10,000	No
***F/6.0=	3302.06	1/29/98	1/29/98	Total Solid	--	--	78.02 %	--	--
				TPHC	199	yes	1307.52	10,000	No
G/6.0=	3302.07	1/29/98	1/29/98	Total Solid	--	--	78.67 %	--	--
				TPHC	190	Yes	380.50	10,000	No
H/6.0=	3302.08	1/29/98	1/29/98	Total Solid	--	--	79.27 %	--	--
				TPHC	198	yes	3446.79	10,000	No
I/6.0=	3302.09	1/29/98	1/29/98	Total Solid	--	--	79.24 %	--	--
				TPHC	187	yes	3074.60	10,000	No
J/1.5=	3302.10	1/29/98	1/29/98	Total Solid	--	--	86.25 %	--	--
				TPHC	174	yes	ND	10,000	No
K/1.0=	3302.11	1/29/98	1/29/98	Total Solid	--	--	84.17 %	--	--
				TPHC	175	yes	ND	10,000	No
DUPC/6.0=	3302.12	1/29/98	1/29/98	Total Solid	--	--	89.46 %	--	--
				TPHC	168	yes	ND	10,000	No

Note:

- * Total Solid results are expressed as a percentage.
 ** NJDEP Residential Direct Contact soil cleanup criteria for total organics
 *** Sample further remediated and resampled
 ND Not detected above stated method detection limit
 TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 911, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

Page 2 of 2

Sample ID/ Depth	Sample Laborator y 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
AZ/6.0=	3308.01	1/30/98	2/2/98	Total Solid	--	--	80.04 %	--	--
				TPHC	184	yes	ND	10,000	No
BZ/6.0=	3308.02	1/30/98	2/2/98	Total Solid	--	--	81.10 %	--	--
				TPHC	190	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: 1/29/98Location: 911Lab Sample ID: 3302.08(SAMPLE H)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
107028	Acrolein	2100	U	NA	NA
107131	Acrylonitrile	2100	U	1000	5000
75650	tert-Butyl alcohol	3900	U	NA	NA
1634044	Methyl-tert-Butyl ether	900	U	NA	NA
108203	Di-isopropyl ether	600	U	NA	NA
	Dichlorodifluoromethane	1200	U	NA	NA
74-87-3	Chloromethane	300	U	520000	1000000(d)
75-01-4	Vinyl Chloride	900	U	2000	7000
74-83-9	Bromomethane	600	U	79000	1000000(d)
75-00-3	Chloroethane	900	U	NA	NA
75-69-4	Trichlorofluoromethane	600	U	NA	NA
75-35-4	1, 1-Dichloroethene	300	U	8000	150000
67-64-1	Acetone	600	U	1000000(d)	1000000(d)
75-15-0	Carbon Disulfide	300	U	NA	NA
75-09-2	Methylene Chloride	600	U	49000	210000
156-60-5	trans-1,2-Dichloroethene	600	U	1000000(d)	1000000(d)
75-35-3	1,1-Dichloroethane	300	U	570000	1000000(d)
108-05-4	Vinyl Acetate	900	U	NA	NA
78-93-3	2-Butanone	900	U	1000000(d)	1000000(d)
156-59-2	cis-1,2-Dichloroethene	300	U	79000	1000000(d)
67-66-3	Chloroform	300	U	19000(k)	28000(k)
75-55-6	1,1,1-Trichloroethane	300	U	NA	NA
56-23-5	Carbon Tetrachloride	600	U	2000(k)	4000(k)
71-43-2	Benzeze	300	U	3000	13000
107-06-2	1,2-Dichloroethane	600	U	6000	24000

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) SOILDate Sampled: 1/29/98Location: 911Lab Sample ID: 3302.08(SAMPLE H)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
79-01-6	Trichloroethene	300	U	23000	54000(k)
78-87-5	1, 2-Dichloropropane	300	U	10000	43000
75-27-4	Bromodichloromethane	300	U	11000(g)	46000(g)
110-75-8	2-Chloroethyl vinyl ether	600	U	NA	NA
10061-01-5	cis-1,3-Dichloropropene	300	U	NA	NA
108-10-1	4-Methyl-2-Pentanone	600	U	1000000(d)	1000000(d)
108-88-3	Toluene	300	U	1000000(d)	1000000(d)
10061-02-6	trans-1,3-Dichloropropene	600	U	NA	NA
79-00-5	1,1,2-Trichloroethane	600	U	22000	420000
127-18-4	Tetrachloroethene	300	U	4000(k)	6000(k)
591-78-6	2-Hexanone	600	U	NA	NA
126-48-1	Dibromochloromethane	600	U	NA	NA
108-90-7	Chlorobenzene	300	U	37000	680000
100-41-4	Ethylbenzene	600	JD	1000000(d)	1000000(d)
1330-20-7	m+p-Xylenes	900	U	NA	NA
1330-20-7	o-Xylene	600	U	NA	NA
100-42-5	Styrene	600	U	23000	97000
75-25-2	Bromoform	600	U	86000	370000
79-34-5	1,1,2,2-Tetrachloroethane	600	U	34000	70000(k)
541-73-1	1,3-Dichlorobenzene	900	U	5100000	10000000(c)
106-46-7	1,4-Dichlorobenzene	900	U	570000	10000000(c)
95-50-1	1,2-Dichlorobenzene	900	U	5100000	10000000(c)

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

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

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.01(Trip Blank)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.01(Trip Blank)

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
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.02(Field Blank)

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	5.54	--	2	yes
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

Note:

* Compound exceeds criteria due to laboratory contamination

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.02(Field Blank)

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
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 10/29/98 Location: 911 Lab Sample ID: 4016.03(Bldg 911)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.03(Bldg 911)

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	2.80	--	600	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.02(Field Blank)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.02(Field Blank)

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
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.04(Bldg 911)

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	5.93	--	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	7.74	--	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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 10/29/98Location: 911Lab Sample ID: 4016.04(Bldg 911)

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

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.01(Trip Blank)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.01(Trip Blank))

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
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER
 Date Sampled: 11/30/98 Location: 911 Lab Sample ID: 4089.02(Field Blank)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.02(Field Blank)

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
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.03(Bldg 911)

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: 11/30/98 Location: 911 Lab Sample ID: 4089.03(Bldg 911)

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

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.02(Field Blank)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.02(Field Blank)

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 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.04(Bldg 911)

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: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 11/30/98Location: 911Lab Sample ID: 4089.04(Bldg 911)

