# **United States Army**

Fort Monmouth, New Jersey

# Underground Storage Tank Closure and Site Investigation Report

Building 718
Main Post-West Area

NJDEP UST Registration No. 81533-116 DICAR No. 98-6-17-1650-28

January 2000

# UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

#### **BUILDING 718**

# MAIN POST-WEST AREA NJDEP UST REGISTRATION NO. 81533-116

#### **JANUARY 2000**

#### PREPARED FOR:

UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
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**PROJECT NO. 2429-308** 

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#### **EXECUTIVE SUMMARY**

#### **UST Closure**

On June 18, 1998, a steel underground storage tank (UST) was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) closure procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-116 (Fort Monmouth ID No. 718), was located southeast of Building 718. UST No. 0081533-116 was a 550-gallon #2 fuel oil UST. The fill port was located directly above the tank.

#### 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. The NJDEP hotline was notified and the case was assigned DICAR No. 98-6-17-1650-28. On June 18 and 19,1998, potentially contaminated soil was removed from the excavation area. In total, approximately 32 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Groundwater was encountered at 5.0 feet below ground surface and no sheen was observed. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from nondetect to 208.69 mg/kg.

All post excavation soil samples collected from the UST excavation at Building 718 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 potentially contaminated soil and the potential of groundwater contamination, two (2) groundwater samples were collected at Building 718. On October 24, 1998, and December 7, 1998, Building 718 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. 81533-116 at Building 718.

# 1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

#### 1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-116, was closed at Building 718 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 18, 1998. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-116 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. 81533-116 proceeded under the approval of the NJDEP Bureau of Federal Case Management (NJDEP-BFCM). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 81533-116 are included in Appendices A and B, respectively.

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

This UST Closure and Site Investigation Report has been prepared by Versar, to assist the U.S. Army DPW in complying with the NJDEP regulations. The applicable NJDEP 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 718 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-116 was located southeast of Building 718 and appurtenant copper piping ran approximately five- (5) feet northwest to Building 718. The fill port area was located directly above the tank. 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 718. 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 718 is located approximately 500 feet southeast of Wampum Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 718 is anticipated to be to the northwest.

#### 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 25 gallons of liquid from the UST and its associated piping were transported by Casie Protank to Casie Ecology Oil Salvage, Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Vineland, New Jersey. Refer to Appendix C for the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP 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 32 cubic yards of potentially contaminated soil were removed from the excavated area and transported to the Main Post petroleum contaminated soil holding area. Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length. Groundwater was encountered at 5.0 feet below ground surface and no sheen was observed. See Figure 3 for a cross-sectional view of the excavated area.

#### 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 visual observation, 32 cubic yards of contaminated soil were removed from the excavation area. 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 at the Main Post Building. Soils that did not exhibit signs of contamination were used as backfill following the removal of the UST. Groundwater was encountered at 5.0 feet below ground surface and no sheen was observed.

# 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 document Interim Closure Requirements for Underground Storage Tank Systems (October 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. The Fort Monmouth DPW Environmental Office maintains all records of the Site Investigation activities.

The following Parties participated in Closure and Site Investigation Activities:

 Subsurface Evaluator: Charles Appleby Employer: U.S. Army, Fort Monmouth Phone Number: (908) 532-0989
 NJDEP Certification No.: 002056

Analytical Laboratory: U.S.Army Fort Monmouth Environmental laboratory

Contact Person: Daniel K. Wright Phone Number: (908) 532-4359

NJDEP Company Certification No.: 13461

Hazardous Waste Hauler: Casie Protank Environmental Services

Contact Person: Bob Corsiglia Phone Number: (609) 696-4401

NJDEP Company Certification No.: 16931

#### 2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank exhibited evidence of potential contamination. Approximately 32 cubic yards of potentially petroleum contaminated soil were removed from the excavated area and transported to the Fort Monmouth petroleum contaminated soil holding area. Soils were removed from the excavation until no evidence of contamination remained. Groundwater was encountered at 5.0 feet below ground surface and no sheen was observed.

#### 2.3 SOIL SAMPLING

On June 18, 1998, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, and DUP B were collected from a total of three (3) locations of the UST excavation. Sidewall samples A, B, C, and DUP B were collected at a depth of 4.5 feet bgs.

On June 19, 1998, following the removal of potentially contaminated soils, post-excavation soil samples A, B, C, and DUP C were collected from a total of three (3) locations of the UST excavation. Sidewall samples A, C, and Dup C were collected at a depth of 4.5 feet bgs. Excavation floor sample B was collected at a depth of 7.0 feet bgs.

All samples collected on June 18 and 19,1998 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 24, 1998, and December 7, 1998, Building 718 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 June 18 and 19,1998 from a total of six (6) locations. All samples were analyzed for TPHC and total solids. 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 analytical data package is provided in Appendix E.

All post-excavation soil samples collected on June 18 and 19,1998, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 208.69 mg/kg.

#### 3.2 GROUNDWATER SAMPLING RESULTS

No compounds were detected in the samples collected from Building 718 on October 24, 1998, and December 7,1998. A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 3 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, DPW.

Groundwater samples collected on October 24, 1998, and December 7, 1998, 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. 81533-116 at Building 718.

#### 3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 718 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 718 on October 24, 1998, and December 7, 1998, groundwater quality at Building 718 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. 81533-116 at Building 718.

TABLE 1

#### SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING 718, 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
Α	6/18/98	6/18/98	Soil	Post-Excavation	ТРНС	OQA-QAM-025
В	6/18/98	6/18/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
С	6/18/98	6/18/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUPB	6/18/98	6/18/98	Soil	Post-excavation	TPHC	OQA-QAM-025

Note:

TPHC Total Petroleum Hydrocarbons

TABLE 1
SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 718, 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
Α	6/19/98	6/22/98	Soil	Post-Excavation	ТРНС	OQA-QAM-025
В	6/19/98	6/22/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
С	6/19/98	6/22/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUPC	6/19/98	6/22/98	Soil	Post-excavation	TPHC	OQA-QAM-025

Note:

TPHC Total Petroleum Hydrocarbons

TABLE 1 SUMMARY OF SAMPLING ACTIVITIES BUILDING 718, 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**
4003.01	10/24/98	10/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4003.02	10/24/98	10/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4003.04	10/24/98	10/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4116.01	12/7/98	12/10/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4116.02	12/7/98	12/10/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4117.01	12/7/98	12/10/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4117.02	12/7/98	12/10/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:

\*VOCs: \*SVOCs: Volatile Organic Compounds plus 15 tentatively identified compounds Semivolatile organic compounds plus 15 tentatively identified compounds Passively Placed Narrow Diameter Point

\*\*PPNDP:

TABLE 2

#### POST-EXCAVATION SOIL SAMPLING RESULTS BUILDING 718, 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/4.5=	3670.01	6/18/98	6/18/98	Total Solid		<del>-</del> -	78.22 %		
				TPHC	196	yes	ND	10,000	No
B/4.5 =	3670.02	6/18/98	6/18/98	Total Solid		. · <del></del>	83.97 %	_ <b>_</b> _	
				TPHC	183	Yes	ND	10,000	No
C/4.5=	3670.03	6/18/98	6/18/98	Total Solid			84.10 %		
				TPHC	183	Yes	ND	10,000	No
DUPB/4.5=	3670.04	6/18/98	6/18/98	Total Solid			82.55 %	, 	
2012. 110				TPHC	185	yes	ND	10,000	No

Note:

Total Solid results are expressed as a percentage.

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

Not detected above stated method detection limit ND

TPHC Total Petroleum Hydrocarbons

TABLE 2

#### POST-EXCAVATION SOIL SAMPLING RESULTS **BUILDING 718, MAIN POST-WEST AREA** FORT MONMOUTH, NEW JERSEY

Page 2 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/4.5=	3675.01	6/19/98	6/22/98	Total Solid			78.34 %		
				TPHC	199	yes	ND	10,000	No
B/7.0=	3675.02	6/19/98	6/22/98	Total Solid			75.86 %		
				TPHC	195	Yes	ND	10,000	No
C/4.5 =	3675.03	6/19/98	6/22/98	Total Solid			77.04 %		
			•	TPHC	203	Yes	208.69	10,000	No
DUPC/4.5=	3675.04	6/19/98	6/22/98	Total Solid			75.32 %	, 	
				TPHC	204	yes	ND	10,000	No

#### Note:

Total Solid results are expressed as a percentage.

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

Not detected above stated method detection limit ND

TPHC Total Petroleum Hydrocarbons

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.01(Trip Blank)

Date Samp	10/24/90	Louison	·· <u>/10</u>	2540 54		(Trip Diame)
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	по
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	по
74-87-3	Chloromethane	1.16	Not Detected	-	30	по
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	по
67-64-1	Acetone	1.36	Not Detected		700	no
75-15-0	Carbon Disulfide	0.46	Not Detected		nle	по
75-09-2	Methylene Chloride	0.24	Not Detected		2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected		100	по
75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	по
108-05-4	Vinyl Acetate	0.78	Not Detected		nle	110
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	по
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	по
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.01(Trip Blank)

Date Statipi	od. <u>10/2/1/20</u>		· <u>/ A V</u>			-(
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	по
108-88-3	Toluene	0.37	Not Detected		1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	по
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	по
127-18-4	Tetrachloroethene	0.32	Not Detected		ı	no .
591-78-6	2-Hexanone	0.71	Not Detected	-	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected		10	по
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	по

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.02(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	по
74-87-3	Chloromethane	1.16	Not Detected		30	по
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	по
75-35-4	1, 1-Dichloroethene	0.24	Not Detected		2	no
67-64-1	Acetone	1.36	Not Detected	-	700	по
75-15-0	Carbon Disulfide	0.46	Not Detected		nle .	по
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	по
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	по
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		ı	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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Location:

718

Lab Sample ID: 4003.02(Field Blank)

Date Sample	ed: <u>10/24/98</u>	Location	: <u>718</u>	Lab Sa	ample ID: 4003.0	2(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	el m	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	_	1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	тю
126-48-1	Dibromochloromethane	0.86	Not Detected	<del></del>	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	ю
100-42-5	Styrene	0.56	Not Detected		100	по
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 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003,04(Bldg 718)

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	по
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	по
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	по
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		I	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 3 **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.04 (Bldg 718)

•					_	
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	по
127-18-4	Tetrachloroethene	0.32	Not Detected	-	1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	по
126-48-1	Dibromochloromethane	0.86	Not Detected		10	по
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	nó
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

# SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.02(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	по
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected		10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected		600	по
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected		75	no
100-51-6	Benzyl alcohol	2.09	Not Detected		nle	во
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected		600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected		300	по
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	по
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	ло
91-57-6	2-Methylnaphthalene	2,49	Not Detected	<del></del>	nle	по
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

# SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: **FMETL**  NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.02(Field Blank)

CAS NO.   COMPOUND NAME	Date Sample	d: <u>10/24/98</u>	Location:	718	Lab Sample ID: 4003.02(Field I			
199-09-2   3-Nitronalitine   1.62	CAS NO.	COMPOUND NAME		RESULTS	QUALIFIER			
132-439   Accrasphilaries   1.98	606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	по	
Disensofuran   2.13   Not Detected     alc   no	99-09-2	3-Nitroaniline	1.62	Not Detected	-	nle	.· no	
121-14-2   2,4-Dinitrotolume	83-32-9	Acenaphthene	1.98	Not Detected		400	no	
Not Detected   .	132-64-9	Dibenzofuran	2.13	Not Detected	<u>-</u>	nle	по	
Section   Sect	121-14-2	2,4-Dinitrotoluene	1.22	Not Detected		10	no	
1.53	84-66-2	Diethylphthalate	1.68	Not Detected		5000	no	
100-01-6	86-73-7	Fluorene	1.93	Not Detected		300	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-plenylether         1.54         Not Detected          nle         no           118-74-1         Hexachlorobenzene         1.88         Not Detected          nle         no           85-01-8         Phenanthrene         1.67         Not Detected          nle         no           120-12-7         Andracene         1.79         Not Detected          2000         no           84-74-2         Di-n-but/lpithalate         1.83         Not Detected          900         no           206-44-0         Fluoranthene         1.83         Not Detected          300         no           129-00-0         Pyrene         1.02         Not Detected          50         no           129-00-0         Pyrene         1.02         Not Detected          100         no           8-687         Butylbenzylphthalate         1.15         Not Detected <td>7005-72-3</td> <td>4-Chlorophenyl-phenylether</td> <td>1.53</td> <td>Not Detected</td> <td>_</td> <td>nle</td> <td>no</td>	7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	_	nle	no	
103-33-3   Azobenzene   1.92   Not Detected     nle   no	100-01-6	4-Nitroaniline	2.70	Not Detected	-	nle	no	
101-55-3	86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected		20	no	
118-74-1         Hexachlorobenzene         1.88         Not Detected         —         10         no           85-01-8         Phenandhrene         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         —         200         no           129-00-0         Pyrene         1.02         Not Detected         —         200         no           85-68-7         Butylbenzylphthalate         1.15         Not Detected         —         100         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 </td <td>103-33-3</td> <td>Azobenzene</td> <td>1.92</td> <td>Not Detected</td> <td></td> <td>nle</td> <td>no</td>	103-33-3	Azobenzene	1.92	Not Detected		nle	no	
Section   Sect	101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected		nle	по	
120-12-7	118-74-1	Hexachlorobenzene	1.88	Not Detected		10	по	
1.83   Not Detected	85-01-8	Phenanthrene	1.67	Not Detected		nle	no	
206-44-0   Fluoranthene   1.85   Not Detected     300   no	120-12-7	Anthracene	1.79	Not Detected		2000	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[a]pyrene         1.36         Not Detected          20         no           193-39-5         Indeno[1,2,3-cd]pyrene         1.22         Not Detected	84-74-2	Di-n-butylphthalate	1.83	Not Detected	_	900	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	206-44-0	Fluoranthene	1.85	Not Detected		300	по	
S5-68-7   Butylbenzylphthalate   1.15   Not Detected     100   no	92-87-5	Benzidine	4.11	Not Detected		50	по	
1.57   Not Detected     10   no	129-00-0	Pyrene	1.02	Not Detected	_	200	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	85-68-7	Butylbenzylphthalate	1.15	Not Detected	· <u></u>	100	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	56-55-3	Benzo[a]anthracene	1.57	Not Detected		10	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]ftuoranthene       1.31       Not Detected        10       no         207-08-9       Benzo[k]ftuoranthene       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	91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected		60	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	218-01-9	Chrysene	2.32	Not Detected		20	по	
117-84-0   Di-n-octylphthalate   1.30   Not Detected     100   110	117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected		30	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	117-84-0	Di-n-octylphthalate	1.30	Not Detected		100	по	
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	205-99-2	Benzo[b]fluoranthene	1.31	Not Detected		10	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	207-08-9	Benzo[k]fluoranthene	1.57	Not Detected		2	по	
53-70-3 Dibenz[a,h]anthracene 3.12 Not Detected - 20 no	50-32-8	Benzo[a]pyrene	1.36	Not Detected		20	no	
Not Detected	193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected		20	по	
191-24-2 Benzo[g,h,i]perylene 1.13 Not Detected nle no	53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected		20	по	
	191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected		nle	no	

# SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

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**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>718</u>

Lab Sample ID: 4003.04(Bldg 718)

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	по
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	по
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected		9	no
91-20-3	Naphthalene	3.03	Not Detected	_	nle	цо
106-47-8	4-Chloroaniline	2.55	Not Detected		nle	по
87-68-3	Hexachlorobutadiene	0.64	Not Detected	-	1	по
91-57-6	2-Methylnaphthalene	2.49	Not Detected		nle	по
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	-	50	по
91-58-7	2-Chloronaphthalene	2.15	Not Detected	-	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected		nle	по
131-11-3	Dimethylphthalate	2.74	Not Detected		7000	no
208-96-8	Acenaphthylene	2.35	Not Detected		nle	no

# SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

71.1

**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

718

Lab Sample ID: 4003.04(Bldg 718)

Date Sampl	ed: 10/24/98	Location:	718	Lab S	ample ID: $\frac{4003.0}{1}$	4(Bldg /18)
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	по
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	Butyibenzyiphthalate	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	πο
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

12/7/98

Location:

718

Lab Sample ID: 4116.01(Trip Blank)

Date Sampi	ed. <u>12/1/36</u>	Location	710	Dao Ba	mpic 1D. <u>+110.0</u>	T(TTP DIMIK)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	-	50	по
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	по
	Dichlorodifluoromethane	1.68	Not Detected		nle	no
74-87-3	Chloromethane	1.16	Not Detected	-	30	по
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	по
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	по
75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	по
108-05-4	Vinyl Acetate	0.78	Not Detected	-	nle	по
78-93-3	2-Butanone	0.62	Not Detected	-	300	110
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	по
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	no
79-01-6	Trichloroethene	0.23	Not Detected		i	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	-	1	по
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sample	ed: <u>12/7/98</u>	Location	: <u>718</u>	Lab Sa	ample ID: 4116.0	1(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	по
127-18-4	Tetrachloroethene	0.32	Not Detected	-	1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	оп
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

C. IIII Spother.: **FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

12/7/98

Location:

<u>718</u>

Lab Sample ID: 4116.02(Field Blank)

Date Samp.	ied. <u>12/1/96</u>	Locution	. 110		<u> </u>	<u> </u>
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	по
108203	Di-isopropyl ether	0.25	Not Detected		nle	no
	Dichlorodifhoromethane	1.68	Not Detected		nle	no
74-87-3	Chloromethane	1.16	Not Detected		30	по
75-01-4	Vinyl Chloride	1.06	Not Detected		5	110
74-83-9	Bromomethane	1.10	Not Detected	-	10	по
75-00-3	Chloroethane	1.01	Not Detected		nle	по
75-69-4	Trichlorofluoromethane	0.50	Not Detected		nle	по
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	<u></u>	2	no
67-64-1	Acetone	1.36	Not Detected		700	no .
75-15-0	Carbon Disulfide	0.46	Not Detected		nle	по
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	по
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	по
56-23-5	Carbon Tetrachloride	0.47	Not Detected		2	no
71-43-2	Benzeze	0.23	Not Detected		1	по
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

13461

Matrix: (soil/water) WATER

Lab Sample ID: 4116 02(Field Blank)

Date Sample	ed: <u>12/7/98</u>	Location	n: <u>718</u>	Lab Sa	Lab Sample ID: 4116		
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	<b></b>	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	по	
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	по	
100-42-5	Styrene	0.56	Not Detected	-	100	по	
75-25-2	Bromoform	0.70	Not Detected		4	no	
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected		2	по	
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	

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

12/7/98

Location:

<u>720</u>

Lab Sample ID: 4117.01(Bldg 718)

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	по
108203	Di-isopropyl ether	0.25	Not Detected		nle	по
	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	по
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	по
67-66-3	Chloroform	0.30	Not Detected		6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected		30	по
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

# **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

12/7/98

Location:

718

Lab Sample ID: 4117.01(Bldg 718)

Date Sample	ed: <u>12/7/98</u>	Location	: <u>718</u>	Lab Sa	1(Blag /18)	
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	Toluène	0.37	Not Detected		1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	по
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no
127-18-4	Tetrachloroethene	0.32	Not Detected		1	по
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	по
75-25-2	Bromoform	0.70	Not Detected		4	по ,
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	по
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	-	600	no

#### SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

<u>12/7/98</u>

Location:

<u>718</u>

Lab Sample ID: 4116.02(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	по
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	по
100-51-6	Benzyl alcohol	2.09	Not Detected	_	nle	по
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected		600	по
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	-	300	по
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected		20	no
67-72-1	Hexachloroethane	2.59	Not Detected	_	10	по
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	по
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

#### SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/7/98 Location: 718 Lab Sample ID: 4116.02(Field Blank)

Date Sample	ed: <u>12/7/98</u>	Location:	<u>718</u>	Lab S	2(Field Blank)	
CAS NO.	COMPOUND NAME	MDL RESULTS QUALIFIER REGULATO (ug/L) LEVEL(ug		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	по
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	по
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected		20	no
103-33-3	Azobenzene	1.92	Not Detected		nle	по
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	по
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected		60	по
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	по
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected		10	по
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected		2	по
50-32-8	Benzo[a]pyrene	1.36	Not Detected		20	по
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	-	20	по
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	по
	<del></del>					

#### SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

12/7/98

Location:

718

Lab Sample ID: 4117.02(Bldg 718)

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	по
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	-	600	по
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	по
106-47-8	4-Chloroaniline	2.55	Not Detected		nie	по
87-68-3	Hexachlorobutadiene	0.64	Not Detected		1	по
91-57-6	2-Methylnaphthalene	2.49	Not Detected		nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected		50	по
91-58-7	2-Chloronaphthalene	2.15	Not Detected	-	nle	по
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

#### SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

**FMETL** 

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

12/7/98

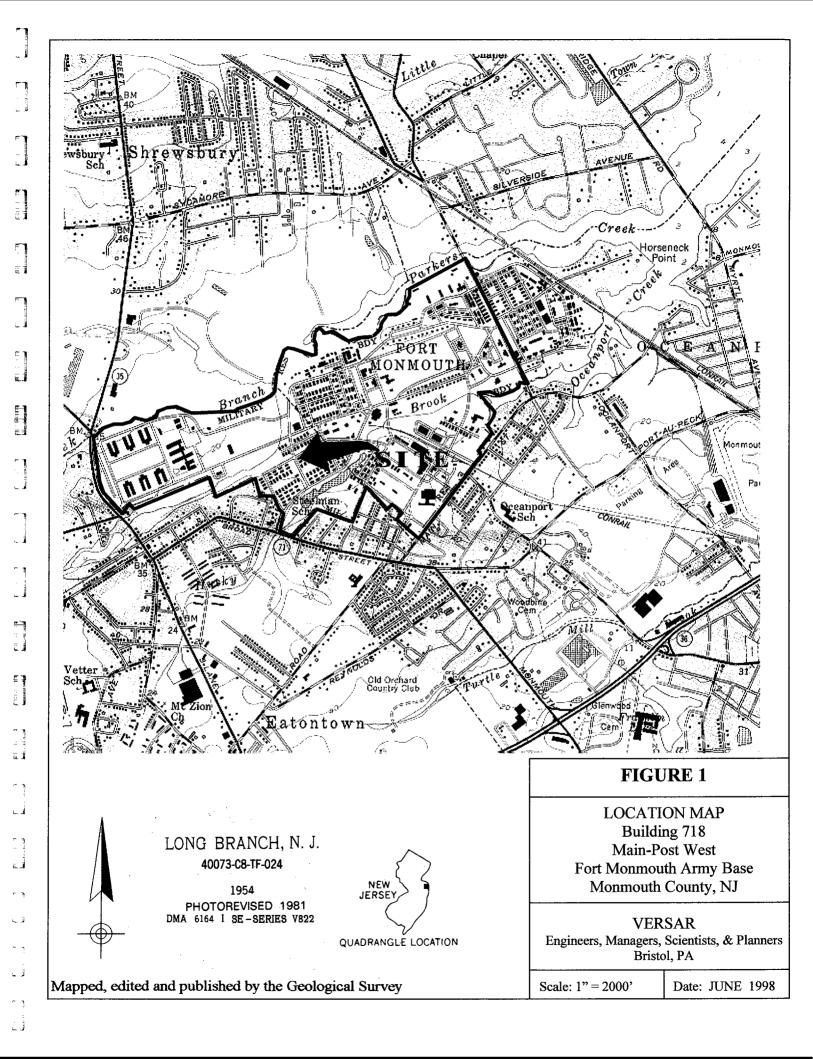
Location:

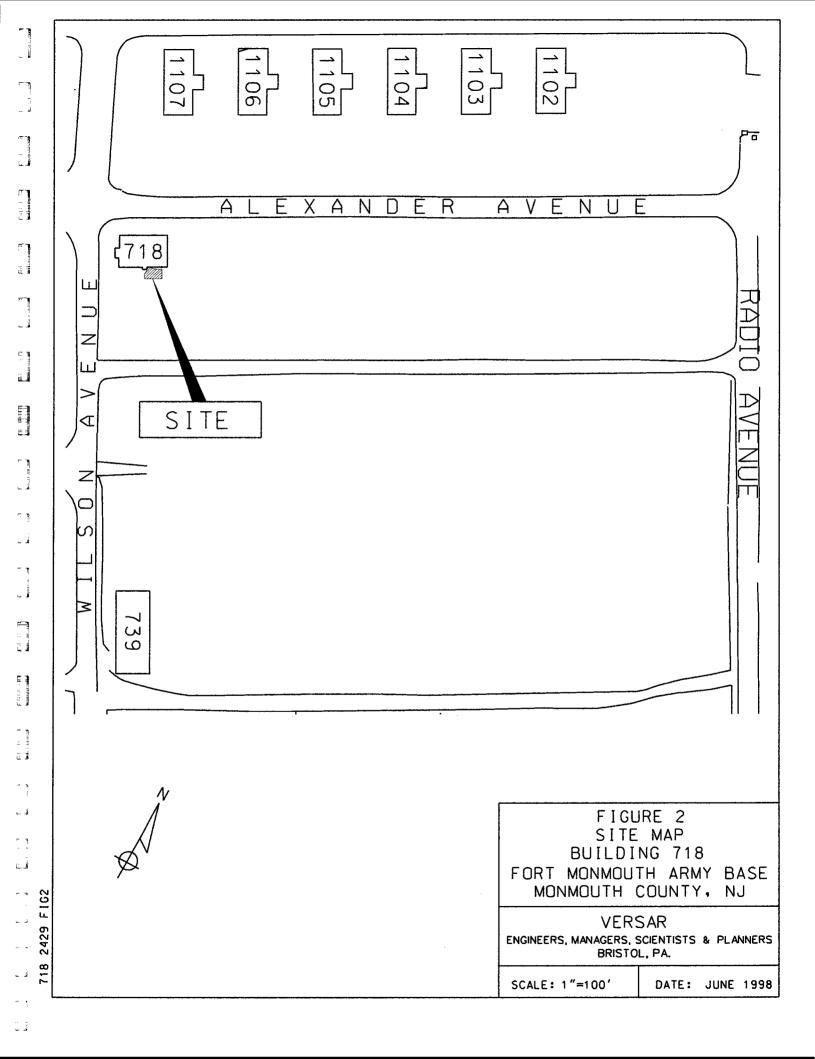
<u>718</u>

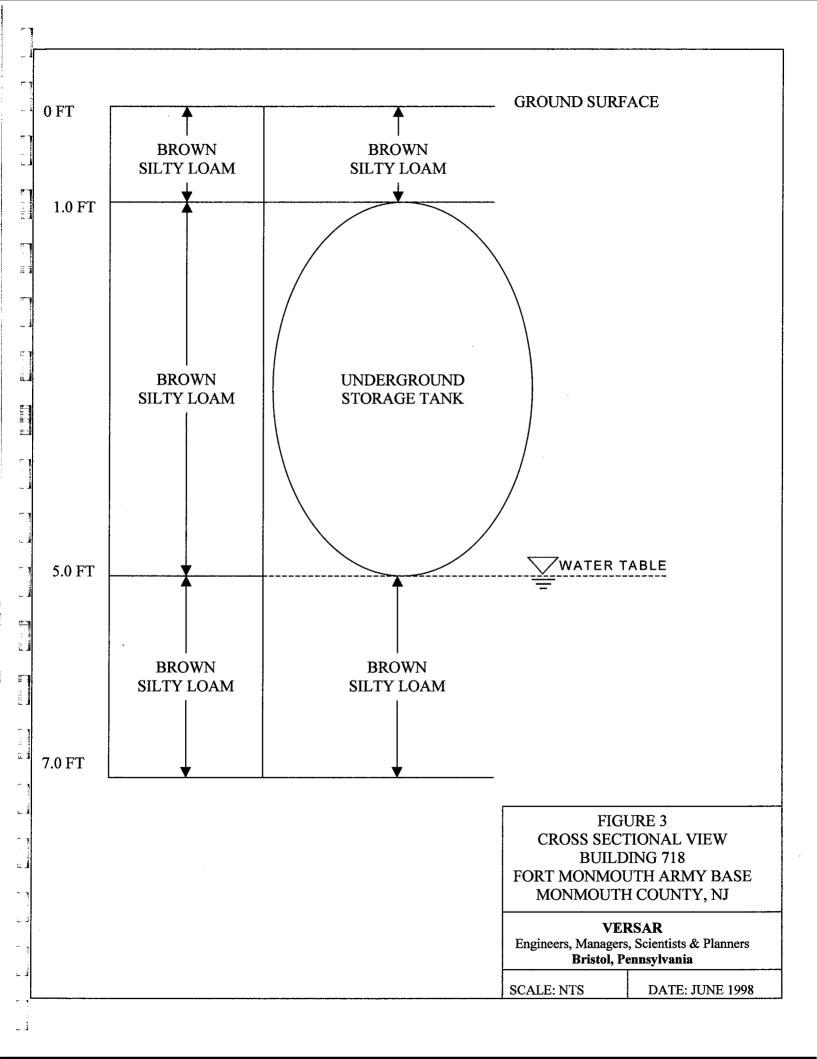
Lab Sample ID: 4117.02(Bldg 718)

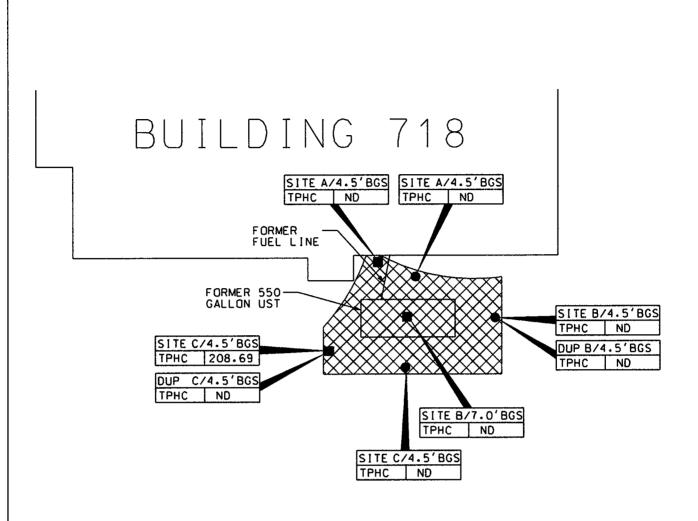
Date Sample	ed: <u>12/7/98</u>	Location:	<u>/18</u>	Lao S	ample 1D: 4117.0	2(Diug / 10)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected		nle	no
83-32-9	Acenaphthene	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	. <u></u>	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	по
100-01-6	4-Nitroaniline	2.70	Not Detected		nle	по
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected		20	. по
103-33-3	Azobenzene	1.92	Not Detected		nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected		nle	по
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	по
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	по
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** 











#### **LEGEND**

SOIL SAMPLE LOCATION (JUNE 18, 1998)

SOIL SAMPLE LOCATION (JUNE 19. 1998)

LIMIT OF EXCAVATION
(JUNE 19, 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 718
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

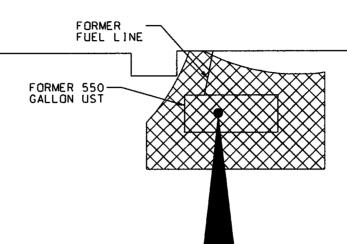
#### VERSAR ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS BRISTOL, PA.