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

FIGURES

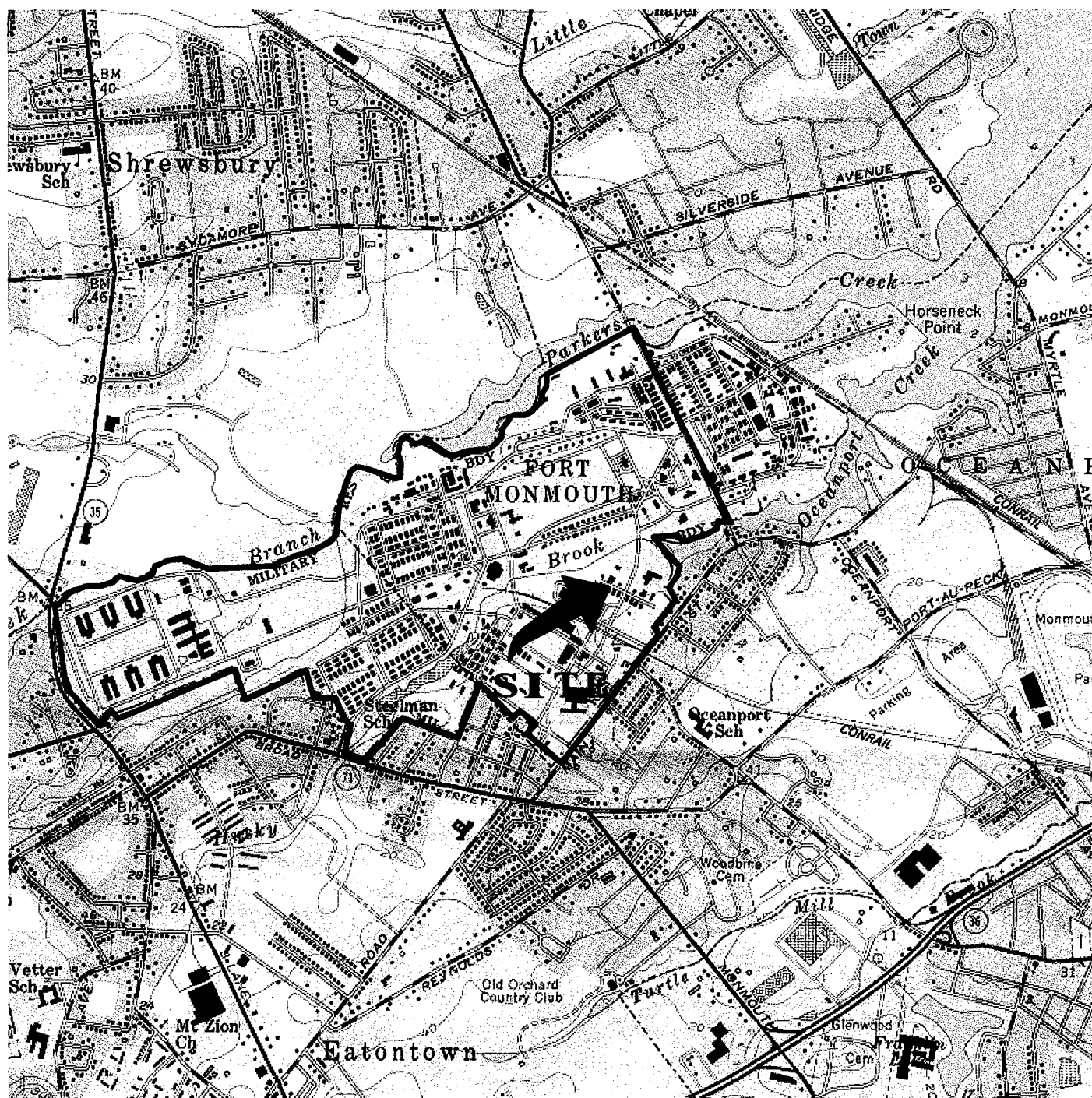


FIGURE 1

LOCATION MAP
 Building 911
 Main-Post West
 Fort Monmouth Army Base
 Monmouth County, NJ

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

Scale; 1" = 2000'

Date: JAN 1998

LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 1 SE-8SERIES V822

NEW
JERSEY

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

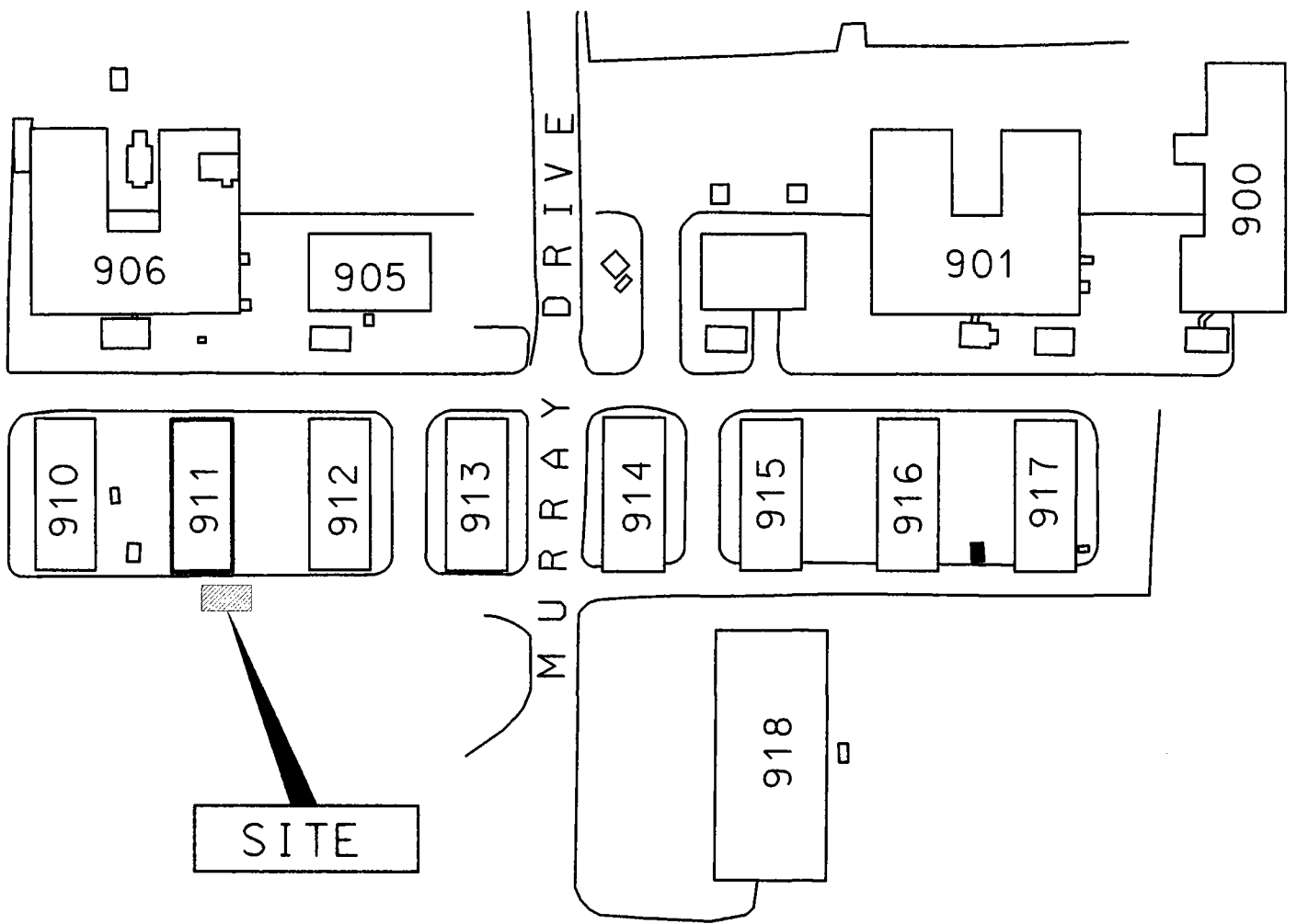


FIGURE 2
SITE MAP
BUILDING 911
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=100'