SCALE: 1"=10'

DATE: JUNE 1998

18 2429 FIG4





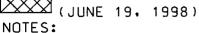
SAMPLING LOCATION: SAMPLING DEPTH: SAMPLING DATE:	NJDEP GWOS	BLDG 718 6.0 'BGS 10/24/98	5.0-10.0'BGS
VOLATILE ORGANIC COMPOUNDS:		ND	ND
SEMIVOLATILE ORGANIC COMPOUNDS:		ND	ND



#### LEGEND

GROUNDWATER SAMPLE LOCATION
(OCTOBER 24, 1998 AND DECEMBER 7, 1998)

LIMIT OF EXCAVATION



- 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 718
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10'

DATE: JUNE 1998

18 2429 F1G

## APPENDIX A NJDEP-STANDARD REPORTING FORM

File Con

FOR STATE USE ONLY

Check In Yes

STATUS

#### NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROJECTION

DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION BUREAU OF APPLICABILITY AND COMPLIANCE

Registration and Billing Unit CN 028, Trenton, N.J. 08625-0028 1-609-984-3156

		1-609-984-3156			STATUS	COMCODE
		ROUND STOR		<b>&lt;</b>	Active Inactive	
EACH ITV HOT 4	FACIL 1 <u>008/5</u> 33	ITY QUESTIO	NNAIRE			
		<i>B</i>	lég 718			
Completion of the Hazardous Sub	his Registration Question stances Act, N.J.S.A. 58	naire will satisfy the :10A-21, and the Re	registration requ gistration and Bi	uirements of the Undilling Regulations N.J	erground Stora .A.C. 7:14B-2.	ge of
[Check appropriate	box(es)]					
B. Is this a reg	istration of a proposed or no istration of an existing unde	ewly installed undergro Proround storage tank r	ound storage tank	? (This form must be filed	l at least 30 days p	rior to operatio
C. S Is this a cor	rection or amendment to an	existing facility registr	ation? UST #	0081533	•	÷
signatures)	been no changes to the fac	clifty registration since I	ast submittal. US	T #	(Go to certificati	on page for
If "C" is checked at	pove, please check the appr	opriate type of change	(s) below			
Facility Name	and/or Address Change	Type of Product(s	•	Financial Respons	ibility Change	÷
Facility Operat	and/or Address Change or and/or Address Change	Spills, Leaks, Release X Tank(s) and/or Pig		Substantial Modifie	cation(s)	
Owner Contact	Person Change	Closure (Complet		Sale or Transfer (Control of the Control of the Con	cify)	ns 4,5,6 & 1;
SECTION A - G	ENERAL FACILITY INF	ORMATION				<del></del>
Facility Name	MAIN POST	<del></del>				
•		,		<u> </u>		
2. Facility Location	Lit Werner	174	NUMBER AND STREET		11111	
		1 1 1 1 1 1 1	I I I I I			
					<del> </del>	<del>!LL-</del> -L-
		<del></del>	CITY OR MUNICIPALIT	<u> </u>	<del>                                     </del>	
	COUNTY	NU LI	ZIP CODE	LI LI	بنا لنن	
3. Facility Operator		<del>                                     </del>		Contact Tele. No		LOT
Operator Address	1	PERSON OR TITLE		(Area Code)		(Extension)
(if different than #2)	1	<del></del>	NUMBER AND STREET		<u> </u>	111
#2)			11111			
			11111			1 ) ; ;
•	1.1 1	□ 1	CITY OR MUNICIPALITY	,		
. Tools On a	STATE ZIP C	ODE				•
4. Tank Owner			11111			
5. Tank Owner Address			11111		<u> </u>	_L
	Litini		NUMBER AND STREET			:
		· · · · · · · · · · · · · · · · · · ·	<del>-   -                                  </del>	<del> </del>	<u> </u>	<del></del>
	<del></del>		CITY OR MUNICIPALITY			<u> </u>
	STATE -7IP		-			
Contact Person	Charlas 1	CODE ANARASIII		Contact 1732 5	3216224	
(Tank Owner)			<del></del>	Tele. No.(Area Code)		(Extension)
7. EPA ID#					• • •	e.
8. Total number of r	egulated underground stora	ige tanks at facility	(Comple	ete Section B for each t	ank)	

9. Total regulated underground storag	_	capacity				_		LI	Light Light		ldg 718	• •	
B Commercial		Cou	nty/N erai	Munic	ipal	E _	CI Re	aritab siden	ole / Public ce	School	H ∟_JFa	ther arm (as de	ofined in N.J.
11. Is a copy of the facility site plan subn	nitted v	with this i	egis	tratio	n pu	rsuant	to N	J.A.C	7·14R-22		54	1:4-23.1 et	seq.)
SECTION B - SPECIFIC TANK IN	FORM	ATION	7							L_  Y	E2 []	NO	
All underground tooks is at all a			1										
ALL underground tanks, including those t 9/3/86) must be registered. Report all tar	aken o	ut of ope	ratio	on (UI	NLES	SS THI	E TA	NK W	AS REMO	VFD FR	OM THE A		
9/3/86) must be registered. Report all tar	~Pibili	g status	спа	nges	unie	ss prev	/ious	ly sub	mitted.		OW 117E G	HOUND	'RIOR TO
1. Tank Identification Number Bld 7/8	-   <u>T</u>	ANK NO	_		TAN	IK NO	<u> </u>	7	ANK NO.		TANK NO.		·
2. CAS Number (hazardous substances only		1///	5					$\prod$			THE NO.	,   -	ANK NO.
		111		1	11		LI		1111		<del></del>		444
3. Date Tank Installed (Month/Day/Year)	<b>MO.</b>	Day Ye	er	Mo	De	Ye	ar -	Mo.	Day Year	Mo.	Day Year	Mo. ,1	Day Year
4. Tank Sizə (gallons)	<del>                                      </del>	<del></del>		┧ᆣ					111				1 1 1
5. Tank Contents (Mark one "X" for each tank				Щ							1111		<del></del>
A. Leaded gasoline	Ί			1	г	<u></u>					<del></del>	╼┸╂┸╼┸╼	
B. Unleaded gasoline	_	<del></del>		+								- 1	
C. Alcohol endriched gasoline		<del>                                     </del>		+		<del></del> -							<del> </del>
D. Light diesel fuel (No. 1-D)		<del></del>		+	$\dashv$	+			<del></del>				<del>                                     </del>
E. Medium diesel fuel (No. 2-D)		<del></del>		<del> </del>					+				<del> </del>
F. Waste Oil		1 +-		+		+							<del> </del>
G. Kerosene (No. 1)		<del>                                     </del>		<del> </del>	-+-	+			+	·			<del>                                     </del>
H. Home heating oil (No. 2)				<del> </del>		+			<del></del>				<del> </del>
J. Heating oil (No. 4)				<del>                                     </del>	+	+			<del></del>				<del>                                     </del>
K. Heavy heating oil (No. 6)		11		<del>                                     </del>		+			╂-┼				1
L. Aviation fuel		T		<del> </del>					+				<del></del>
M. Motorail		1 -	-		<del></del>	<del> </del>	$\dashv$		┾-┼	<del></del> -			
N. Lubricating oil					+	<del> </del>	$\dashv$	<del></del>	<del> </del>				
P. Sewage					<del></del>	<del> </del>	$\dashv$		<del>                                     </del>				
Q. Sewage sludge					1		+		<del>                                     </del>	+	<del>                                     </del>		
R. Other hazardous substances (specify)						<del></del>	_		<del></del>				
S. Hazardous waste (specify ID number)							$\dashv$	<del></del>		┼			,
T. Mixtures (please specify)							+			<del> </del>			
U. Emergency spill tank (specify substance)							$\top$			+			
V. Other petroleum products (please specify)     W. Other (please specify)							$\top$			<del> </del>		<del></del>	
6. Tank & Piping Construction							+			<del> </del>			
(Mark one each for both tank & piping)	Tank	Pipin	g	Tan	k	Piping	,	Tank	Dinin	<del> </del>		<del></del>	
A. Bare Steel	V						•		Piping	Tank	Piping	Tank	Piping
B. Cathodically protected steel	-	X	$\dashv$			╂╼╁╌		1.					
C. Fiberglass-coated steel	++	+	-		· 	+-+-	+	<del> </del>				1-1-	-+
D. Fiberglass-reinforced plastic Listal	<del>     </del>	<del></del>	-			+	+	<del>                                     </del>					-+
E. Internally lined	++		$\dashv$	++	·							1 -	
F. Other (please specify)			+	4_4		1							
. Tank & Piping Structure			+	<del></del> _				15.00	· · · · · · · · · · · · · · · · · · ·		\$= 5\$\$ . T	1	<del>-                                      </del>
(Mark one each for both tank & pinion)	Tank	Piping	3	Tank	ا ا	Piping	1	ank	Piping	Tank	Piping	Table	
A. Single wall						$\Box$						Tank	Piping
B. Double wall	11	711	+	1.1	٠,-	<del>                                     </del>			<del>-     -   -   -   -   -   -   -   -   -</del>				
C. Other (please specify)			+	<u> </u>		1 1	7-1			1.1:	122		
Type of Monitoring/Detection System	Tank	Piping	,	Tank		-	+				n garage and the second	eri Startetisk er fa	
(Mark all that apply for both tank & piping)  A. Statistical Inventory Reconciliation		ः हिं"' <sup>8</sup> ि े		1 GUIK	l Transfer	Piping	T	ank	Piping	Tank	Piping	Tank	Piping
B. Manual Tank Gauging	11									الإشارة			11/11/0
C. Inventory Control	1 1 -								-1-1-1				44
D. Interstital	+ + -	11		+ 1			1				-		
E. Precision Test		+	1	1 +									

First Carrier

F. Ground water observation wells.
G. Vapor observation wells

J. Periodic Tank Test

H. In-tank (automatic) monitoring gauge

	<del></del>	<u> </u>		<u> </u>	$\mathcal{E}$	718				
Tank Identification Number	TA	NK NO.	TAN	K NO.	TAI	NK NO.	TA	NK NO.	TAN	IK NO.
Type of Monitoring/Detection System     K. None	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Pipi
L Other (please specify)	<del></del> -	!!	+		╂┷┷		111		$\perp \Box$	
Overfill Protection (tank only) (Mark one X for each tank)		<del></del>					<del> </del>			
A. Yes			1 .	_	} ,		1	_	Ι,	
B. No		<del></del>		<del></del>	+		<b></b> -	<del></del>		
10. Spill Containment Around Fill Pipe		<del>*</del>	<del>                                     </del>		<del>                                     </del>	!	<del> </del> i		<u> </u>	
(Mark one X for each tank)			į		1		ļ			
A Yes	<u> </u>		[		<u>l</u> [		1		l r	_
B. No										+-
Tank Status (Mark one X for each tank)     A. In-use	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Pipir
B. Empty less than 12 months									┝┷┼╼┼╼	
C. Empty 12 months or more	+						<del>                                     </del>		<del></del>	-++
D. Emergency spill tank (sump)	+++		$\Box$						<del>                                      </del>	-+-
E. Emergency backup generator tank     F. Abandoned in Place	+	$-\downarrow \downarrow$	+++		$\Box$				<del>-     -</del>	-+-
G. Removed	+		<del>                                     </del>							-+-
H. Other (please specify)	1-1-		<del>                                     </del>		<del>                                     </del>					
	<del> </del>	<del></del>	<del> </del>							
If box 11B, C, or D above has been marked, indicate the estimated date	Mo. Day	Year	Mo. Day	Year	Mo. Day	Year	Mo. Day	Year	Mo. Day	<u> </u>
last used (month/day/year)		1111	111	1,,,		1,,,,			and Day	Year
3. Closure Information - Tank ID No.	TAN	K NO.	TANK	NO.	TAN	C NO.	TAN	K NO.	TANK	NO.
	Mo. Day	Year	Mo. Day	Year	Mo. Day	Year	Mo. Day	/ ; Year	Mo., Day	Yea
A. Date abandoned in place				111	!   1			1111		111
B. Date taken temporarily out of service		1111		1 1 1	1 1	1 1			<del></del>	
C. Date removed	0617	1998			<del></del>	<del>                                     </del>		<del>- - - -</del>  -		<del>:    </del>
D. Date of Sale or Transfer		77 / 3		_!!!		<del>                                     </del>	111	+1 - 1 - 1 - 1		<u> </u>
E. TMS # (if applicable)	1-1-1						1 1			111
F. ISRA # (if applicable)	Hd (	135 M	<u> </u>							<del></del>
F. ISPA # (If applicable)	Disch	and #	78-6-1	7-1650	7-28	, —				
ECTION C - FINANCIAL RESPONS				•	-				<del></del>	
es this facility have a Financial Responsite ase list the appropriate financial informate Type	pility Assu ion below	rance Med	hanism as	<u></u>	.= <u></u>		YES	□ NO	<u>-</u>	3
1 1	_			C	amer / Is	suing Age	ncy		-	
Effective Date Expiration D	-/	<del></del> .				· · · · · · · · · · · · · · · · · · ·		\$		
Expiration U	ate			Policy Nu	mber			Amo	unt	
CTION D - MONITORING SYSTEM	AS				_			-:	-	
es this facility have a release detection mo	onitoring s	system which	ch is in cor	mpliance w	ith N.J.A	.C. 7:14B-	<b>5</b> ?	ПΥ	ES 🗀	NO
No", please be aware that the facility must	meet tne	appropriat	e deadline	. (See *Da	ates to Kr	now" on Pa	ige 4)			_
CTION E - RECORDKEEPING/CO									·	
ase answer all the questions in this section.  1. Does this facility have cathodic protocol.	n on a fac	ility basis.	Any one t	ank not in	complian	ce require	MO-	20040-6-	ماندان شامان	
The same saling that a cathodic biologic	JUDII SVSIE	ims ior all s	synci loots	200 DIDIO	.7				ES	-
II Tes , are the systems properly on	arated and	d maintaine	ad outerion	tto NI I A	C 7.44D	·5? –		<del></del>	ES	NO.
<ol><li>Are the performance claims and docu pursuant to N.J.A.C. 7:14B-5?</li></ol>	mentation	of monitor	ing systen	ns maintair	ed by the	e owner or	operator			NO
<ol> <li>Are the proper monitoring, testing, sar</li> <li>N.I.A.C. 7:14B-5 and 62</li> </ol>							-	Y	ES	NO
14.5.7.0. 7.14D-3 atto 6 ?						ursuant to			s ∏	NO
4. Is the proper Release Response Plan	kept on-s	ite pursuar	nt to N.J.A.	.C. 7:14B-5	·				:s  -	NO NO
o. Does the facility have spill and over till	protectio	n systems	Dursuant t	ANIAC	7-14D-40	?		Y		NO
6. Have all Fill Ports been permanently n	narked as	per API #1	1637 pursu	ant to N.J.	A.C. 7:14	1B-52		HU	L I	

	1	
FEE:	IMPORT	TANT INFORMATION
	Please make checks payble to:	
	All Initial Position and Billing Sc	surer, State of New Jersey". Use of the enclosed return envelope will expe
PENALTY:	All Initial Registration fees are \$100 pe	r facility.
	Act or regulations may a substitute the	er facility.  ated underground storage tank to comply with any requirement of the State I talties set forth in N.JS.A. 58:10A-10.
EMERGENCY:	Act or regulations may result in the pen.  If a discharge or spill occurs, the NIDET	alties set forth in N.J., S.A. 58:10A-10.
UPGRADE EXEMPTION:	Residential heating oil underground	P Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a discrete tanks are exempt from all upgrade requirements.
	_	-P8 rodulienienie
	HATEC TO TO	
September 4, 1000	TO ALL DEW Tederalls I	
December 4, 1990 _	<ul> <li>All new State-only regulated tank syst</li> </ul>	ems must have cathodic protection and spill/overfill protection.  tems must have cathodic protection and spill/overfill protection.
December 22, 1990 _	All federally regulated piping must have     All federally regulated.	ve begun leak detection.
February 19, 1993 _	<ul> <li>All federally regulated tank systems m</li> </ul>	nust maintain financial responsibility assurance.
December 22, 1993	All federally regulated tank systems m     All regulated tanks systems m	wist have been a later responsibility assurance.
December 22, 1998 _	All regulated tanks shall install cathodi	is Trategies at the line of th
NOTE: IF THE DER CO.	CER	TIFICATIONS
CERTIFICATION NO 2		
Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	NEED NOT BE SIGNED. (If different p	THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN persons are required to sign No. 1 and No. 2, then they must do so.)
<b>CERTIFICATION NO</b>	.1:	2 organic. 1 and No. 2, then they must do so.)
""	ghest ranking individual at the facility	with overall responsibility
knowledge, information a	and belief. I am aware that there are	ed in this document is true, accurate and complete to the best of significant civil and criminal penalties for knowingly submitting fall a crime of the fourth degree if I make a prime fall.
inaccurate or incomplete	information and that I am committies	significant civil and criminal penalties for knowingly submitting fal a crime of the fourth degree if I make a written false statement which lirect or authorize the violation of any statute.
do not believe to be true.	I am also aware that if I knowingly d	a crime of the fourth degree if I make a written false statement which
the penalties."	T Allowingly (	a crime of the fourth degree if I make a written false statement which irect or authorize the violation of any statute, I am personally liable
	James OTT ed/Printed Name) r & Public Works (Title)	The Man MA
(Type	ed / Printed Name)	- COMO COO
- DiRecto	c & Public Works	(Signature)
		6/20/98
CERTIFICATION NO.	2:	(Date)
Must be signed as follows:		
• For a corporation, by a		
• For a partnership or solo	rincipal executive officer of at least the	e level of vice president
• For a municipality State	proprietorship, by a general partner or Federal or other public agency, by sign	the proprietor, respectively
• For persons other than in	reueral or other public agency, by eit	the proprietor, respectively ther a principal executive officer or ranking elected official
"I comife and	dicated above, by the person with legal	d responsibility for the site
submitted info-	on my inquiry of those individuals im-	and am familiar with the information submitted herein and all attached mediately responsible for obtaining the information. I believe that the re that there are significant civil and criminal
submitting folio	ie, accurate and complete. I am awar	the that there are significant in the information. I believe that the
statement which I	or incomplete information and that I	mediately responsible for obtaining the information. I believe that the that there are significant civil and criminal penalties for knowingly am committing a crime of the fourth documents.
nersonally liable service	elieve to be true. I am also aware tha	re that there are significant civil and criminal penalties for knowingly am committing a crime of the fourth degree if I make a written false if I knowingly direct or authorize the significant.
personally made for the pen	alties."	am committing a crime of the fourth degree if I make a written false at I knowingly direct or authorize the violation of any statute, I are
(Туре	d / Printed Name)	
	(Tra)	(Signature)
CEPTIFICATION	(Title)	(D.1)
CERTIFICATION NO. 3:		(Date)
If applicable, must be signed	by the individual who is certified to p	
"I certify under penalty of	law that the information to p	perform services.  In this document is true, accurate and complete to the best of my nificant civil and criminal penalties for least in the best of my
knowledge, information and	belief I am amount of provided in	n this document is true, accurate and complete to the best of my nificant civil and criminal penalties for knowingly submitting false, trime of the fourth degree if I make a project for the fourth d
do not believe to be true. La	m also aware that I am committing a ci	nificant civil and criminal penalties for knowingly submitting false, crime of the fourth degree if I make a written false statement which I criminal penalties of any statement.
the penalties."	also aware that it I knowingly direc	crime of the fourth degree if I make a written false statement which I ct or authorize the violation of any statute, I am personally liable for
Chala A	100/1 E 1 = -	Jam personally liable for
(Typed / Diagram)	J.S. Aeros	$\mathcal{L}$
(Typed / Printed Name)	(Title)	(Signature)
(Nama aff	1. Heny	(Signature) 2017. (Date)
(Name of Firm UST-021 (9/94)	a ir applicable)	(N.J. Certification Number)
(0/07)		

# APPENDIX B SITE ASSESSMENT SUMMARY

- 1

### New Jersey Department of Environmental Protection

#### **Site Remediation Program**

### **UST Site/Remedial Investigation Report Certification Form**

A. Facility Name : U.S. Arn	A. Facility Name: U.S. Army Fort Monmouth New Jersey									
Facility Street Address:	Directorate of Public Works Build	ing 173								
Municipality: Oceanpo	rtC	ounty : Monmouth								
Block:	Lot(s):	Telephone Number : 732-532-6224								
<b>B.</b> Owner (RP)'s Name:										
		City :								
State:	Zip:Telepho	ne Number :								
C. (Check as appropriate)  Site Investigation Report (SIR) \$500 Fee Remedial Investigation Report (RIR) \$1000 Fee  X NA – Federal Agreement	• UST Registration Number : 8	Ian Curtis, Federal Case Manager         31533-116       (7 digits)         - 06 - 17 - 1650       - 28       (10 or 12 digits)								
Name: Charles Appleby  Firm: U.S. Army Fort Mo  Firm Address: Directorate  State: NJ	orms to the specific reporting requirer Signature: onmouth of Public Works Building 173 Zip: 07703 Telep	UST Cert. No.: 2056								
F. Certification by the Res The following certification s  1. For a Corporation by a presolution, certified as a t  2. For a partnership or sole  3. For a municipality, State,  "I certify under application and information, I significant cive committing a committing a committing a committing a committed to the c	ponsible Party(ies) of the Facility: shall be signed [according to the requirers on authorized by a resolution of true copy by the secretary of the corporproprietorship, by a general partner of federal or other public agency by either penalty of law that I have personally exist all attached documents, and that based of believe that the submitted information rill penalties for knowingly submitting terime of the fourth degree if I make a written.	rements of N.J.A.C. 7:14B-1.7(b)]as follows: he board of directors to sign the document. A copy of the ration, shall be submitted along with the certification; or								
Signature:Company Name:	U.S. Army Fort Monmouth	Date: 9/4/00								

APPENDIX C
WASTE MANIFEST

718

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

	NON-HAZARDOUS MANIFEST  1. Generator's US E N   J   3   2   1   0										
	3. Generator's Name and Mailing Address U.S. Army Com.  Main Post Bldg	Elec.Command		A. Non-haz NHZ02			ocument Number				
	Fort Monmouth N			B. State Ger							
	4. Generator's Phone (732) 532 - 622			c/o Issos Shirghio/ Toe Fallow							
	5. Transporter 1 Company Name 6.	US EPA ID Numbe	-		. Ia	FALL	ا تده				
	Casie Ecology Oil Salvage, Inc. N J D	0 4 5 9 9 5 6 9	3	C. State Trans. (D 1 5 9 3 1 1 1 1							
	7. Transporter 2 Company Name 8.	US EPA ID Numbe	r	D. Transporter's Phone ((609)) 696-4401							
	Designated Facility Name and Site Address     10.	US EPA ID Numbe		E. State Train	ns. ID						
	Casie Ecology Oil Salvage, Inc. T/A	US EFA IU NUMBE	"	F. Transport							
	3209 N. MIll Rd / Casie Protank			G. State Fac			5				
۱		J   D   0   4   5   9   9   5	16   9   3		•		•				
Ì	11. US DOT Description (Including Proper Shipping Name, Hazard Cl.		12. Conta	iners	13. Total	14. Unit	į .				
1	•	No.		uantity	Wt/Vol	Waste No.					
3	a.   Combustible liquid, n.o.s.(Fuel C			ממכו							
E N	NA1993, PGIII		0,0,1		5 10	G	I, D, 7, 2				
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Ц	J. Additional Descriptions for Materials Listed Above			K. Handling	Codes for	Wastes Li	sted Above				
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	b. d			b. L		đ.					
	15. Special Handling Instructions and Additional Information						f				
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Н	a.24 Hr. Emergency Response #609 696-44	401 K. Ambrosia	NAERO	#127	•		i				
П	16. GENERATOR'S CERTIFICATION: I hereby declare that the conter	nts of this consignment are fu	ally and acc	urately describ	ed above t	у					
H	proper shipping name and are classified, packed, marked, and labe according to applicable international and national government reg	eled, and are in all respects in	n proper cor	ndition for tran	sport by hi	ghway	l				
Н	I hereby certify that the above-named material is not hazardous waste		61, 264 <sub>-</sub> 2nd	279 or any app	licable state	law.					
H							•				
$\ $		100	//								
$\  \ $	MARIES APPLEBY SELFM-PU-FU	Signature	, C				onth Day 98				
+	17. Transporter) Acknowledgement of Receipt of Materials			7 /	-						
R	Priored/Typed/Name	Signature	-/-	(1)		A.	Ionth/ Day . Xaar				
A S P	100 B Consibling	136	das	, E-	-	Ž	40148				
	18. Transporter 2 Acknowledgement of Receipt of Materials			)		<u>.</u>					
ORTER	Printed/Typed Name	Signature			<del></del>	. A	fonth Day Year				
Ŕ							1 1 1 1 1				
	19. Discrepancy Indication Space					;	Į.				
F						:	Ī				
FACIL						:	Į				
i i	20. Facility Owner or Operator: Certification of receipt of non-hazardous n	naterials covered by this manif	est except as	noted in Item	19.	•					
Ť	Printed/Typed Name	Signature					fonth Day Year				
	··· 					1	11111				
_	·										

718

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

- 100	se ty	pe or p	fint in block letters. (Form designed for use on ente (12-pitch) typewriter.)							
		1	1. Generator's US EPA ID No.   N   J   3   2   1   0   0   2   0   5   9   7   1   4   4   1   1   4   1   1   4   1   1	8112	2. Pa of	ge 1				
	3.	Gene	ator's Name and Mailing Address U.S. Army Com. Elec.Command		A. N	on-haz	ardous I	Manifest	Documo	ent Numbe
			Main Post Bldg 173/Attn: Joe Fa	HON			o 19		8	
	4.	Gener	Fort Monmouth NJ 07703  ator's Phone ( 732 ) 532 - 6223		K.r.		erator's l		Qhira	hia/ '
			porter 1 Company Name 6. US EPA ID Number	r	(	$Cb^{-}$	JOE	FAZ		) 1107
	Ca	sie	Ecology Oil Salvage, Inc. N J   D   O   4   5   9   9   5   6   9	3		tate Tran		1 6	7	To the
	7.	Trans	porter 2 Company Name 8. US EPA ID Number	r	D. T	ransport	er's Pho	ne ( <b>( 60</b>	9) 69	6-4401
	0	Docio	nated Facility Name and Site Address 10. US EPA ID Number	<u> </u>	E. St	ate Tran	is. ID		للل	
		-	Ecology Oil Salvage, Inc. T/A		F. Tr	nsporte	r's Phon	<u> </u>	`	
	ı		N. MIll Rd / Casie Protank		Ļ		lity's ID	- ,	D1HPO	5
	٧j	nel	and NJ 08360 [N J D 0 4 5 9 9 5	6 9 3			Phone (			
	11.	US D	OT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Cont	ainers   Type	T	13. otal antity	14. Unit Wt/Vo	Wa	L iste No.
G	a.		Combustible liquid, n.o.s.(Fuel Oil)	<u> </u>		16. 6	MO	) <	j	
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	<u>a.</u>				<u>a.</u>	,1		<u>c.</u>		<u> </u>
	b.		d		b.			d.		
	15.	Specia	# 128	233	J.3.	5,2	37.	239		
	a	ERG	<b>#</b> 128		US	TO	lasor	~		
	5		hr emergency response #609-696-4401 K.Ambrosia							
	16.	GENE	RATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are full r shipping name and are classified, packed, marked, and labeled, and are in all respects in	lly and acc	urately	describe	ed above	by highway		
		accor	ding to applicable international and national government regulations.				-			
		i nere	by certify that the above-named material is not hazardous waste as defined by 40 CFR Part 26	11, 264 and	279 or :	any appli	cable sta	te law.		
K	K,	Printe	d/Typed Name  Lake Apolch SEIFN-RUEU X	Z	4	<			Mobile	业级
-	17.	Trans	porter Acknowledgement of Receipt of Materials		$\rightarrow$	4			الماما	TILL
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FACI										
Ļ	20.	Facili	y Owner or Operator: Certification of receipt of non-hazardous materials covered by this manife	et excent a	s noted	in Item 1	0			
Ý	-		d/Typed Name Signature	or evechi a	HOIGO	m rem 1	J.		Month	Day Year
										,,

In case of an emergency or spill, Immediately call CASIE (800) 354-2584

# APPENDIX D UST DISPOSAL CERTIFICATE

B.718, 1150

Customer's Name.

## MAZZA & SONS, INC.

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

NO	075	
110		

DATE. 22 ILL EV

	Ad	dress					<u>.</u>	
	Weight	Price	·	* * C#		:	Weight	Price
Cast Iron						Lt. Cop	_	Trice
Steel Tanks	50	.05			15000 LB	Brass		<del></del>
Lt. Iron						Alum C	loon	
Copper #1		<del></del>			13180			
				*	1820	Lead	<del></del>	
Copper #2			;	,	7,000	Stainles	S	
with the	· · · · · · · · · · · · · · · · · · ·		*Check	NOT !	Picked up.	Battery	,	
· · · · · · · · · · · · · · · · · · ·				1) 1/2	4/28	·		
-			A	5	,,,,,,		\$ 50	03
			JUL   6 1998			TOTAL	AMOUNT:	
W	eigher		JUN 1978	/ E1	Customer	Jan J.	Mar.	

Tecom - VINIVECC

THIS CHECK IS DELIVERED ON THE FOLLOWING	FOR PAYMENT		1978
TOTAL OF INVOICES LESS % DISCOUNT LESS FREIGHT LESS TOTAL DEDUCTIONS AMOUNT OF CHECK	AMOUNT	MAZZA & SONS, INC.  RECYCLING DIVISION P.O. BOX 246 OAKHURST, NJ 07755  PAY TO THE ORDER OF OSIN DOLLA  Sovereign Bank  But 1221272332:000 109109928611	55-7233/2212

# 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. 718

Project #

3670

Date Rec.

06/18/98

Date Compl. 06/18/98

Released by:

)-6 . a.d

Daniel K. Wright

**Laboratory Director** 

#### **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 res</u>
1.Method Detection Limits provided.	
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank	
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	NA
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)	- 1
Additional Comments:	

#### Laboratory Authentication Statement

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

Daniel K. Wright

Laboratory Manager



## Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim@monmouth.army.mil
NJDEP Certification #13461

**Chain of Custody Record** 

Customer: C. A.	APPL64	Project No:	98-a	001	Analysis Parameters Comments:					Comments:				
Customer: C, F. Phone #: 530-6	6334	Location: BCDG 718				<b>\</b>								·
()DERA (XÓMA (		UST#	81533 -	116		•	10							
Samplers Name / Co	mpany: 6. Immello	TUS		Sample	#	2	4							
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	ス	6							Remarks / Preservation Method
3670.01	A-45'D	6-184	1430	SOIL	1	X	X							
. 02	B 4.5'D	6-18-9	\$ 1435	SOIL	1	X	×							
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					<u></u>									6/18/98 - Read 98 of 95 F
														6. I mills
Relinquished by (signatu	re): Date/Time:	Received by (	signature):		Relin	quished	by (sig	nature)	):	Date/7	ime:	Receiv		(signature):
x gay a. I	enll 6-18-98 1520	800	5											
Relinquished by (signatu	re): Date/Time:	Received by (	signature):		Relino	Relinquished by (signature):  Date/Time: Received by (signature):			(signature):					
Report Type: (_)Full, (_)Reduced, (_XStandard, (_)Screen / non-certified Remarks:  Turnaround time: (_)Standard 4 wks, (_XRush2 Days, (_)ASAP VerbalHrs.														

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

Client:

U.S. Army

Lab. ID#:

3670

DPW. SELFM-PW-EV

Date Rec'd:

18-Jun-98

Bldg. 173

**Analysis Start:** 

18-Jun-98

Ft. Monmouth, NJ 07703

**Analysis Complete:** 

18-Jun-98

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

**D.DEINHARDT** 

DICAR #:

Ext. Meth:	Shake			Location #:		BLDG. 718
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3670.01	A-4.5' D	1.00	15.32	78.22	196	ND
3670.02	B-4.5' D	1.00	15.28	83.97	183	ND
3670.03	C-4.5' D	1.00	15.30	84.10	183	ND
3670.04	DUPE	1.00	15.41	82.55	185	ND
METHOD BLANK	TBLK 117	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright Laboratory Director

1

#### 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 <u>and</u> 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	
Lab Date	oratory Manager or Environmental Consultant's Signature	
Lab	oratory 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. 718

Project #

3675

Date Rec.

06/19/98

Date Compl. 06/22/98

Released by:

Daniel K. Wright

7-6-98 Date:

**Laboratory Director** 

### **Table of Contents**

Section	<u>Pages</u>
Cover Sheet	1
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Continuing Calibration Summary	9-10
Surrogate Results Summary	. 11
MS/MSD Results Summary	12
Quality Control Spike Summary	13
Raw Sample Data	14-21
Laboratory Deliverable Checklist	22

#### **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

	No Yes
1.Method Detection Limits provided.	- /
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank	
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	NA
<ol><li>Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.</li></ol>	
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 (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

**Chain of Custody Record** 

Customer: C Ample by - DPW Project No: 98.0001				Analysis arameters						r. v	Comments:			
Phone #: 26334   Location: B. 7/88/5.						as	V	16.00	<b>. 1</b>				*= SAMPLES KEPT BELOW 4°C.	
()DERA NOMA (	)Other:	D.	118815	33-116	<i>y</i>	$ \mathcal{J}_0 $	Ĵ	3	78					BEZOW 4°C.
Samplers Name / Con	npany: GARY DIKA	ARTINIS-	TUS	Sample	#	10	Sswa	VOAY	6 3				OUA	
Lab Sample I.D.	Sample Location	Date	Time	Type bottle		1	9	1					$\mathcal{U}$	Remarks / Preservation Method
3675. 01	718-A	6-19-18	1316	501L	1	$\boxtimes$	$\geq$	$\times$					/	SIDEWALL @ 4.5' #
02	$\mathcal{B}$		1323		1								5	EAC. FLOOR @ 7.0'
03	C		1330										8	SIDEWALL @4.51
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elly 01496	6-19-98/572	J. Ulu	HUU	1										
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Report Type: (_)Full, 😢	Reduced, (_)Standard, (_)Scre	en / non-certifie	d			Remar	ks: De	MICI	ATEV	SAN	rpli	SG T	PULS	Useo.
Turnaround time: Stand	dard 4 wks, (_)Rush Days	s, (_)ASAP Ver	bal <u>H</u> r	s.		<u> </u>						:	ن ب	

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

Client:

U.S. Army

Lab. ID#:

3675

DPW. SELFM-PW-EV

Date Rec'd:

19-Jun-98

Bldg. 173

Analysis Start:

22-Jun-98

Ft. Monmouth, NJ 07703

**Analysis Complete:** 

22-Jun-98

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

D.DEINHARDT

DICAR#:

Ext. Meth:	Shake			Location #:		BLDG. 286
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3675.01	718-A	1.00	<sup>3</sup> ~ 15.08	78.34	199	ND
3675.02	718-B	1.00	15.86	75.86	195	ND
3675.03	718-C	1.00	15.04	77.04	203	208.69
3675.04	718-DUP	1.00	15.26	75.32	204	ND
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			•			
		) and 170				
METHOD BLANK	TBLK 118	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright Laboratory Director

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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 <u>and</u> in the main body of the report.

Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	
Table of Contents submitted	
Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	
Document paginated and legible	
Chain of Custody submitted	
Samples submitted to lab within 48 hours of sample collection	
Methodology Summary submitted	
Laboratory Chronicle and Holding Time Check submitted	
Results submitted on a dry weight basis	
Method Detection Limits submitted	
Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	
oratory Manager or Environmental Consultant's Signature	
•	Table of Contents submitted  Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted  Document paginated and legible  Chain of Custody submitted  Samples submitted to lab within 48 hours of sample collection  Methodology Summary submitted  Laboratory Chronicle and Holding Time Check submitted  Results submitted on a dry weight basis  Method Detection Limits submitted  Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP

\*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. 718**

Field Location No. &	Laboratory	Matrix	Date and Time	Date Received
Location	Sample ID#		Of Collection	
Trip Blank	4003.01	Aqueous	24-Oct-98	10/26/98
Field Blank	4003.02	Aqueous	24-Oct-98 08:45	10/26/98
Bldg. 718 – 6.0'	4003.04	Aqueous	24-Oct-98 10:15	10/26/98

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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# 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: ca/wersap		Project No:						Anal	ysis P	arame	eters			Comments:
Phone #: \2(02)	Location: 8	LOGS 67	1, 718,	906	W	ദ								
()DERA (90MA (	)Other:					VOA	13 N							
Samplers Name / Con	npany:		<u></u>	Sample	#	7	+							
Lab Sample I.D.	Sample Location	Date	'Time	Туре	bottles	ıs	15							Remarks / Preservation Method
4093. 1	TRIP BUNNE	10-24-98	-	AQ.	Z	X	· .							HEL
2	FIELD BLANK	) I	0845	AQ.	3	×	×							HCL/ 240c
3	BLOG. 671- 7.5'	<b>1</b> 1	0915	AQ.	3	×	×							н
4	BLOG. 718-6.0'	11	1015	AQ.	3	×	×							
5	BLAG. 906 - 13.0	·ι	1145	AQ.	3	×	X							11
6	FICED DUP, -	А		AQ.	3	×.	٨							11
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( . )	Planing hy (gidantura): Palin		nquished by (signature): Date/Time			Time:	Received by (signature):		(signature):					
Report Type: (_)Full, X	Reduced, Standard, Screen	en / non-certifi	ed		-	Rema	rks:							
Tumaranad tima: ( Water	ndard 4 wks ( )Rush Day	a ( NASAP V	erbal H	rs.		1								

2002

Page / of /

coc.XLS10/19/98

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

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

### 5. Quality Assurance/Quality Control

#### A. Decontamination

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

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

#### B. Field Blanks

- 1 Field blank was shared with bldg. 671 taken on same day.
- 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

# 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.		peled/Compounds identified and method blanks)	<u>4e3</u>
2.	Retention times for	chromatograms provided	<u>yes</u>
3.	GC/MS Tune Spec	ifications	•
	<b>a.</b> b.	BFB Meet Criteria DFTPP Meet Criteria	yes yes
4.	GC/MS Tuning Fre series and 12 hours	equency – Performed every 24 hours for 600 for 8000 series	<u>yes</u>
5.	analysis and contin	Initial Calibration performed before sample uing calibration performed within 24 hours of 600 series and 12 hours for 8000 series	yes
6.	GC/MS Calibration	requirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	yes yes
7.	Blank Contamination	on - If yes, List compounds and concentrations in each blank:	NO
	a. b. c.	VOA Fraction  B/N Fraction  Acid Fraction  NA	
8.	Surrogate Recoveri	es Meet Criteria	yes
	If not met, list outside the acc	those compounds and their recoveries, which fall eptable range:	·
	a.	VOA Fraction	
	ь.	B/N Fraction	
	c.	Acid Fraction NA	
	If not met, wer as "estimated"	e the calculations checked and the results qualified	
).		x Spike Duplicate Recoveries Meet Criteria se compounds and their recoveries, which fall ole range)	yes
	a.	VOA Fraction	
	<b>b</b> .	B/N Fraction	
	c.	Acid Fraction NA	

ft. pran

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

			Indicate Yes, No, N/A
10.		Area/Retention Time Shift Meet Criteria cose compounds, which fall outside the acceptable range)	<u>yes</u>
	a.	VOA Fraction	
	b.	B/N Fraction	
	c.	Acid Fraction	
11.	Extraction Holdin	ng Time Met	yes
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	Ves
	,; <b>3</b>		
	If not met, list the	number of days exceeded for each sample:	
Add	itional Comments:	te performed on 4003.05 (Bldg 906)	
Labo	oratory Manager:	Date: 12/3/48	

# LABORATORY CHRONICLE

# **Laboratory Chronicle**

Lab ID: 4003

Site: Bldg. 718

		Date	Hold Time
Da	te Sampled	10/24/98	NA
Re	ceipt/Refrigeration	10/26/98	NA
<b>E</b> x	tractions  Base Neutrals	10/27/98	14 days
An	alyses		
1. 2.	Volatiles Base Neutrals	10/28,29/98 10/31/98,11/04/98	14 days 40 days

# VOLATILE ORGANICS

# 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 vb01881.d

Sample Name

VBLK61

Operator Skelton Field ID

VBLK61 1

Date Acquired 28 Oct 98 9:12 am

Sample Multiplier

Regulatory Level MDL Qualifier Result (ug/l)' R.T. Response Compound Name CAS# not detected 50 1.85 ug/L 107028 Acrolein not detected 50 2.78 ug/L Acrylonitrile 107131 not detected 8.52 ug/L nle tert-Butyl alcohol 75650 not detected 0.16 ug/L nle Methyl-tert-Butyl ether 1634044 not detected 0.25 ug/L nle Di-isopropyl ether 108203 1.68 ug/L not detected nle Dichlorodifluoromethan 1.16 ug/L not detected 30 74-87-3 Chloromethane 1.06 ug/L not detected 5 75-01-4 Vinyl Chloride 10 1.10 ug/L not detected Bromomethane 74-83-9 1.01 ug/L not detected nle Chloroethane 75-00-3 not detected 0.50 ug/L nle Trichlorofluoromethane 75-69-4 not detected 0.24 ug/L 2 1,1-Dichloroethene 75-35-4 700 1.36 ug/L not detected 67-64-1 Acetone 0.46 ug/L Carbon Disulfide not detected nle 75-15-0 not detected 0.24 ug/L Methylene Chloride 75-09-2 0.16 ug/L 100 trans-1,2-Dichloroethene not detected 156-60-5 0.12 ug/L 70 not detected 1.1-Dichloroethane 75-35-3 0.78 ug/L not detected nle 108-05-4 Vinyl Acetate 300 0.62 ug/L not detected 2-Butanone 78-93-3 0.17 ug/L cis-1,2-Dichloroethene not detected 10 not detected 6 0.30 ug/L 67-66-3 Chloroform not detected 30 0.23 ug/L 1,1,1-Trichloroethane 75-55-6 0.47 ug/L not detected 2 Carbon Tetrachloride 56-23-5 not detected 0.23 ug/L 71-43-2 Benzene not detected 2 0.18 ug/L 1,2-Dichloroethane 107-06-2 not detected 0.23 ug/L Trichloroethene 79-01-6 0.40 ug/L not detected 1,2-Dichloropropane 78-87-5 not detected 0.55 ug/LBromodichloromethane 75-27-4 not detected nle 0.65 ug/L 2-Chloroethyl vinyl ethe 110-75-8 not detected 0.69 ug/L nle cis-1,3-Dichloropropene 10061-01-5 400 0.59 ug/L not detected 108-10-1 4-Methyl-2-Pentanone not detected 1000 0.37 ug/L 108-88-3 Toluene not detected nle 0.87 ug/L trans-1,3-Dichloroprope 10061-02-6 not detected 3 0.48 ug/L 1,1,2-Trichloroethane 79-00-5 not detected 0.32 ug/L Tetrachloroethene 127-18-4 0.71 ug/L not detected nle 2-Hexanone 591-78-6 not detected 10 0.86 ug/L Dibromochloromethane 126-48-1 not detected 4 0.39 ug/L 108-90-7 Chlorobenzene not detected 700 0.65 ug/L Ethylbenzene 100-41-4 not detected 1.14 ug/L nle m+p-Xylenes 1330-20-7 not detected 0.62 ug/L nle o-Xylene 1330-20-7 100 0.56 ug/L not detected 100-42-5 Styrene not detected 0.70 ug/L 75-25-2 Bromoform not detected 2 0.47 ug/L 1,1,2,2-Tetrachloroethan 79-34-5 600 0.55 ug/L not detected 541-73-1 1,3-Dichlorobenzene 75 0.57 ug/L not detected 1,4-Dichlorobenzene 106-46-7 600 0.64 ug/L not detected

\* 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

1,2-Dichlorobenzene

95-50-1

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID
----------

		IENIATIVELT IDENT	IFIED CONIFC	ONDS		Vblke	:4
Lab Name:	FMETL		Project	980932		VDIK	<u></u>
NJDEP#	13461	Case No.: 4003	SDG N	No	_ Loc	ation <u>UST</u>	
Matrix (soil/v	vater)	WATER	L	ab Sample	ID: V	/BLK61	
Sample wt/v	ol:	5.0 (g/ml) ML	L	ab File ID:	<u>\</u>	/B01881.D	
Level: (low/r	ned)	LOW	D	ate Receiv	red: <u>1</u>	0/26/98	
% Moisture:	not dec.		D	ate Analyz	ed: 1	0/28/98	
GC Column:	HP5M	S ID: 0.25 (mm)	D	ilution Fac	tor: 1	.0	
Soil Extract \	/olume:	(uL)	S	oil Aliquot	Volum	ie:	(uL
			CONCENTRA	ATION UNI	TS:		
Number TIC	s found:	0	(ug/L or ug/Ko	g) <u>UG</u>	/L	<del></del>	
CAS NO.		COMPOUND NAME		RT	EST	CONC.	Q

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

Data File Nam vb01898.d

Sample Name

4003.01

Operator

Skelton

Field ID

Trip Blank

Date Acquired 28 Oct 98 10:08 pm

Sample Multiplier

C1 64	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
CAS# 107028	Acrolein	14.11	Acceptable	not detected	50	1.85 ug/L	
	Acrylonitrile			not detected	50	2.78 ug/L	
107131 75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
1634044	Di-isopropyl ether			not detected	nle	0.25 ug/L	
108203	Dichlorodifluoromethan			not detected	nle	1.68 ug/L	
74.07.3	Chloromethane		<u> </u>	not detected	30	1.16 ug/L	
74-87-3	Vinyl Chloride		<del></del>	not detected	5	1.06 ug/L	
75-01-4			<del></del>	not detected	10	1.10 ug/L	
74-83-9	Bromomethane			not detected	nle	1.01 ug/L	
75-00-3	Chloroethane			not detected	nle	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2	0.24 ug/L	
75-35-4	1,1-Dichloroethene			not detected	700	1.36 ug/L	
67-64-1	Acetone		<del> </del>	not detected	nle	0.46 ug/L	
75-15-0	Carbon Disulfide		<del>  </del>	not detected	2	0.43 ug/L	
75-09-2	Methylene Chloride		├──┤	not detected	100	0.16 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	70	0.12 ug/L	
75-35-3	1,1-Dichloroethane		<del> </del>	not detected	nle	0.78 ug/L	
108-05-4	Vinyl Acetate			not detected	300	0.62 ug/L	1
78-93-3	2-Butanone			not detected	10	0.02 ug/L	
	cis-1,2-Dichloroethene			not detected	6	0.30 ug/L	
67-66-3	Chloroform		<u> </u>	not detected	30	0.23 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	2	0.47 ug/L	
56-23-5	Carbon Tetrachloride		<u> </u>	not detected	1	0.47 ug/I	
71-43-2	Benzene		<u> </u>	not detected	2	0.18 ug/I	
107-06-2	1,2-Dichloroethane			not detected	1 1	0.18 ug/I	
79-01-6	Trichloroethene			not detected	1 1	0.40 ug/I	
<i>7</i> 8-8 <b>7</b> -5	1,2-Dichloropropane		-	not detected	1	0.40 ug/I	
75-27-4	Bromodichloromethane			not detected	nle	0.55 ug/I	
110-75-8	2-Chloroethyl vinyl ethe	<u> </u>		not detected	nle	0.69 ug/l	
10061-01-5		ļ	<b></b>	not detected	400	0.59 ug/l	
108-10-1	4-Methyl-2-Pentanone				+		
108-88-3	Toluene			not detected	1000	0.37 ug/l	
10061-02-6				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	<u> </u>	<u> </u>	not detected	1 1	0.32 ug/l	_
591-78-6	2-Hexanone	<u> </u>	ļ	not detected	nle	0.71 ug/l	
126-48-1	Dibromochloromethane	L	<b></b>	not detected	10	0.86 ug/l	
108-90-7	Chlorobenzene		<u> </u>	not detected	4	0.39 ug/l	
100-41-4	Ethylbenzene		<u> </u>	not detected	700	0.65 ug/l	
1330-20-7	m+p-Xylenes	L		not detected	nle	1.14 ug/l	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/	
100-42-5	Styrene		<u> </u>	not detected	100	0.56 ug/	
75-25-2	Bromoform			not detected	4	0.70 ug/	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/	<u> </u>
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/	
95-50-1	1.2-Dichlorobenzene		I	not detected	600	0.64 ug/	

\* 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

Lab Name:	FMETL	, 2,7,7,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,	Project	980932		Tr	ip Blank	(
NJDEP#	13461	Case No.: 4003	SDG N	lo	Loc	ation	UST	
Matrix (soil/w	rater)	WATER	La	ab Sample	ID: 4	003.01	<u> </u>	
Sample wt/vo	oł:	5.0 (g/ml) ML	L	ab File ID:	<u>v</u>	/B0189	8.D	
Level: (low/n	ned)	LOW	D	ate Receiv	ed: <u>1</u>	0/26/9	8	
% Moisture: r	not dec.		D	ate Analyz	ed: <u>1</u>	0/28/9	8	_
GC Column:	HP5M	S ID: 0.25 (mm)	D	ilution Fact	tor: <u>1</u>	.0		
Soil Extract V	/olume:	(uL)	s	oil Aliquot \	Volum	e:		(uL
			CONCENTRA	TION UNI	TS:			
Number TICs	s found:	0	(ug/L or ug/Kg	) <u>UG/</u>	L			
CAS NO.		COMPOUND NAME		RT	EST	CON	С.	Q

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

Data File Nam vb01899.d

Sample Name

4003.02

Operator

Skelton Date Acquired 28 Oct 98 10:53 pm

Field ID Sample Multiplier

Field Blank

CA CH	Comment Name	R.T.	Response	Result	Regulatory Level (ug/I)*	MDL	Qualifier
CAS#	Compound Name Acrolein	10.1.		not detected	50	1.85 ug/L	
107028				not detected	50	2.78 ug/L	
107131	Acrylonitrile tert-Butyl alcohol		<del>  </del>	not detected	nle	8.52 ug/L	
75650				not detected	nle	0.16 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.25 ug/L	
108203	Di-isopropyl ether			not detected	nle	1.68 ug/L	
	Dichlorodifluoromethan		<del>  </del>	not detected	30	1.16 ug/L	
74-87-3	Chloromethane		<del>  </del>	not detected	5	1.06 ug/L	
75-01-4	Vinyl Chloride		<del>                                     </del>	not detected	10	1.10 ug/L	
74-83-9	Bromomethane		<del>  </del>	not detected	nle	1.01 ug/L	
75-00-3	Chloroethane		<del> </del>	not detected	nle	0.50 ug/L	
75-69-4	Trichlorofluoromethane		<del> </del>	not detected	2	0.30 ug/L	
75-35-4	1,1-Dichloroethene			not detected	700	1.36 ug/L	
67-64-1	Acetone			not detected	nle	0.46 ug/L	
<u>75-15-0</u>	Carbon Disulfide		ļI	not detected	2	0.40 ug/L	<del>                                     </del>
75-09-2	Methylene Chloride		<u> </u>	not detected	100	0.16 ug/L	<b></b> -
156-60-5	trans-1,2-Dichloroethene		<u> </u>	not detected	70	0.10 ug/L	<del>  </del>
75-35-3	1,1-Dichloroethane			not detected	nle	0.12 ug/L 0.78 ug/L	
108-05-4	Vinyl Acetate					0.78 ug/L	
78-93-3	2-Butanone		ļ——	not detected	300 10		
	cis-1,2-Dichloroethene			not detected		0.17 ug/L 0.30 ug/L	
67-66-3	Chloroform			not detected	6		
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride		ļ	not detected	2	0.47 ug/L	
71-43-2	Benzene		<del> </del>	not detected	1 1	0.23 ug/L	
107-06-2	1,2-Dichloroethane		ļ	not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1 1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1 1	0.40 ug/I	
75-27-4	Bromodichloromethane		ļ	not detected	1	0.55 ug/I	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/I	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/I	
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/I	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/I	
127-18-4	Tetrachloroethene			not detected	1 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/	
75-25-2	Bromoform	_	1	not detected	4	0.70 ug/l	
79-34-5	1.1.2.2-Tetrachloroethan	$t^{-}$	1	not detected	2	0.47 ug/	
	1,3-Dichlorobenzene	<del>                                     </del>	-	not detected	600	0.55 ug/	
541-73-1	1,4-Dichlorobenzene		+	not detected	75	0.57 ug/	_
106-46-7		<del>                                     </del>	+	not detected	600	0.64 ug/	
95-50-1	1,2-Dichlorobenzene	<u></u>		10t detected	1 000	TTAC 7.0	