DATE: JANUARY 1998

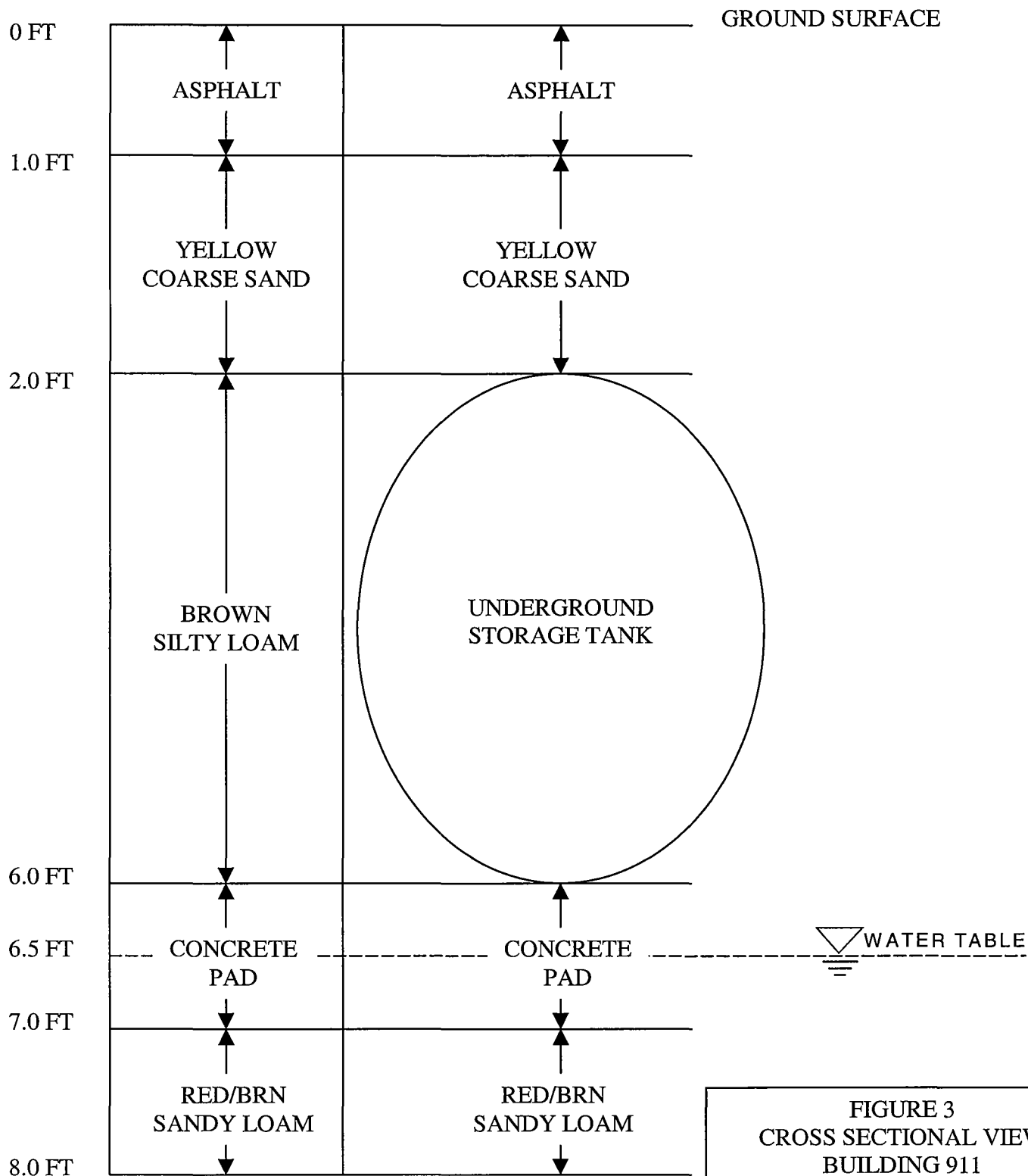


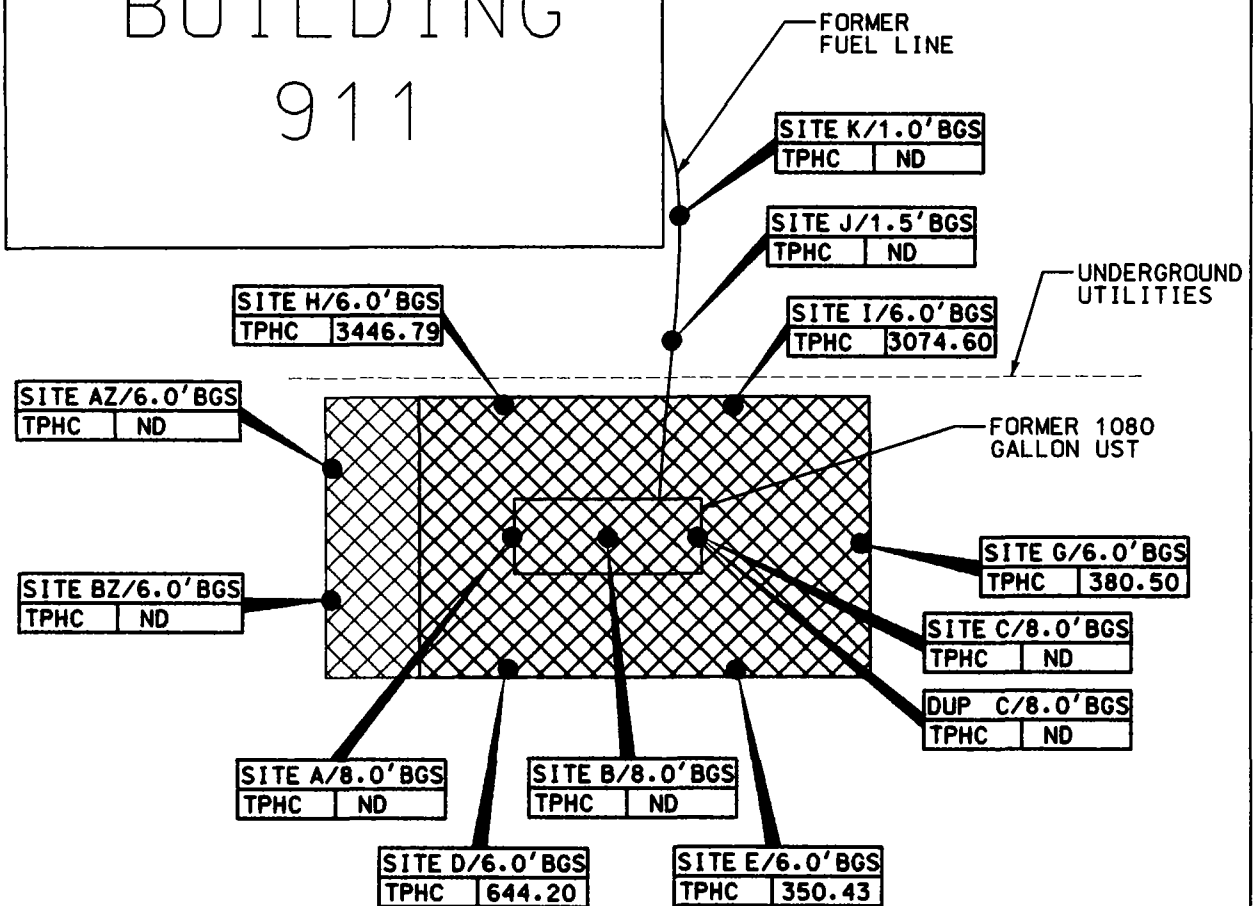
FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 911
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, Pennsylvania

SCALE: NTS

DATE: JAN 1998

BUILDING 911



LEGEND

- SOIL SAMPLE LOCATION (JANUARY 29, 1998)
- SOIL SAMPLE LOCATION (JANUARY 30, 1998)
- ▨ LIMIT OF EXCAVATION (JANUARY 29, 1998)
- ▨ LIMIT OF EXCAVATION (JANUARY 30, 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 911
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10'

DATE: JANUARY 1998

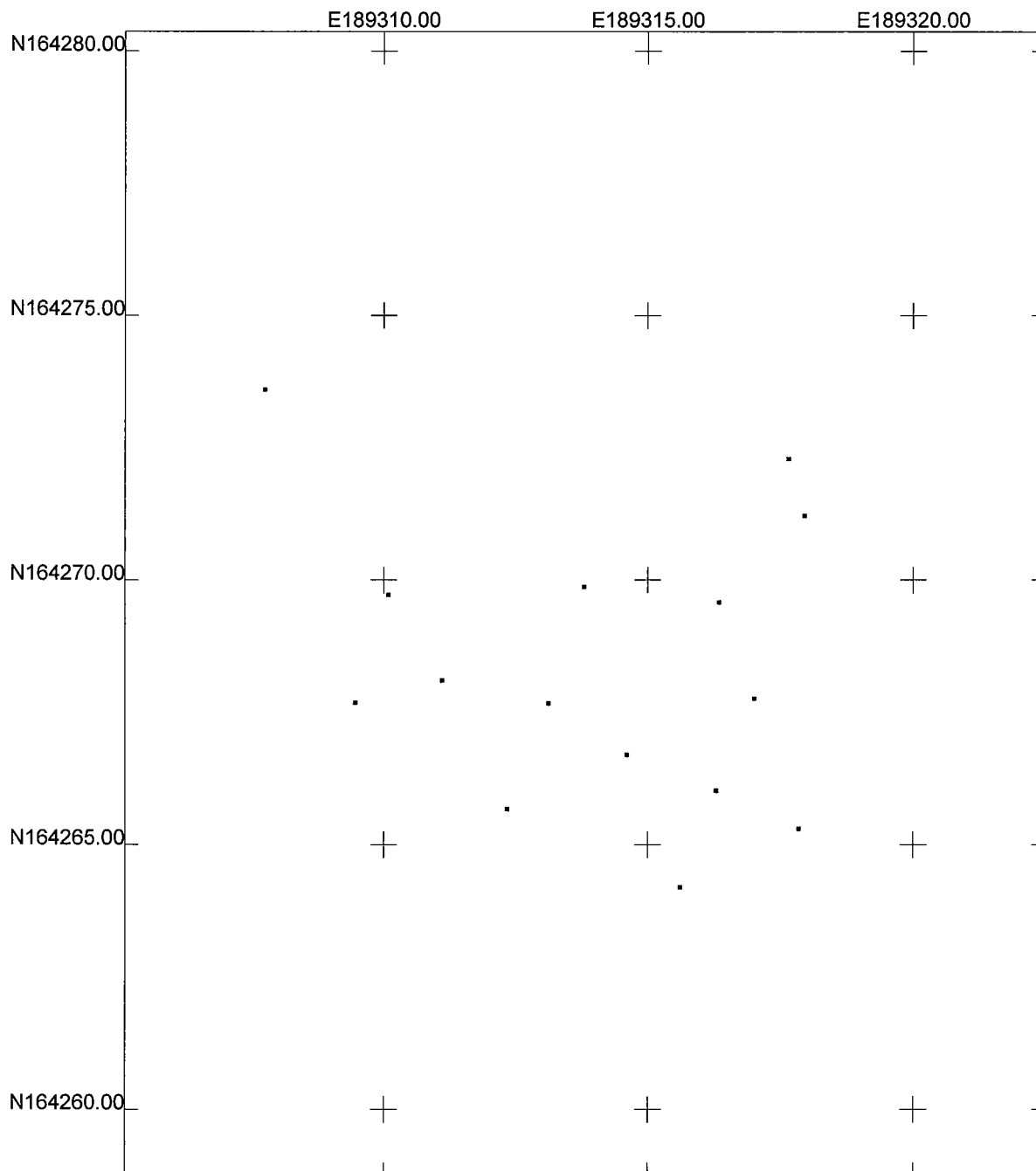


Figure 4 GPS Sample Location Map

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



Scale 1:125
0 4.000
Meters

r010815a911.cor
1/28/1999
Pathfinder Office
 **Trimble**

Figure 4 GPS Sample Location Point Data

US State Plane 1983 NJ (NY East) 2900 NAD 1983 (CONUS)

(In Meters)

Sample Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
911 A	164267.687	189313.107
911 B	164266.713	189314.594
911 C	164266.036	189316.282
911 D	164265.688	189312.329
911 E	164264.213	189315.596
911 F	164268.121	189311.095
911 G	164265.317	189317.836
911 H	164269.886	189313.781
911 I	164267.781	189317.002
911 J	164269.597	189316.334
911 K	164272.3	189317.64
911 AZ	164269.737	189310.072
911 BZ	164267.704	189309.45

Reference Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
911 CORN	164271.228	189317.942
911 CORN	164273.615	189307.733

BUILDING 911

FORMER
FUEL LINE

FORMER 1080
GALLON UST

SAMPLING LOCATION: SAMPLING DEPTH: SAMPLING DATE:	HIGHER OF NJDEP GWQS AND PQL	BLDG 911 7-10' BGS 10/29/98	BLDG 911 7.5-10.5' BGS 11/30/98
VOLATILE ORGANIC COMPOUNDS:			
1,2-DICHLOROBENZENE:	600	2.80	ND
SEMIVOLATILE ORGANIC COMPOUNDS:			
NAPHTHALENE:	NLE	5.93	ND
2-METHYLNAPHTHALENE:	NLE	7.74	ND



LEGEND



GROUNDWATER SAMPLE LOCATION
(OCTOBER 29, 1998 AND NOVEMBER 30, 1998)



LIMIT OF EXCAVATION
(JANUARY 29, 1998)



LIMIT OF EXCAVATION
(JANUARY 30, 1998)

NOTES:

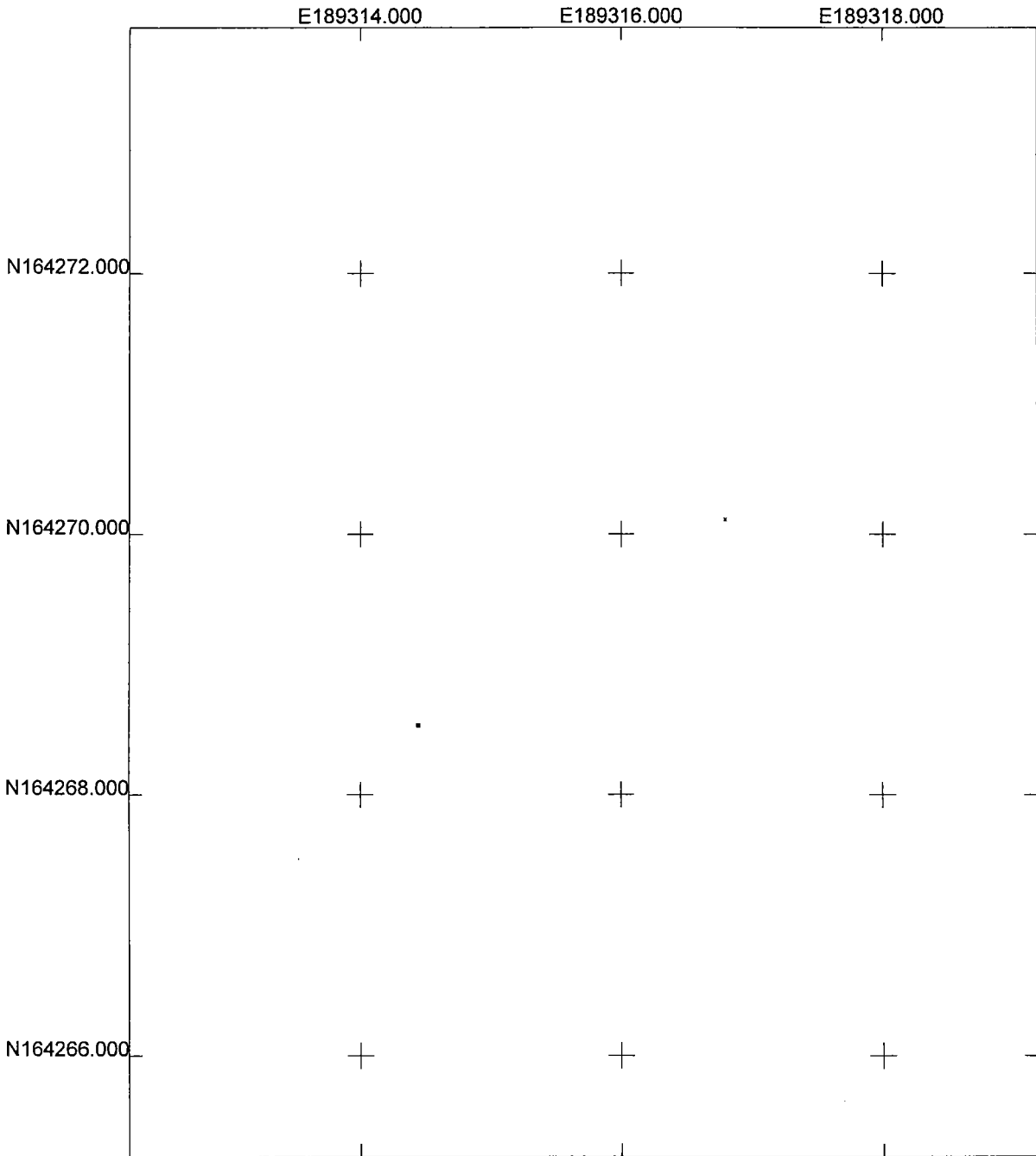
1. ND=INDICATES COMPOUND NOT DETECTED
2. NLE= NO LIMIT ESTABLISHED
3. ALL RESULTS IN UG/L
4. BGS = BELOW GROUND SURFACE