\* 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 I	D
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Lab Name:	FMETL			Project	980932		Fie	eld Bla	ınk
NJDEP#	13461	Cas	se No.: 4003	SDG N	lo	Lo	cation	UST	
Matrix (soil/w	rater)	WATER		La	ab Sample	ID:	4003.02	2	
Sample wt/vo	-	5.0	(g/ml) ML	La	ab File ID:	•	VB0189	9.D	
Level: (low/n		LOW		 D	ate Receiv	ed:	10/26/9	8	
% Moisture: r	-		•	D	ate Analyz	ed:	10/28/9	8	
GC Column:		S ID: 0.2	25 (mm)	D	ilution Fact	or:	1.0		
Soil Extract V			(uL)	s	oil Aliquot	Volun	ne:		(uL)
				CONCENTRA	TION UNI	TS:			
Number TICs	s found:	0	_	(ug/L or ug/Kg	) UG/	L			
CAS NO.		COMPOU	ND NAME		RT	ES	T. CON	c.	Q

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

Data File Nam vb01901.d

Sample Name

4003.04

Operator Date Acquired 29 Oct 98 12:23 am

Skelton

Field ID

Sample Multiplier

Bldg 718 6.0'

CA CILL	Company Norma	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
CAS#	Compound Name Acrolein	К. 1.	( Caponac	not detected	50	1.85 ug/L	
107028	Acrylonitrile			not detected	50	2.78 ug/L	
107131	tert-Butyl alcohol		<del> </del>	not detected	nle	8.52 ug/L	
			<del></del>	not detected	nle	0.16 ug/L	
	Methyl-tert-Butyl ether		<del>                                     </del>	not detected	nle	0.25 ug/L	
108203	Di-isopropyl ether Dichlorodifluoromethan		<del>                                     </del>	not detected	nle	1.68 ug/L	
			<del> </del>	not detected	30	1.16 ug/L	
74-87-3	Chloromethane			not detected	5	1.06 ug/L	
75-01-4	Vinyl Chloride		<del>                                     </del>	not detected	10	1.10 ug/L	
74-83-9	Bromomethane		<del> </del>	not detected	nle	1.01 ug/L	
75-00-3	Chloroethane		<del>                                     </del>	not detected	nle	0.50 ug/L	
75-69-4	Trichlorofluoromethane		<del> </del>	not detected	2	0.24 ug/L	
75-35-4	1,1-Dichloroethene			not detected	700	1.36 ug/L	
67-64-1	Acetone		<del>                                     </del>	not detected	nle	0.46 ug/L	
75-15-0	Carbon Disulfide		<del> </del>	not detected	2	0.24 ug/L	
75-09-2	Methylene Chloride		<del>                                     </del>	not detected	100	0.16 ug/L	
156-60-5	trans-1,2-Dichloroethene		<del>  -</del>	not detected	70	0.12 ug/L	
75-35-3	1,1-Dichloroethane		<del>├</del>	not detected	nle	0.78 ug/L	
108-05-4	Vinyl Acetate		<del>  -</del>	not detected	300	0.62 ug/L	
78-93-3	2-Butanone		<del> </del>	not detected	10	0.02 ug/L	<u>'</u>
	cis-1,2-Dichloroethene		<del>├</del>	not detected	6	0.30 ug/L	` <del></del>
67-66-3	Chloroform		<del> </del>	not detected	30	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane		<del>                                     </del>	not detected	2	0.23 ug/L	
56-23-5	Carbon Tetrachloride		<del> </del>	not detected	1	0.23 ug/I	
71-43-2	Benzene		<del>                                     </del>	not detected	2	0.23 ug/I	
107-06-2	1,2-Dichloroethane	<u> </u>	<del>                                     </del>	not detected	1	0.18 ug/I	
79-01-6	Trichloroethene		<del> </del>	not detected	1	0.40 ug/I	
78-87-5	1,2-Dichloropropane	<b>.</b>	<del>├</del>	not detected	1 1	0.40 ug/I	
75-27-4	Bromodichloromethane	├	<del> </del>	not detected	nle	0.55 ug/I	7
110-75-8	2-Chloroethyl vinyl ethe		<del> </del>	not detected	nle	0.69 ug/l	
10061-01-5		<u> </u>	<del></del>	not detected	400	0.59 ug/I	
108-10-1	4-Methyl-2-Pentanone		-	not detected	1000	0.37 ug/l	<del></del>
108-88-3	Toluene		<del> </del>			0.87 ug/l	
	trans-1,3-Dichloroprope	<u> </u>	<del> </del>	not detected	nle 3		
79-00-5	1,1,2-Trichloroethane		<del> </del>	not detected		0.48 ug/l 0.32 ug/l	
127-18-4	Tetrachloroethene		<del> </del>	not detected	1		
591-78-6	2-Hexanone	<u> </u>	<del>  </del>	not detected	nle	0.71 ug/l	
126-48-1	Dibromochloromethane	<u> </u>	1	not detected	10	0.86 ug/	-
108-90-7	Chlorobenzene	<u> </u>	<b></b> _	not detected	4 700	0.39 ug/	
100-41-4	Ethylbenzene		<u> </u>	not detected	700	0.65 ug/	
1330-20-7	m+p-Xylenes		<del>   </del>	not detected	nle	1.14 ug/	
1330-20-7	o-Xylene	<u> </u>		not detected	nle	0.62 ug/	
100-42-5	Styrene			not detected	100	0.56 ug/	
75-25-2	Bromoform			not detected	4	0.70 ug/	
79-34-5	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/	
106-46-7	1.4-Dichlorobenzene			not detected	75	0.57 ug/	
95-50-1	1,2-Dichlorobenzene		T	not detected	600	0.64 ug/	Ll

\* 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

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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 I	D
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Lab Name:	FMETL	7_7777		Project	980932		Bi	dg718	
NJDEP#	13461	Ca	se No.: 4003	SDG N	10	Lo	cation	UST	
Matrix (soil/w	ater)	WATER	_	L	ab Sample	ID:	4003.04	,, <u>,</u>	
Sample wt/vo	ol:	5.0	(g/ml) ML	L	ab File ID:	<u>'</u>	VB01901	.D	
Level: (low/m	ned)	LOW	_	D	ate Receiv	red:	10/26/98		
% Moisture: n	ot dec.			D	ate Analyz	ed:	10/29/98		
GC Column:	HP5M	S ID: 0.2	25 (mm)	, D	ilution Fac	tor:	1.0		_
Soil Extract V	olume:		_ (uL)	S	oil Aliquot	Volun	ne:		(uL)
			(	CONCENTRA	ATION UNI	TS:			
Number TICs	found:	0		ug/L or ug/Ko	g) <u>UG</u>	/L		-	
CAS NO.		COMPOL	IND NAME		RT	EST	Γ. CONC		Q

# BASE NEUTRALS

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

Data File Name bna01125.d

Sample Name

SBLK153

Operator

Skelton

Misc Info

SBLK153 A 981027

Date Acquired

4 Nov 1998 1:02 am

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		i vinte sette ∰i Li	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	L	25.54	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/	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/l	L
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/	
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/	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/	L
83-32-9	Acenaphthene		f	not detected	400	1.98 ug/	ı 🗆
132-64-9	Dibenzofuran		;	not detected	NLE	2.13 ug/	L

#### Semi-Volatile Analysis Report Page 2

Data File Name bna01125.d

Sample Name

SBLK153

Operator

Skelton

Misc Info

SBLK153 A 981027

Date Acquired 4 Nov 1998 1:02 am 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	Ругепе		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	1 - 2 - 2	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 exceded 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 COMPOUN
--------------------------------

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		ILINIA	HIVEE! IDENTI	ILD CC	WII COIN	טטו		1	
Lab Name:	FMETL			Lab	Code 1	3461		Sbik1	
Project	980932	c	ase No.: 4003	Lo	cation	UST	_ S	DG No.:	
Matrix: (soil/	water)	WATER	<u> </u>		Lab S	Sample	ID:	SBLK153	· <del>-</del> · · · · · · · · · · · · · · · · · · ·
Sample wt/v	ol:	1000	(g/ml) ML	<del></del>	Lab F	File ID:		BNA01125.	)
Level: (low/i	med)	LOW			Date	Receiv	ed:	10/26/98	
% Moisture:		de	canted: (Y/N)	<u>N</u>	Date	Extract	ed:	10/27/98	
Concentrate	d Extract	Volume:	1000 (uL)		Date	Analyz	ed:	11/04/98	
Injection Vol	ume: 1.	0 (uL)			Diluti	on Fac	tor:	1.0	
GPC Cleanu	ip: (Y/N)	N	_ pH: <u>7</u>						
				CON	CENTR	ATION	UNI	TS:	
Number TIC	s found:	0		(ug/L	or ug/K	g)	UG/	<u>L</u>	
CAS NUMI	BER	СОМРО	OUND NAME	:		RT	ES	ST. CONC.	Q

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

Data File Name bna01078.d

Sample Name

4003.02

Operator

Skelton

Misc Info

Field Blank

Date Acquired 31 Oct 1998 5:56 am

Sample Multiplier 1

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

## Semi-Volatile Analysis Report Page 2

Data File Name bna01078.d

Sample Name

4003.02

Operator

Skelton

Misc Info

Field Blank

Date Acquired

31 Oct 1998 5:56 am

Sample Multiplier 1

					<del></del>		_
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		ug/L	

#### Qualifiers

E = Value exceded linear range

D = Value from dilution

B = Compound in related blank

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

		I LIVIA III TERIT	i ilb coiiii	00.150		Figure 5	
Lab Name:	FMETL		Lab Cod	le <u>13461</u>		Field BI	ank
Project	980932	Case No.: 4003	Locat	ion <u>UST</u>	_ SI	DG No.:	
Matrix: (soil/	water)	WATER	l	ab Sample	ID:	4003.02	
Sample wt/ve	ol:	1000 (g/ml) ML		.ab File ID:		BNA01078.D	<u> </u>
Level: (low/i	med)	LOW	Į	Date Receiv	ved:	10/26/98	
% Moisture:		decanted: (Y/N)	N I	Date Extrac	ted:	10/27/98	
Concentrate	d Extract	Volume: 1000 (uL)	I	Date Analyz	zed:	10/31/98	
Injection Vol	ume: <u>1.</u>	0 (uL)	ı	Dilution Fac	tor:	1.0	
GPC Cleanu	ıp: (Y/N)	N pH: 7	_				
Number TIC	s found:	0	CONCEI	NTRATION ug/Kg)	UNI'		
CAS NUMI	BER	COMPOUND NAME		RT	ES	ST. CONC.	Q

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

Data File Name bna01080.d

Sample Name

4003.04

Operator

Skelton

Misc Info

Bldg 718 6.0'

Date Acquired 31 Oct 1998 7:19 am

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	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		v	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		54, 5	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/I	,
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/I	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/I	
83-32-9	Acenaphthene			not detected	400	1.98 ug/I	
132-64-9	Dibenzofuran		Sp. A. C.	not detected	NLE	2.13 ug/I	

#### Semi-Volatile Analysis Report Page 2

Data File Name bna01080.d

Sample Name

4003.04

Operator

Skelton

Misc Info

Bidg 718 6.0'

31 Oct 1998 7:19 am Date Acquired

Sample Multiplier 1

		<del></del>					
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	1
191-24-2	Benzo[g,h,i]perylene	* **	not detected	NLE	1.13	ug/L	

#### Qualifiers

E = Value exceded linear range

D = Value from dilution

B = Compound in related blank

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

1F

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

#### TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

		IENIA	HACET INCHAIN	IED CON	ir Oui	103			
Lab Name:	FMETL			Lab C	ode _	3461		Bldg 7	18 
Project	980932	Ca	ase No.: 4003	Loc	cation	UST	SE	OG No.:	
Matrix: (soil/	water)	WATER			Lab	Sample I	D:	4003.04	
Sample wt/v	ol:	1000	(g/ml) <u>ML</u>		Lab	File ID:		BNA01080.D	
Level: (low/i	med)	LOW			Date	Receive	d:	10/26/98	
% Moisture:		de	canted: (Y/N)	N	Date	Extracte	ed:	10/27/98	
Concentrate	d Extract	Volume:	1000 (uL)		Date	Analyze	d:	10/31/98	
Injection Vol	ume: <u>1.</u> 0	0 (uL)			Dilut	ion Facto	or:	1.0	
GPC Cleanu	ıp: (Y/N)	<u>N</u>	pH: <u>7</u>	-					
				CONC	ENTR	ATION L	רואנ	ΓS:	
Number TIC	s found:	0		(ug/L	or ug/k	(g) <u>L</u>	JG/I		
CAS NUM	BER	COMPO	UND NAME			RT	ES	T. CONC.	C

#### 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 <u>and</u> 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	<u>/</u>
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	
	oratory Manager or Environmental Consultant's Signature	

Laboratory Certification #13461

<sup>\*</sup>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

# FORT MONMOUTH ENVIRONMENTAL

# **TESTING LABORATORY**

**DIRECTORATE OF PUBLIC WORKS** 

**NJDEP LABORATORY CERTIFICATION # 13461** 

PHONE: (732)532-6224 FAX: (732)532-3484 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



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

**Bldg.** 718

Field Location No. &	Laboratory	Matrix	Date and Time	Date Received
Location	Sample ID#		Of Collection	
Trip Blank	4116.01	Aqueous	07-Dec-98	12/07/98
Field Blank	4116.02	Aqueous	07-Dec-98 09:12	12/07/98
Bldg. 718	4117.01	Aqueous	07-Dec-9811:05	12/07/98
Bldg. 718	4117.02	Aqueous	07-Dec-98 11:25	12/07/98

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

Daniel Wright/Date

2-7-99

Laboratory Director

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## CHAIN OF CUSTODY

## Fort Monmouth Environmental Testing Laboratory

Bidg. 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: CHAS	Appleby	Project No:						Anal	ysis F	aram	eters	· · · · ·		Comments:
Phone #: 1200	QY	Location:	BLSG. 718	8		V	В							
()DERA (YÓMA (						V 0	N							
Samplers Name / Cor	npany: MARK LAWRA	7.V.S.	puson	Sample	#	A	+							
Lab Sample I.D.	Sample Location	Date	Time	Туре	pottles	15	15							Remarks / Preservation Method
4117.	BLOG. 718	12-7-98	1105	AQ.	Z	X								HCC
2	. 13	u	1125	11			×							24°C
			_,											
	·													
			,											
					-									
Relinquished by (signatu	re): Date/Time: 12-7-98 1155.	Received by	(signature):	LA		quished	by (sig	enature)	):	Date/	Time:	Recei	ved by	(signature):
Relinquished by (signatu	//			iquished by (signature):				Date/Time: Received by			ved by	(signature):		
Report Type: (_)Full, (_)Reduced, (_)Standard, (_)Screen / non-certified Remarks: SHA  Turnaround time: (_)Standard 4 wks, (_)Rush Days, (_)ASAP Verbal Hrs.								SHARE		./F.B Ame		BCD	g. 9	06

## Fort Monmouth Environmental Testing Laboratory

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

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doi:n6.monmouth.army.mil

NJDEP Certification #13461

## **Chain of Custody Record**

Customer: CHAR. A	PEDICON I NE DEAD.	Project No:	Project No:				Analysis Parameters							Comments:	
Phone #: \2\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	7 - 7 /	Location: B	LDG. 906			V	В								
()DERA (YOMA (					بنسينة	VOAT	N								
	mpany: Mar Laura	T.V.S. P	uS-07	Sample	#		,+							D. J. Dansierstin Mathed	
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	15	15							Remarks / Preservation Method	
41/6. 1	TRIP BLANK	12-7-98		AQ.	2	×								HCL HOLD	
2	FIELD BLANK	U	0912	11	3	×	×						<u> </u>	401/2406	
3	BLAG. 906	. U	0930	u	3	×	×				,			11	
4	Field DUP	ч	×		3	×	×		ļ				<u></u>		
				<b></b>		<b> </b>	<u> </u>								
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		-			ļ		<del> </del>			-					
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			<del> </del>		1-	-	-	-		-		<u> </u>			
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				بينيني	-	1		ــــــــــــــــــــــــــــــــــــــ	<u> </u>		ert og er	Dana	and by	(signature):	
Relinquished by (signat			(signature):		Reli	nquishe	ed by (si	ignatur	<b>:</b> ):	Date	/Time:	Rece	iveu by	(signaune).	
Mathe	12-7-98 1155		MILL		-		<u>ئۇدىيە يۇرى.</u>			5	The same	Paga	irad b	(comature):	
Relinquished by (signature): Date/Time:		Received by	(signature):		Reli	inquished by (signature): Date/Time:					/ 1 me:	Rece	Received by (signature):		
												<del> </del>			
3	Reduced, (_)Standard, (_)Sc			_		Kem	arks:	ă.							
Turnaround time: (X)Sta	ındard 4 wks, (_)Rush Da	ys, (_)ASAP \	Verbal	Irs.	برونونون	ــــــــــــــــــــــــــــــــــــــ									