FIGURE 5
GROUNDWATER SAMPLING MAP
BUILDING 911
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10'

DATE: JANUARY 1998



**Figure 5 GPS Sample Locations Map
(Bldg 911)**

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



Scale 1:50
0 1.500
Meters

r010814a.cor
1/20/1999
Pathfinder Office
 **Trimble**

Figure 5 GPS Sample Point Location Data

US State Plane 1983 NJ (NY East) 2900 NAD 1983 (CONUS)

(in Meters)

Sample Point

<u>Location / Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
911GW	164268.54	189314.438

(GW denotes Ground Water)

Reference Point

<u>Location / Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
911 BLDG	164270.12	189316.793

APPENDIX A

NJDEP-STANDARD REPORTING FORM

UST File Copy



State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation

CR 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 | ☐ Date of Transfer |
| ☐ Closure (Abandonment or Removal) | ☐ Electrical 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 type can be done per facility)

*** NOTE *** ALL NEW UST INSTALLATIONS IN EXISTING REGULATED facilities must submit a Registration Questionnaire for the New UST.

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 APT 07703

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

MAIN POST WEST

3. Contact person for this activity:

CHARLES APPLEBY/DINKER DESAI
Telephone Number: (732) 682-6224

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

Box 911
0081533

5. Registration Number (if known):

UST 149

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:

d. Block:

Lot:

e. Contact person (facility operator):

f. Contact telephone number: ()

g. Other (Specify):

(OVER)

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 : 81533-149 (7 digits)• Incident Report Number • • • • • (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. 7:26E Yes NoName: Dinker DeSai Signature: [Signature] UST Cert. No.: 10173Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: NA - U.S. ArmyFirm Address: Directorate of Public Works Building 173 City: Fort MonmouthState: New Jersey 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 WorksSignature: [Signature]Company Name: U.S. Army Fort MonmouthDate: 3/25/99

APPENDIX C

WASTE MANIFEST



RD. 1, BOX 5A - OLD BRIDGE, NJ 08857

NON-HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest
Document No.2. Page 1
of 1

NHZ 009784

3. Generator's Name and Mailing Address

U.S. ARMY COMMUNICATIONS ELECTRONICS COMM

BLDG #173 ATTN: SELF-M-PW-EV

FORT MONMOUTH NJ 07703

4. Generator's Phone (732) 532 6223

5. Transporter 1 Company Name

LIONETTI OIL RECOVERY CO INC

6. US EPA ID Number

NJ.D.0.8.4.0.4.4.0.6.4

A. Transporter's Phone

908 721-0900

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

LIONETTI OIL RECOVERY CO INC DBA LORCO PETROLEUM SVCS

RUNYON&CHEESEQUAKE RDS

OLD BRIDGE, NJ 08857

10. US EPA ID Number

NJ.D.0.8.4.0.4.4.0.6.4

C. Facility's Phone

908 721-0900

11. Waste Shipping Name and Description

12. Containers

No. Type

13.
Total
Quantity14.
Unit
Wt/Vola. PETROLEUM OIL (PETROLEUM OIL)
COMBUSTIBLE LIQUID UN1270 PGIII

0 0 1 T 10547 G

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

T, L PETROLEUM OIL 90 %

WATER 10 %

E. Handling Codes for Wastes Listed Above

T04 FILTRATION

15. Special Handling Instructions and Additional Information

24 HR EMERGENCY RESPONSE#(908) 721-0900

DECAL#87092 ERG#128 DEXSIL TEST KIT RESULTS <1000 PPM

MANIFEST USED FOR TRACKING PURPOSES ONLY

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Joseph M. Fallon

Signature

Joseph M. Fallon

Month Day Year

01 02 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

DOUGLAS VAN PELT

Signature

Douglas Van Pelt

Month Day Year

01 02 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Richard LeBeau

Signature

Richard LeBeau

Month Day Year

01 02 98

ORIGINAL - RETURN TO GENERATOR

APPENDIX D

UST DISPOSAL CERTIFICATE

THIS CHECK IS DELIVERED TO OR PAYMENT ON THE FOLLOWING ACCOUNTS					
DATE		AMOUNT			
TOTAL OF INVOICES					
LESS % DISCOUNT					
LESS FREIGHT					
LESS					
TOTAL DEDUCTIONS					
AMOUNT OF CHECK					

MAZZA & SONS, INC.
 RECYCLING DIVISION
 P.O. BOX 286
 OAKHURST, NJ 07755

1626

55-7233 / 2212

PAY TO THE ORDER OF Tecom Virell Services \$ 93.10

Ninety Three + 10/100 DOLLARS

Sovereign Bank

@001626@ : 221272332:000 1091099285

B. 911

MAZZA & SONS, INC.

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

NO. _____

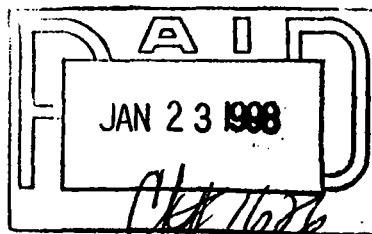
DATE. 23 Jun 78

Customer's Name TECHN - UINIVITIC

Address _____

Weight	Price
Cast Iron	
Steel	
7.111	38.50
Lt. Iron	
Copper #1	
Copper #2	

	Weight	Price
14580 LB	Lt. Copper	
	Brass	
17480 LB	Alum Clean	
1/100	Lead	
	Stainless	
	Battery	
		\$ 38.50
	TOTAL AMOUNT:	



Weigher _____

Customer John Williams

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. 911

Project # 3302
Date Rec. 01/29/98
Date Comp. 01/30/98
Released by:



Daniel K. Wright
Laboratory Director

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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>
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank. _____ _____	<u>✓</u>	—
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	—	—
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). _____ _____	—	—
5. IR Spectra submitted for standards, blanks, & samples	—	<u>NA</u>
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	—	—
7. Analysis holding time met. (If not met, list number of days exceeded for each sample) _____ _____	—	—
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 (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPW-ENV		Project No: 98-0001		Analysis Parameters								Comments:			
Phone #:		Location: B.911		TPHC Ca Salts Murder VOCs PCBs DETERMINED VOC ID # QVA								*= SAMPLES KEPT BELOW 4°C.			
() DERA (X) JOMA () Other:				Samplers Name / Company: GARY DiMARTINIS-TUS		Sample #									
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles	TPHC	Ca Salts	Murder	VOCs	PCBs	DETERMINED	VOC ID #	QVA	Remarks / Preservation Method	
3302.01	911-A	1-29-98	1052	SOIL	1	X	X	X					1	Exc. Floor @ 8.0' *	
02	B		1031										ND		
03	C		1028										1		
04	D		1059										10	SIDE WALL @ 6.0'	
05	E		1046										1		
06	F		1055										2		
07	G		1034		↓								1		
08	H		1105		2				X			980128.02	15		
09	I		1038		↓				↓			980128.01	15		
10	J		1125		1								ND	Piping Run @ 1.5'	
11	K		1130										ND	Piping Run @ 1.0'	
12	DUP		—			↓	↓	↓					—	FIELD Duplicate	
13	TB		—	METHANE	↓				X			980128.03	—	TRIP BLANK	
NOTE: QVA (#ASX114) CALIBRATED W/15 PPM CHV + ZERO W/ AIR @ 1015 HRS ON 1-29-98 by G. DiMARTINIS															
Relinquished by (signature):		Date/Time:		Received by (signature):		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		Turnaround time: () Standard 4 wks, (X) Rush Days, (X) ASAP Verbal Hrs.				Remarks: DEDICATED SAMPLING TOOLS USED.									

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 2/23/96

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
98-0001
B.911

Project # 3302
Date Rec. 01/29/98
Date Compl. 02/10/98
Released by:



Daniel K. Wright
Laboratory Director

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Method Summary

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil 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 1,1-DEE 1550/b
 - b. B/N Fraction _____
 - c. Acid Fraction _____

Y

Y

Y

Y

Y

Y

Y

N

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 _____

Y

11. Extraction Holding Time Met

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

NA

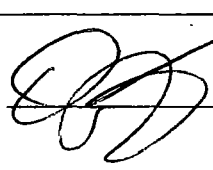
12. Analysis Holding Time Met

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

Y

Additional Comments:

Laboratory Manager :



Date:

6-16-96

Fort Monmouth Environmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPW-ENV				Project No: 98-0001		Analysis Parameters						Comments: * = SAMPLES KEPT BELOW 4°C.	
Phone #:				Location: B. 911									
() DERA (X) OMA () Other:				Samplers Name / Company: GARY DiMARTINIS-TUS		Sample #							Remarks / Preservation Method
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles	TPHC	La Salas	Murphy	VOA-15	VOA-15 (DETERMINED)	VOA ID #	OVA	
3302. 01	911-A	1-29-98	1052	SOIL	1	X	X	X				1	Exc. Floor @ 8.0' *
02	B		1031									ND	
03	C		1028									1	↓
04	D		1059									10	SIDE WALL @ 6.0'
05	E		1046									1	
06	F		1055									2	
07	G		1034		↓							1	
08	H		1105		2				X	98028.02		15	
09	I		1038		↓				↓	98028.01		15	↓
10	J		1125		1							ND	Piping Run @ 1.5'
11	K		1130									ND	Piping Run @ 1.0'
12	DUP		—			↓	↓	↓				—	FIELD Duplicate
13	TB		—	METHANE	↓				X	98028.03		—	Trip Blank
NOTE: OVA (#AS2114) CALIBRATED W/ 95 ppm CH ₄ + ZERO'd AIR @ 1015 HRS ON 1-29-98 by G. DiMARTINIS													
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):			
		1/29/98 1320											
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: DEDICATED SAMPLING TOOLS USED.							
Turnaround time: () Standard 4 wks, (X) Rush Days, (X) 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.

VBK23

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBK23

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02953.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 0 Date Analyzed: 02/10/98

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

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
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
108-88-3	Toluene	250	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
100-41-4	Ethylbenzene	500	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBK23

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBK23

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02953.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 0 Date Analyzed: 02/10/98

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

1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
79-34-5	1,1,2,2-Tetrachloroethane	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.

911-H

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3302.08

Sample wt/vol: 10.5 (g/ml) G Lab File ID: V02959.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 20.73 Date Analyzed: 02/10/98

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
107028	Acrolein		2100	U
107131	Acrylonitrile		2100	U
75650	tert-Butyl alcohol		3900	U
1634044	Methyl-tert-Butyl ether		900	U
108203	Di-isopropyl ether		600	U
	Dichlorodifluoromethane		1200	U
74-87-3	Chloromethane		300	U
75-01-4	Vinyl Chloride		900	U
74-83-9	Bromomethane		600	U
75-00-3	Chloroethane		900	U
75-69-4	Trichlorofluoromethane		600	U
75-35-4	1,1-Dichloroethene		300	U
67-64-1	Acetone		600	U
75-15-0	Carbon Disulfide		300	U
75-09-2	Methylene Chloride		600	U
156-60-5	trans-1,2-Dichloroethene		600	U
75-35-3	1,1-Dichloroethane		300	U
108-05-4	Vinyl Acetate		900	U
78-93-3	2-Butanone		900	U
	cis-1,2-Dichloroethene		300	U
67-66-3	Chloroform		300	U
75-55-6	1,1,1-Trichloroethane		300	U
56-23-5	Carbon Tetrachloride		600	U
71-43-2	Benzene		300	U
107-06-2	1,2-Dichloroethane		600	U
79-01-6	Trichloroethene		300	U
78-87-5	1,2-Dichloropropane		300	U
75-27-4	Bromodichloromethane		300	U
110-75-8	2-Chloroethyl vinyl ether		600	U
10061-01-5	cis-1,3-Dichloropropene		300	U
108-10-1	4-Methyl-2-Pentanone		600	U
108-88-3	Toluene		300	U
10061-02-6	trans-1,3-Dichloropropene		600	U
79-00-5	1,1,2-Trichloroethane		600	U
127-18-4	Tetrachloroethene		300	U
591-78-6	2-Hexanone		600	U
126-48-1	Dibromochloromethane		600	U
108-90-7	Chlorobenzene		300	U
100-41-4	Ethylbenzene		600	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

911-H

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3302.08

Sample wt/vol: 10.5 (g/ml) G Lab File ID: V02959.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 20.73 Date Analyzed: 02/10/98

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

1330-20-7	m+p-Xylenes	900	U
1330-20-7	o-Xylene	600	U
100-42-5	Styrene	600	U
75-25-2	Bromoform	600	U
79-34-5	1,1,2,2-Tetrachloroethane	600	U
541-73-1	1,3-Dichlorobenzene	900	U
106-46-7	1,4-Dichlorobenzene	900	U
95-50-1	1,2-Dichlorobenzene	900	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

911-TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3302.13

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02961.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 0 Date Analyzed: 02/10/98

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
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
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
108-88-3	Toluene		250	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
100-41-4	Ethylbenzene		500	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

911-TB

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3302.13

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02961.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 0 Date Analyzed: 02/10/98

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

1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
79-34-5	1,1,2,2-Tetrachloroethane	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.

VBLK23

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3302 Location: B.911 SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: VBLK23
Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02953.D
Level: (low/med) MED Date Received: 01/29/98
% Moisture: not dec. 0 Date Analyzed: 02/10/98
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.