## FIELD DOCUMENTATION

HILL CHILD

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

### **FOR BLDG. #718**

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 12 of feet. The water table was at 6 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 shared with bldg. 671 taken on same day.
- 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.		ed/Compounds identified and method blanks)	<u>yes</u>
2.	Retention times for cl	nromatograms provided	- Hes
3.	GC/MS Tune Specific	cations	·
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	yes
4.	GC/MS Tuning Frequences and 12 hours for	nency Performed every 24 hours for 600 or 8000 series	yes
5.	analysis and continui	Initial Calibration performed before sample ag calibration performed within 24 hours of 00 series and 12 hours for 8000 series	Yos
6.	GC/MS Calibration re	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	yes Yes
<b>7</b> .	Blank Contamination	- If yes, List compounds and concentrations in each blank:	<u>6</u> 4_
	a. b. c.	VOA Fraction B/N Fraction Acid Fraction	
8.	Surrogate Recoveries	Meet Criteria	<u>Lipes</u>
	If not met, list the outside the accep	ose compounds and their recoveries, which fall table range:	v
	a. b.	VOA Fraction B/N Fraction Acid Fraction	
	c.  If not met, were t as "estimated"?	he calculations checked and the results qualified	
9.		Spike Duplicate Recoveries Meet Criteria compounds and their recoveries, which fall crange)	yes
	a. b.	VOA Fraction  B/N Fraction	
	C.	Acid Fraction NA	

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

		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)	40
	a. VOA Fraction	
	b. B/N Fraction	
	c. Acid Fraction DA	
11.	Extraction Holding Time Met	405
	If not met, list the number of days exceeded for each sample:	
12.	Analysis Holding Time Met	Les
	If not met, list the number of days exceeded for each sample:	
Add	itional Comments:	
Lab	oratory Manager: Date: 2-7-99	

## LABORATORY CHRONICLE

## **Laboratory Chronicle**

**Lab ID:** 4117

Site: Bldg. 718

	Date	Hold Time
Date Sampled	12/07/98	NA
Receipt/Refrigeration	12/07/98	NA
Extractions		
1. Base Neutrals	12/08/98	14 days
Analyses		
<ol> <li>Volatile Organics</li> <li>Base Neutrals</li> </ol>	12/10/98 12/19,21/98	14 days 40 days

# VOLATILE ORGANICS

## 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 vb02313.d

Sample Name

Vblk72

Operator

Skelton

Field ID

Vblk72

Date Acquired 10 Dec 98 9:59 am

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	<u> </u>
107131	Acrylonitrile			not detected	50	2.78 ug/L	<del></del> -
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	
100203	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 <b>-</b> 69-4	Trichlorofluoromethane		<b></b>	not detected	nle	0.50 ug/L	
75-35-4	1.1-Dichloroethene			not detected	2	0.30 ug/L 0.24 ug/L	
67-64-1	Acetone		<del> </del>	not detected	700	0.24 ug/L 1.36 ug/L	
75-15-0	Carbon Disulfide	-	-	not detected	1		
75-09-2	Methylene Chloride		-	not detected	nle 2	0.46 ug/L	
	trans-1,2-Dichloroethene			not detected		0.24 ug/L	
156-60-5	*** · · · · · · · · · · · · · · · · · ·				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	
(7, (6, 2)	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	11	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
	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	
	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		<del></del>	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 ORGANI**

DLATILE ORGANICS ANALYSIS DATA SHEET	LIELD
TENTATIVELY IDENTIFIED COMPOUNDS	F"

			V				l v	blk72	
Lab Name:	FMETL			Project	980932	_	. L		
NJDEP#	13461	Cas	se No.: 4117	SDG N	4o	_ Lo	cation	UST	
Matrix: (soil/	water)	WATER	_	L	ab Sample	ID:	Vblk72		
Sample wt/ve	ol:	5.0	(g/ml) ML	L	ab File ID:		VB02313	.D	-
Level: (low/r	med)	LOW	-	D	ate Receiv	ved:	12/07/98	··· ··	_
% Moisture:	not dec.		<del></del>	D	ate Analyz	zed:	12/10/98		_
GC Column:	HP5M	S ID: 0.2	25 (mm)	D	ilution Fac	tor:	1.0		_
Soil Extract \	Volume:		_ (uL)	S	oil Aliquot	Volu	me:		_ (uL)
		_		CONCENTRA (ug/L or ug/K					
Number TIC:	s found:	0							
CAS NO.		COMPOL	IND NAME		RT	ES	ST. CONC		Q

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

Data File Nam vb02322.d

Sample Name

4116.01

Operator Ske

Skelton

Field ID

Trip Blank

Date Acquired 10 Dec 98 4:59 pm

Sample Multiplier

1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein		ŀ	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		i	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		<del> </del>	not detected	i	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				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	-
	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	i	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane		<del>  -</del>	not detected	10	0.71 ug/L 0.86 ug/L	<b></b> -
108-90-7	Chlorobenzene		<del>  </del>	not detected	4	0.30 ug/L	<del>                                     </del>
			<del>                                     </del>	not detected	1		<del> </del>
100-41-4	Ethylbenzene		<del>                                     </del>	not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes		<del> </del>		nle	1.14 ug/L	<del> </del>
1330-20-7	o-Xylene		<del> </del>	not detected	nle	0.62 ug/L	<del>                                     </del>
100-42-5	Styrene		<del>                                     </del>	not detected	100	0.56 ug/L	<del> </del>
75-25-2	Bromoform		<b> </b>	not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan		ļ	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		<b> </b>	not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	L

<sup>\*</sup> 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

Lab Name:	FMETL		Project	980932	Tı	rip Blank						
NJDEP#	13461	Case No.: 41	16 SDG	No	Location	UST						
Matrix: (soil/w	vater)	WATER	ι	.ab Sample	ID: 4116.0	1						
Sample wt/vo	ol:	5.0 (g/ml) <u>N</u>	<u>1L</u> L	.ab File ID:	VB0232	22.D						
Level: (low/n	ned)	LOW	Γ	Date Receiv	ed: 12/07/9	98						
% Moisture: r	ot dec.		ι	Date Analyz	ed: <u>12/10/9</u>	98						
GC Column:	HP5MS	S ID: <u>0.25</u> (mm	) [	Dilution Fact	tor: 1.0							
Soil Extract V	olume: _	(uL)	9	Soil Aliquot	Volume:	(uL						
			CONCENTR	ATION UNI	TS:							
Number TICs	found:	0	(ug/L or ug/K	(ug/L or ug/Kg) UG/L								
CAS NO.		COMPOUND NAME		RT	EST. CON	IC. Q						

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

Data File Nam vb02323.d

b02323.d

Sample Name

4116.02 Field Blank

Operator Skelton
Date Acquired 10 Dec 98 5:44 pm

Field ID

Sample Multiplier

					Regulatory Level		
CAS#	Compound Name	R.T.	Response	Result	(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	
1	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	i	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	
	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	<del> </del>
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	<b> </b>
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	<del>                                     </del>
	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
	Ethylbenzene			not detected	700	0.65 ug/L	
100-41-4 1330-20-7				not detected	nle	1.14 ug/L	
1330-20-7	m+p-Xylenes o-Xylene			not detected	nle	0.62 ug/L	
				not detected	100	0.62 ug/L 0.56 ug/L	
100-42-5	Styrene			not detected	1		<del>,</del>
75-25-2	Bromoform			not detected not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan				2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene		ļ	not detected	75	0.57 ug/L	1
95-50-1	1,2-Dichlorobenzene	+ TT' 1	. CDOLL	not detected	600	0.64 ug/L	<u> </u>

\* 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

NEE - NO Ellin Established

R.T. = Retention Time

1E

## VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

						Fie	eld Bla	nk
Lab Name: FME	TL		Project	980932				
NJDEP# 1346	<u> </u>	Case No.: 4116	SDG I	No	_ Lo	cation	UST	
Matrix: (soil/water)	) WATE	R	L	ab Sample	ID:	4116.02	2	
Sample wt/vol:	5.0	(g/ml) ML	L	ab File ID:	-	VB0232	3.D	
Level: (low/med)	LOW		E	ate Receiv	ved:	12/07/9	8	
% Moisture: not de	ec		0	ate Analyz	zed:	12/10/9	8	
GC Column: HF	SMS ID:	0.25 (mm)		ilution Fac	tor:	1.0		
Soil Extract Volum	ne:	(uL)	S	oil Aliquot	Volu	me:		(uL)
			CONCENTRA					
Number TICs four	nd: <u> </u>							
CAS NO.	СОМ	POUND NAME		RT	ES	T. CON	с.	Q

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

Data File Nam vb02326.d

Sample Name

4117.01

Operator Skelton

Field ID

Bldg718

Date Acquired 10 Dec 98 7:58 pm

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	<u> </u>
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	0.46 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	
F****	cis-1,2-Dichloroethene			not detected	10	0.02 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	<del></del>
75-55-6	1,1,1-Trichloroethane			not detected	30	0.30 ug/L 0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.23 ug/L 0.47 ug/L	
71-43-2	Benzene			not detected	1 1	0.47 ug/L 0.23 ug/L	
107-06-2	1,2-Dichloroethane	<u>_</u>		not detected	2	0.23 ug/L 0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.18 ug/L 0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.23 ug/L 0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1 1	0.40 ug/L	
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/L	
	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	
	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.87 ug/L 0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1 1		
591-78-6	2-Hexanone			not detected		0.32 ug/L	
	Dibromochloromethane			not detected	nle	0.71 ug/L	
	Chlorobenzene	-	<del></del>		10	0.86 ug/L	
	Ethylbenzene	<del></del>		not detected	700	0.39 ug/L	
	m+p-Xylenes			not detected	700	0.65 ug/L	
	o-Xylene		<del></del> +	not detected	nle	1.14 ug/L	
	Styrene			not detected	nle	0.62 ug/L	<del></del>
			<del></del>	not detected	100	0.56 ug/L	
	Bromoform		<del></del>	not detected	4	0.70 ug/L	
	1,1,2,2-Tetrachloroethan			not detected	2	0.47 ug/L	
	1,3-Dichlorobenzene	$\rightarrow$		not detected	600	0.55 ug/L	
	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

	1100 KINKEI	510 D7 (17 ( G1 12 E1	
TENTATIVELY	IDENTIFIED	COMPOUNDS	

FI	E	LD	ID

		TENTATIVELY IDEN	HELED COMPC	DOMD2			
Lab Name:	FMETL		Project	980932	··········	Bldg. 7	18
NJDEP#	13461	Case No.: 4117	SDG N	10	_ Loc	ation UST	
Matrix: (soil/	water)	WATER	L	ab Sample	ID: 4	117.01	
Sample wt/v	ol:	5.0 (g/ml) ML	La	ab File ID:	<u>\</u>	/B02326.D	
Level: (low/	med)	LOW	D	ate Receiv	/ed: <u>1</u>	2/07/98	<del></del>
% Moisture:	not dec.		D	ate Analyz	ed: 1	2/10/98	
GC Column:	HP5M	S ID: <u>0.25</u> (mm)	D	ilution Fac	tor: <u>1</u>	.0	
Soil Extract	Volume:	(uL)	S	oil Aliquot	Volum	ne:	(uL
Number TIC	s found:	0	CONCENTRA (ug/L or ug/Ko				
CAS NO.	٠	COMPOUND NAME		RT	EST	CONC.	Q

## BASE NEUTRAL

### Semi-Volatile Analysis Report

## U.S. Army, Fort Monmouth Environmental Laboratory

## NJDEP Certification #13461

Data File Name

BN02424.D

Sample Name

Sblk177

Operator

Date Acquired

Skelton 19-Dec-98 Misc Info

Sblk177 A 981208

Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	-
108-60-1	bis(2-chloroisopropyl)ether	1		not detected	300		ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33		
98-95-3	Nitrobenzene	1		not detected	10	0.46		
78-59-1	Isophorone			not detected	100	0,35		
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46		
65-85-0	Benzoic Acid			not detected	NLE	0.26		
120-82-1	1,2,4-Trichlorobenzene	<b>_</b>		not detected	9	0.25		
91-20-3	Naphthalene			not detected	NLE	0.25		
106-47-8	4-Chloroaniline			not detected	NLE	0,19		
87-68-3	Hexachlorobutadiene	-		not detected	1	0.38		
91-57-6	2-Methylnaphthalene	<del> </del>		not detected	NLE	0.16		
77-47-4	Hexachlorocyclopentadiene			not_detected	50	1.50		
91-58-7	2-Chloronaphthalene	+		not detected	NLE	0.32		
88-74-4	2-Nitroaniline			not detected	NLE	0.21		
131-11-3	Dimethylphthalate	+		not detected	7000	0.18		
208-96-8	Acenaphthylene			not detected	NLE	0.19		
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31		<u> </u>
99-09-2	3-Nitroaniline	+		not detected	NLE	0.26		<del></del>
83-32-9	Acenaphthene	+	-	not detected	400	0.26 0.32		<del>                                     </del>
132-64-9	Dibenzofuran	+		not detected	NLE 10	0.32		
121-14-2	2,4-Dinitrotoluene			not detected not detected	5000		ug/L ug/L	
84-66-2	Diethylphthalate	+		not detected	300		ug/L	
86-73-7	Fluorene	+	-	not detected	NLE		ug/L	<del> </del>
7005-72-3	4-Chlorophenyl-phenylether	+	<del>                                     </del>	not detected	NLE		ug/L	
100-01-6	4-Nitroaniline		-	not detected	20		ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	NLE		ug/L	
103-33-3	Azobenzene 4-Bromophenyl-phenylether			not detected	NLE		ug/L	
101-55-3 118-74-1	Hexachlorobenzene	+		not detected	10			
85-01-8	Phenanthrene	+		not detected	NLE			
120-12-7	Anthracene			not detected	2000		ug/L	
84-74-2	Di-n-butylphthalate	<del></del>		not detected	900			
206-44-0	Fluoranthene	<del>                                     </del>		not detected	300	1-	ug/L	
92-87-5	Benzidine	1	i -	not detected	50		ug/L	
129-00-0	Pyrene	1	<u> </u>	not detected	200	0.32		
	Butylbenzylphthalate			not detected	100	0.47		
85-68-7 56-55-3	Benzo[a]anthracene	<b>—</b>		not detected	10		ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60		ug/L	
218-01-9	Chrysene			not detected	20		ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	1		not detected	30		ug/L	
117-81-7 117-84-0	Di-n-octylphthalate	$\top$		not detected	100		ug/L	
205-99-2	Benzo[b]fluoranthene	T	<b> </b>	not detected	10		ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2		ug/L	
50-32-8	Benzo[a]pyrene	1		not detected	20		ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene	<del>                                     </del>	1	not detected	20		ug/L	<u> </u>
193-39-3 53-70-3	Dibenz[a,h]anthracene		<b>T</b>	not detected	20		ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6

### **Qualifiers**

E= Value Exceeds 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 1F

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Field ID:

EST. CONC.