911-H

Lab Name: FMETL NJDEP # 13461

Project: 980001 Case No.: 3302 Location: B.911 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3302.08

Sample wt/vol: 10.5 (g/ml) G Lab File ID: V02959.D

Level: (low/med) MED Date Received: 01/29/98

% Moisture: not dec. 20.73 Date Analyzed: 02/10/98

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: 15

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000624-29-3	Cyclohexane, 1,4-dimethyl-, cis-	24.76	3700	JN
2.	unknown	27.24	4300	J
3.	unknown	27.76	3200	J
4. 001678-92-8	Cyclohexane, propyl-	30.85	5900	JN
5.	unknown	31.97	3300	J
6. 001678-93-9	Cyclohexane, butyl-	34.15	3800	JN
7. 000135-98-8	Benzene, (1-methylpropyl)-	34.34	3500	JN
8.	unknown	35.48	8400	J
9. 001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	35.67	10000	JN
10. 000493-02-7	Naphthalene, decahydro-, trans-	35.86	5500	JN
11. 000933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	36.39	4600	JN
12. 000874-41-9	Benzene, 1-ethyl-2,4-dimethyl-	36.69	6300	JN
13.	unknown	36.97	7400	J
14.	unknown	37.31	6500	J
15.	unknown	37.51	3400	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

911-TB

Lab Name: FMETL NJDEP # 13461
Project: 980001 Case No.: 3302 Location: B.911 SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 3302.13
Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02961.D
Level: (low/med) MED Date Received: 01/29/98
% Moisture: not dec. 0 Date Analyzed: 02/10/98
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 | ☒ |
| 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 6/16/98

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: Total Petroleum Hydrocarbons
98-0001
Bldg. 911
West Wall

Project # 3308
Date Rec. 01/30/98
Date Compl. 02/02/98
Released by:



Daniel K. Wright
Laboratory Director

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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.

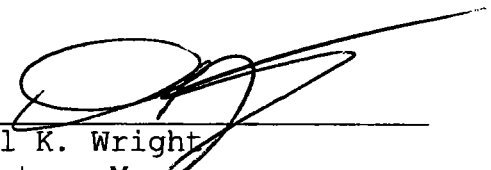
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

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.

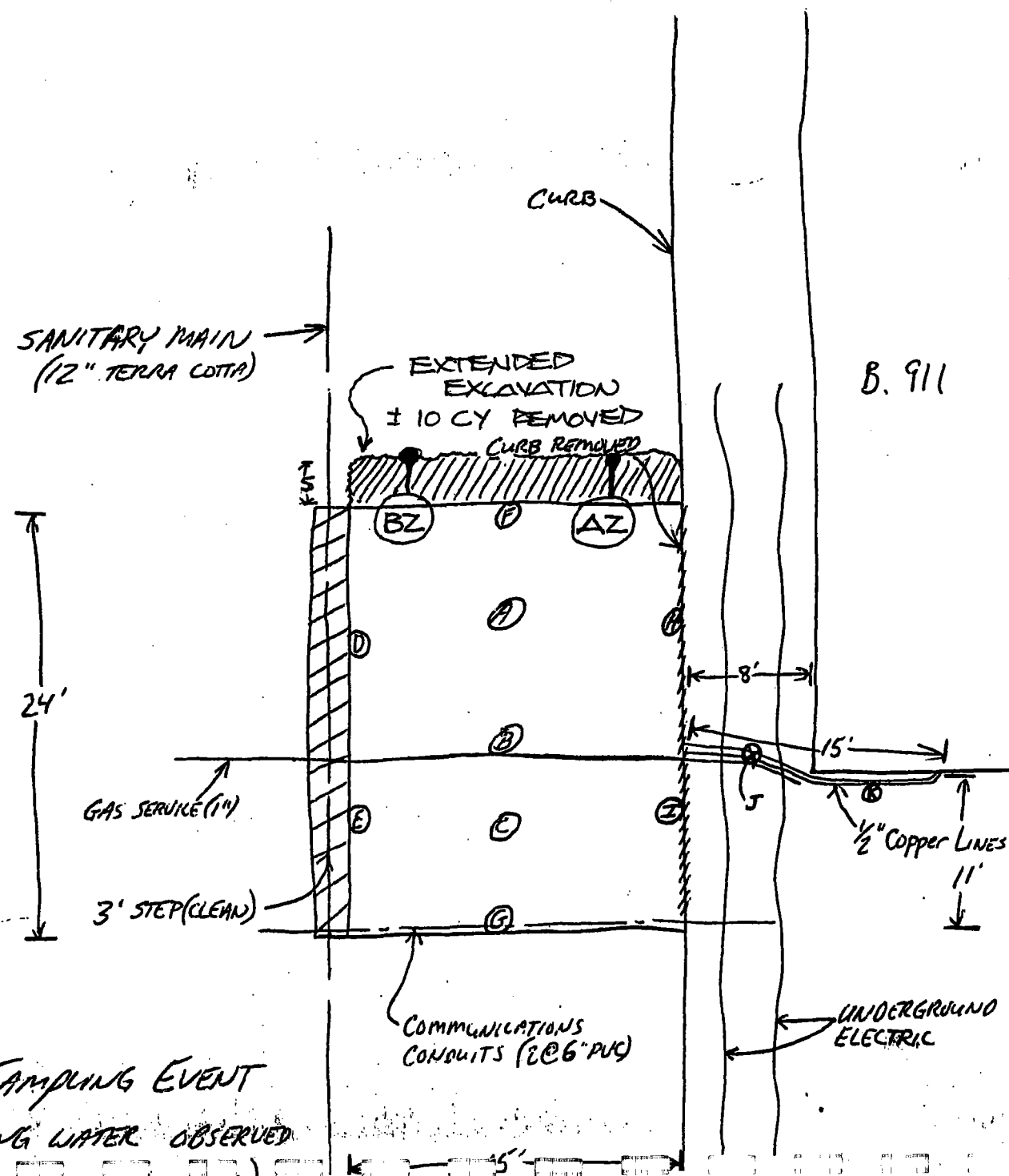
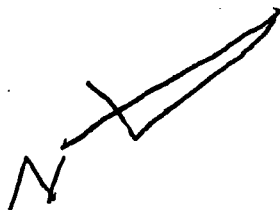


Daniel K. Wright
Laboratory Manager

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

Chain of Custody Record

print legibly



1/29/98 SAMPLING EVENT
NOTE: STANDING WATER OBSERVED

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

Client : U.S. Army Lab. ID # : 3308
DPW. SELFM-PW-EV Date Rec'd: 30-Jan-98
Bldg. 173 Analysis Start: 02-Feb-98
Ft. Monmouth, NJ 07703 Analysis Complete: 02-Feb-98

Analysis: OQA-QAM-025 UST Reg. #:
Matrix: Soil Closure #:
Analyst: D.DEINHARDT DICAR #:
Ext. Meth: Shake Location #: BLDG. 911

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3308.01	911-AZ	1.00	15.95	80.04	184	ND
3308.02	911-BZ	1.00	15.27	81.10	190	ND
METHOD BLANK	2-Feb-98	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit


Daniel K. Wright
Laboratory Director

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 2/27/96



Laboratory Certification #13461

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

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. 911

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4016.01	Aqueous	29-Oct-98	10/29/98
Field Blank	4016.02	Aqueous	29-Oct-98 10:58	10/29/98
Bldg. 911 - 7-10'	4016.03	Aqueous	29-Oct-98 11:19	10/29/98
Bldg. 911 - 7-10'	4016.04	Aqueous	29-Oct-98 13:00	10/29/98

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



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: CHS. APPLEBY / VERSAE		Project No:		Analysis Parameters										Comments:		
Phone #: 826224		Location: BLDG 5, 911, 912 913														
() DERA (X) OMA () Other:		Samplers Name / Company: MARK LUNA / T/S		Sample #	bottles	V	B									Remarks / Preservation Method
Lab Sample I.D.	Sample Location	Date	Time	Type		15	15									
4016.	1 TRIP BLANK	10-29-98	—	AQ	2	X										HCL
	2 FIELD BLANK	"	1058	"	3	X	X									HCL/24°C
	3 BLDG. 911 - 7-10'	"	1119	"	2	X										HCL
	4 BLDG. 911 - "	"	1300	"	1		X									24°C
	5 BLDG. 912 - 7-10'	"	1200	"	2	X										HCL
	6 BLDG. 912 - "	"	1240	"	1		X									24°C
	7 BLDG. 913 - 7-10'	"	1403	"	2	X										HCL
	8 BLDG. 913 - "	"	1539	"	1		X									24°C
	9 FIELD DUP. - "	"	—	"	3	X	X									HCL/24°C
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):						
[Signature]		10-29-98 1550		[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:										
Turnaround time: (X) Standard 4 wks, () Rush ___ Days, () ASAP Verbal ___ Hrs.																