Q

RT

		TENTAT	IVELY IDENTIF	IED COMPO	UNDS	01 11 4==
Lab Name:	FMETL			Lab Cod	13461	Sblk177
Project:	98-0932	Ca	se No.: 4117	Location	n: <u>UST</u> S	SDG No:
Matrix: (soil/v	vater)	WATER		La	b Sample ID:	Sblk177
Sample wt/vo	ol:	1000	(g/ml) ML	La	b File ID:	BN02424.D
Level: (low/n	ned)	LOW	_	Da	te Received:	12/7/98
% Moisture:		dec	anted: (Y/N)	N Da	te Extracted:	12/8/98
Concentrated	d Extract '	Volume:	1000 (uL)	Da	te Analyzed:	12/19/98
njection Volu	ıme: <u>1.0</u>	) (uL)		Dil	ution Factor:	1.0
GPC Cleanu	p: (Y/N)	N	pH:			
				CONCENT	RATION UNI	ITS:
Number TICs	s found:	0		(ug/L or ug		

COMPOUND NAME

**CAS NUMBER** 

## Semi-Volatile Analysis Report

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

Data File Name

BN02429.D

Sample Name

4116.02 Field Blank

Operator

Date Acquired

Skelton 19-Dec-98 Misc Info Sample Multiplier

,

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDŁ		Onalifiers
110-86-1	Pyridine			not detected	NLE	5.00	ıg/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94 1	ng/L	
62-53-3	Aniline			not detected	NLE	0.15 ι	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ıg/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23 1	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16 ι	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61 v	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33 1	μg/L	
98-95-3	Nitrobenzene			not detected	10	0.46	12g/L	
78-59-1	Isophorone			not detected	100	0.35 1	ng/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ոք/Լ	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0,31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene	1		not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate	1		not detected	900	0.23	ug/L	
206-44-0	Fluoranthene	<del></del>		not detected	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene			not detected	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47		
56-55-3	Benzo[a]anthracene	$\top$		not detected	10	0.22		
91-94-1	3,3'-Dichlorobenzidine	1		not detected	60	0.46		
218-01-9	Chrysene	<del>                                     </del>		not detected	20	0.20		
117-81-7	bis(2-Ethylhexyl)phthalate	1		not detected	30	0.51		
	Di-n-octylphthalate	1	<b></b>	not detected	100	0.82		
117-84-0		+	<u> </u>	not detected	10	0.37		
205-99-2	Benzo[b]fluoranthene	1	<del> </del>	not detected	2	0.32		
207-08-9	Benzo[k]fluoranthene	+		not detected	20	0.31		
50-32-8	Benzo[a]pyrene	+-		not detected	20	0.79		t
193-39-5 53-70-3	Indeno[1,2,3-cd]pyrene	+	<del> </del>	not detected	20	0.79		<del> </del>
	Dibenz[a,h]anthracene			not detected	. 40	U.40	14/4/ La	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6

### **Qualifiers**

E= Value Exceeds 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 1F

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Field	ID:	
<u> </u>		

		IENIA	I IVELY IDENTIF	IED COMP	SOND2		Figur D	
Lab Name:	FMETL			Lab Cod	13461		Field BI	ank
Project:	98-0932	C	ase No.: 4116	Locat	on: UST	s	DG No:	
Matrix: (soil/v	vater)	WATER		Ĺ	.ab Samp	le ID:	4116.02	
Sample wt/vo	ol:	1000	(g/ml) ML		.ab File IC	<b>)</b> :	BN02429.D	
Level: (low/n	ned)	LOW		5	Date Rece	eived:	12/7/98	
% Moisture:		de	canted: (Y/N)	N I	Date Extra	acted:	12/8/98	
Concentrated	d Extract	Volume:	1000 (uL)	[	Date Anal	yzed:	12/19/98	
Injection Volu	ıme: <u>1.0</u>	(uL)		ī	Dilution Fa	actor:	1.0	
GPC Cleanu	p: (Y/N)	N	pH:					
				CONCE	NTRATIO	N UNI	TS:	
Number TICs	s found:	0		(ug/L or	ug/Kg)	UG	<u>/L</u>	
CAS NUME	BER	COMPO	OUND NAME		RT	E	ST. CONC.	Q

### Semi-Volatile Analysis Report

## U.S. Army, Fort Monmouth Environmental Laboratory

### NJDEP Certification #13461

Data File Name

BN02448.D

Sample Name

4117.02

Operator

Date Acquired

Skelton 21-Dec-98 Misc Info Sample Multiplier Bldg718

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
	Pyridine	T	Кезроизе	not detected	NLE		ug/L	Vanile 3
10-86-1		+		not detected	20		ug/L	
52-75-9	N-nitroso-dimethylamine	-		not detected	NLE		ug/L	<del> </del>
52-53-3	Aniline	<del> </del>			10		ug/L	-
111-44-4	bis(2-Chloroethyl)ether	+		not detected	75		ug/L	
06-46-7	1,4-Dichlorobenzene	<del>- </del>		not detected	NLE		ug/L	
100-51-6	Benzyl alcohol	+	· · ·	not detected				
95-50-1	1,2-Dichlorobenzene			not detected	600 300	0.10	ug/L ug/L	<del>                                     </del>
08-60-1	bis(2-chloroisopropyl)ether	+		not detected				<del> </del>
57-72-1	Hexachloroethane			not detected	10		ug/L	<del> </del>
98-95-3	Nitrobenzene	+		not detected	10		ug/L	
78-59-1	Isophorone	<del></del>	<del></del>	not detected	100		ug/L	-
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE		ug/L	<del></del>
55-85 <u>-0</u>	Benzoic Acid			not detected	NLE		ug/L	<del></del>
20-82-1	1,2,4-Trichlorobenzene			not detected	9 .	0.25	ug/L	<b> </b>
91-20-3	Naphthalene	+-		not detected	NLE	0,25		<del> </del>
06-47-8	4-Chloroaniline			not detected	NLE		ug/L	ļ
37-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE		ug/L	<u> </u>
77-47-4	Hexachlorocyclopentadiene			not detected	50	1,50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
38-74-4	2-Nitroaniline			not_detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	L
506-20-2	2,6-Dinitrotoluene	T		not detected	NLE	0.31	ug/L	<u> </u>
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2.4-Dinitrotoluene			not detected	10	0.36	ug/L	1
84-66-2	Diethylphthalate	1		not detected	5000	0.82	ug/L	
36-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
	4-Nitroaniline	<del>                                     </del>		not detected	NLE		ug/L	
100-01-6	n-Nitrosodiphenylamine	1		not detected	20		ug/L	
86-30-6		<del> </del>		not detected	NLE		ug/L	1
103-33-3	Azobenzene	+		not detected	NLE		ug/L	
101-55-3	4-Bromophenyl-phenylether	-	<del> </del>	not detected	10		ug/L	<b>-</b>
118-74-1	Hexachlorobenzene			<del>                                     </del>	NLE		ug/L	1
85-01-8	Phenanthrene	+-		not detected			1	$\vdash$
120-12-7	Anthracene	+		not detected	2000		ug/L	<del> </del>
84-74-2	Di-n-butylphthalate		<u> </u>	not detected	900		ug/L	<u> </u>
206-44-0	Fluoranthene		<b></b>	not detected	300		ug/L	<del> </del>
92-87-5	Benzidine	+		not detected	50		ug/L	+
129-00-0	Рутепе	+		not detected	200		ug/L	<del>}</del>
85-68-7	Butylbenzylphthalate			not detected	100		ug/L	+
56-55-3	Benzo[a]anthracene		<b> </b>	not detected	10		ug/L	<del> </del>
91-94-1	3,3'-Dichlorobenzidine		ļ	not detected	60		ug/L	<b>↓</b>
218-01-9	Chrysene			not detected	20	0.20	ug/L	ļ
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	0.51	ug/L	<u> </u>
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	ļ
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	1
207-08-9	Benzo[k]fluoranthene			not detected	2	0,32	ug/L	
50-32-8	Benzo[a]pyrene	T		not detected	20	T	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20		ug/L	
	Dibenz[a,h]anthracene	1	1	not detected	20		ug/L	
53-70 <u>-3</u>	NIOCHA[4]HAHHHAVEHE		+	1	NLE		ug/L	1

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6

### Qualifiers

E= Value Exceeds 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 1F

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Field ID: TENTATIVELY IDENTIFIED COMPOUNDS

Bldg. 718	

Project:

98-0932

**FMETL** 

Case No.: 4117

Lab Cod 13461 Location: UST

SDG

Matrix: (soil/water)

**WATER** 

Lab Sample ID: 4117.02

BN02448.D

Sample wt/vol:

Lab Name:

1000

(g/ml) ML

Lab File ID:

Date Received: 12/7/98

Level: (low/med) % Moisture:

LOW

decanted: (Y/N) Ν Date Extracted: 12/8/98

Concentrated Extract Volume:

1000

Date Analyzed: 12/21/98

Injection Volume: 1.0 GPC Cleanup: (Y/N)

(uL)

Dilution Factor: 1.0

**CONCENTRATION UNITS:** 

Number TICs found:

(ug/L or ug/Kg)

UG/L

**CAS NUMBER** 

**COMPOUND NAME** 

pH:

RT

EST. CONC.

Q

## SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

 Lab Name:
 FMETL
 Lab Cod
 13461

 Project:
 98-0932
 Case No.:
 4117
 Location:
 UST
 SDG No:

 Lab File ID:
 BN02340.D
 DFTPP Injection Date:
 12/15/98

 Instrument ID:
 SVoa#1
 DFTPP Injection Time:
 15:49

		% RELATIVE
m/e	ION ABUNDANCE CRITERIA	ABUNDANCE
51	30.0 - 80.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 Relative abundance	58.9
70	Less than 2.0% of mass 69	0.0 ( 0.0)1
127	25.0 - 75.0% of mass 198	41.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	17.3
365	Greater than 0.75% of mass 198	1.9
441	Present, but less than mass 443	6.4
442	40.0 - 110.0% of mass 198	41.0
443	15.0 - 24.0% of mass 442	7.8 ( 19.0)2

1-Value is % mass 69

2-Value is % mass 442

## THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

Γ		LAB	LAB	DATE	TIME
	Field ID:	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	SSTD120	120 PPM STD	BN02341.D	12/15/98	16:13
02	SSTD80	80 PPM STD	BN02342.D	12/15/98	16:58
03	SSTD50	50 PPM STD	BN02343.D	12/15/98	17:43
04	SSTD20	20 PPM STD	BN02344.D	12/15/98	18:28
05	SSTD10	10 PPM STD	BN02345.D	12/15/98	19:13

Data File : C:\HPCHEM\1\DATA\981215\BN02340.D

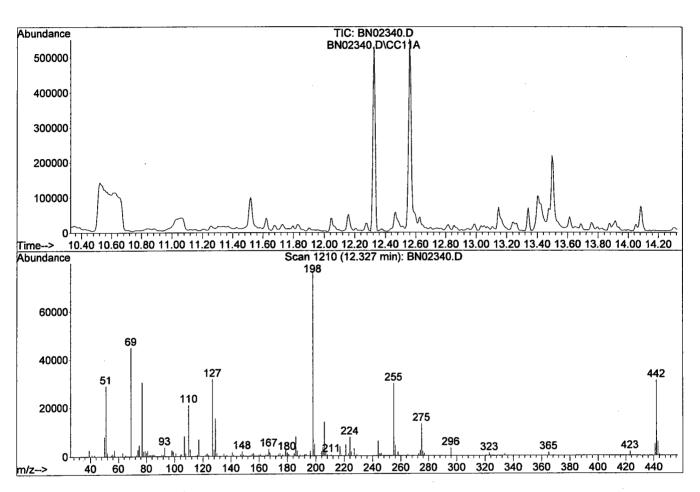
Vial: 1

Acq On : 15 Dec 1998 3:49 pm Operator: Skelton Sample : DFTPP Tune Inst : GC/MS Ins

Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M62519.M (RTE Integrator)

Title : BNA Calibration



Spectrum Information: Scan 1210

Target Mass	Rel. to	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.9	28912	PASS
68	69	0.00	- 2	0.0	0	PASS
69	198	0.00	100	58.9	44912	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	41.7	31784	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	76192	PASS
199	198	5	9	6.5	4946	PASS
275	198	10	30	17.3	13163	PASS
365	198	1 1	100	1.9	1432	PASS
441	443	1	99	82.9	4911	PASS
442	198	40	100	41.0	31216	PASS
443	442	17	23	19.0	5921	PASS

## SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

 Lab Name:
 FMETL
 Lab Cod
 13461

 Project:
 98-0932
 Case No.:
 4117
 Location:
 UST
 SDG No:

 Lab File ID:
 BN02442.D
 DFTPP Injection Date:
 12/21/98

 Instrument ID:
 SVoa#1
 DFTPP Injection Time:
 14:36

/	ION ARUNDANGE ORITERIA	% RELATIVE ABUNDANCE		
m/e	ION ABUNDANCE CRITERIA			
51	30.0 - 80.0% of mass 198	58.9		
68	Less than 2.0% of mass 69	0.0	( 0.0	))1
69	Mass 69 Relative abundance	83.4		
70	Less than 2.0% of mass 69	0.0	( 0.0	))1
127	25.0 - 75.0% of mass 198	50.4		
197	Less than 1.0% of mass 198	0.0		
198	Base Peak, 100% relative abundance	100.0		
199	5.0 to 9.0% of mass 198	7.0		
275	10.0 - 30.0% of mass 198	17.6		
365	Greater than 0.75% of mass 198	3.6		
441	Present, but less than mass 443	9.2		
442	40.0 - 110.0% of mass 198	58.7		
443	15.0 - 24.0% of mass 442	11.4	( 19.5	)2

<sup>1-</sup>Value is % mass 69

## THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

		LAB	LAB	DATE	TIME
	Field ID:	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	SSTD120	120 PPM STD	BN02443.D	12/21/98	15:05
02	SSTD80	80 PPM STD	BN02444.D	12/21/98	15:46
03	SSTD50	50 PPM STD	BN02445.D	12/21/98	16:26
04	SSTD20	20 PPM STD	BN02446.D	12/21/98	17:07
05	SSTD10	10 PPM STD	BN02447.D	12/21/98	17:47
06	BLDG. 718	4117.02	BN02448.D	12/21/98	18:27

<sup>2-</sup>Value is % mass 442

## 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	<u> </u>
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	
	oratory Manager or Environmental Consultant's Signature	<del></del>

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

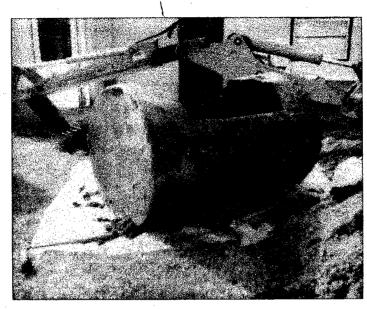
Laboratory Certification #13461

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



B. 718

6-18-98



B.718

6-18-98

**JUNE 18, 1998** 

## PHOTOGRAPHIC LOG

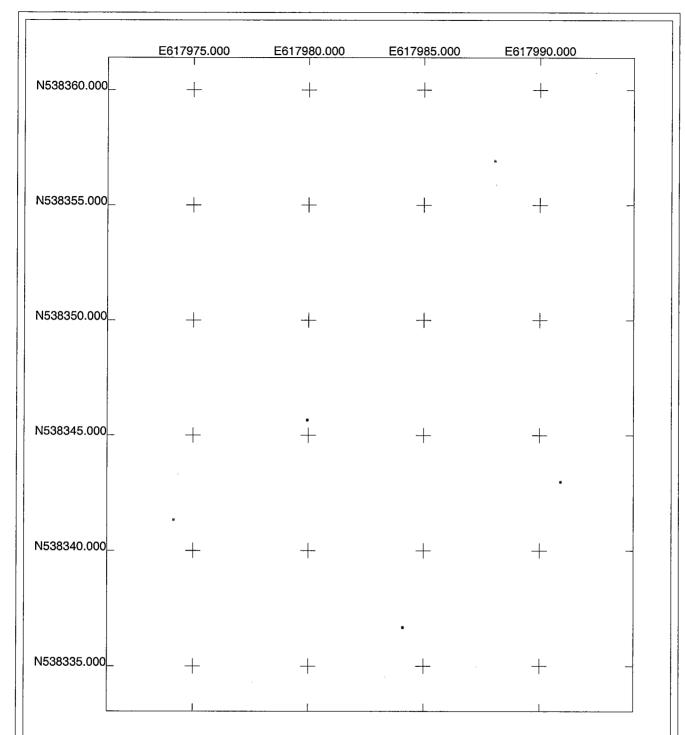
UST NO. 81533-116

Building 718 Main Post-West Fort Monmouth

VERSAR

Engineers, Managers, Scientists & Planners Bristol, PA

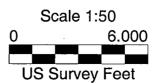
## APPENDIX H ELECTRONIC DATA DELIVERABLES



## Bldg. 718 UST Sample Location GPS Map

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





r121513a.cor 3/20/2000 Pathfinder Office Trimble

## **BLDG. 718 UST SAMPLE LOCATION GPS POSITIONS & COORDINATES**

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

(IN US SURVEY FEET)

## **SAMPLE POINTS**

<u>P</u> (	OSITION / DESC.	Y COORD. ( NORTHING )	X COORD. ( EASTING )
JUNE	718 A 718 B 718 C	538345.683 538342.999 538336.684	617979.936 617990.893 . 617984.095
C	DUP B		

## REFERENCE POINTS

POSITION / DESC.	Y COORD. ( NORTHING )	X COORD. ( EASTING )
718 SE CORNER	538356.936	617988.045
718 S SIDE DOOR CORNER	538341.346	617974.156

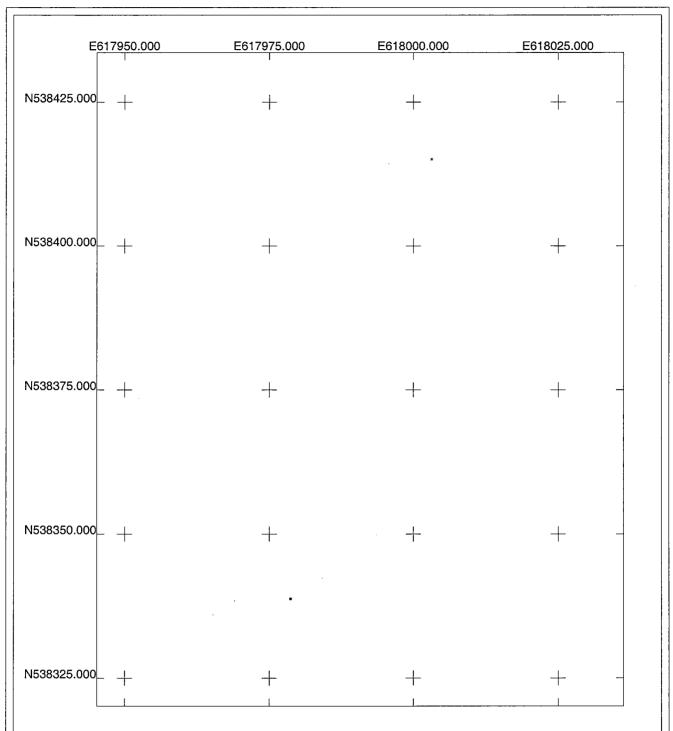
## **GPS SAMPLE LOCATION MAP(BLDG.718)**

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

(IN US SURVEY FEET)

## SAMPLE POINT