0002

FIELD DOCUMENTATION

0003

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

FOR BLDG. # 911

Ground Water Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP)

Objective:

To collect a representative groundwater sample utilizing a narrow diameter point [PPNDP] This is a small diameter [1-inch OD] screened casing passively placed in a borehole. The casing is of p.v.c. construction.

1. Methods

- A. A solid push - rod (bull point) is used to create a narrow diameter hole to a depth below the water table. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole. Glues or adhesives are not used for joining the casing. Threaded PVC casing is used. No filter or gravel pack is used.

2. Installation

- A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 10 feet. The water table was at 7 feet below ground surface.
- B. The screened section of PVC was placed into the borehole so the screened section was across the ground water table from 5 - 10 feet. Riser casing from 5 - 0 feet.

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 taken at this site.

- 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 913 7-10' (4016.07+08)

Laboratory Manager: _____

Date: 12-3-08

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID:4016

Site: Bldg. 911

	Date	Hold Time
Date Sampled	10/29/98	NA
Receipt/Refrigeration	10/29/98	NA
Extractions		
1. Base Neutrals	10/30, 11/02/98	14 days
Analyses		
1. Volatiles	11/04,05/98	14 days
2. Base Neutrals	11/04/98	40 days

0012

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 vb01984.d
 Operator Skelton
 Date Acquired 4 Nov 98 3:54 pm

Sample Name VBLK62
 Field ID VBLK62
 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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

VBLK62

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4016 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: VBLK62
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB01984.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: not dec. Date Analyzed: 11/04/98
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 vb02006.d
 Operator Skelton
 Date Acquired 5 Nov 98 9:08 am

Sample Name 4016.01
 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-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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Trip Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4016 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4016.01
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02006.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: not dec. Date Analyzed: 11/05/98
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 vb02007.d
 Operator Skelton
 Date Acquired 5 Nov 98 9:54 am

Sample Name 4016.02
 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	12.82	263816	5.54 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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Blank

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4016 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4016.02
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02007.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: not dec. Date Analyzed: 11/05/98
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 vb02008.d
 Operator Skelton
 Date Acquired 5 Nov 98 10:39 am

Sample Name 4016.03
 Field ID Bldg 911 7-10'
 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	
	Dichlorodifluoromethane			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	35.67	229498	2.80 ug/L	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg 911

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4016 SDG No Location UST
Matrix (soil/water) WATER Lab Sample ID: 4016.03
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02008.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: not dec. Date Analyzed: 11/05/98
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 **bna01129.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 3:52 am**

Sample Name **SBLK155**
 Misc Info **SBLK155 A 981030**
 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 **bna01129.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 3:52 am**

Sample Name **SBLK155**
 Misc Info **SBLK155 A 981030**
 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

0051

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

Sblk155

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4016 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: SBLK155
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01129.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/30/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/04/98
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7

Number TICs found: 1 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000295-17-0	Cyclotetradecane	16.73	9	JN

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

Data File Name **bna01143.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 3:46 pm**

Sample Name **4016.02**
 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 **bn01143.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 3:46 pm**

Sample Name **4016.02**
 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			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 FIELD ID
TENTATIVELY IDENTIFIED COMPOUNDS

Field Blank

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4016 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4016.02
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01143.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/30/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/04/98
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 Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **bn01144.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 4:30 pm**

Sample Name **4016.04**
 Misc Info **Bldg 911 7-10'**
 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	10.43	242762	5.93 ug/L	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	12.05	213510	7.74 ug/L	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 **bn01144.d**
 Operator **Skelton**
 Date Acquired **4 Nov 1998 4:30 pm**

Sample Name **4016.04**
 Misc Info **Bldg 911 7-10'**
 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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

Bldg 911

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4016 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4016.04
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01144.D
Level: (low/med) LOW Date Received: 10/29/98
% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/30/98
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/04/98
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 | ✓ |

Laboratory Manager or Environmental Consultant's Signature

Date 12/3/98

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, appearing to read 'Daniel K. Wright', is written over a horizontal line.

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

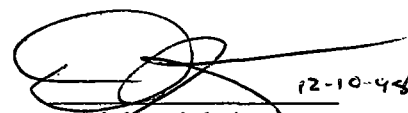


ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

BLDG. 911

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. 911 7.5-10.5'	4089.03	Aqueous	30-Nov-98 09:40	11/30/98
Bldg. 911 7.5-10.5'	4089.04	Aqueous	30-Nov-98 10:30	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



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

Chain of Custody Record

FIELD DOCUMENTATION

000003

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

FOR BLDG. # 911

Ground Water Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP)

Objective:

To collect a representative groundwater sample utilizing a narrow diameter point [PPNDP] This is a small diameter [1-inch OD] screened casing passively placed in a borehole. The casing is of p.v.c. construction.

1. Methods

- A. A solid push - rod (bull point) is used to create a narrow diameter hole to a depth below the water table. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole. Glues or adhesives are not used for joining the casing. Threaded PVC casing is used. No filter or gravel pack is used.

2. Installation

- A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 10 feet. The water table was at 7 feet below ground surface.
- B. The screened section of PVC was placed into the borehole so the screened section was across the ground water table from 5 - 10 feet. Riser casing from 5 - 0 feet.

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.

000004

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.

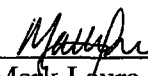
B. Field Blanks

1 Field blank was taken at this site.

- 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

METHODOLOGY SUMMARY

000006

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

000008

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 _____

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 dup performed on Bldg. 917-4093.02

Laboratory Manager: _____

Date: 12-10-98

000010

LABORATORY CHRONICLE

000011

Laboratory Chronicle

Lab ID: 4089

Site: Bldg 911

	Date	Hold Time
Date Sampled	11/30/98	NA
Receipt/Refrigeration	11/30/98	NA
Extractions		
1. Base Neutrals	12/01/98	14 days
Analyses		
1. Volatile Organics	12/01/98	14 days
2. Base Neutrals	12/02,03/98	40 days

000012

VOLATILE ORGANICS

003013

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 **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

000015

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

VbIk69

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4089 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: VbIk69
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:

(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 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-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

000017

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	
	Dichlorodifluoromethane			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 ether			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

000019

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 **vb02276.d**
 Operator **Skelton**
 Date Acquired **1 Dec 98 8:03 pm**

Sample Name **4089.03**
 Field ID **Bldg911**
 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	
	Dichlorodifluoromethane			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

000021

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Bldg. 911

Lab Name: FMETL Project 980932
NJDEP# 13461 Case No.: 4089 SDG No Location UST
Matrix: (soil/water) WATER Lab Sample ID: 4089.03
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02276.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

603044

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 **Sblk174**
 Misc Info **Sblk174 A 98120**
 Sample Multiplier **1**

CASH	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	Dibenzo[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

600045

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Sblk174

Lab Name: FMETL Lab Code 13461
 Project 980932 Case No.: 4089 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	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

000047

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 **bu01493.d**
 Operator **Skelton**
 Date Acquired **3 Dec 1998 3:06 am**

Sample Name **4089.04**
 Misc Info **Bldg911**
 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

000049

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

Bldg911

Lab Name: FMETL Lab Code 13461
Project 980932 Case No.: 4089 Location UST SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 4089.04
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01493.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 12/16/94

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.



Daniel K. Wright
Laboratory Manager

APPENDIX G
PHOTOGRAPHS



JANUARY 2, 1998
PHOTOGRAPHIC LOG

UST NO. 81533-149

**Building 911
Main Post-West
Fort Monmouth**

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA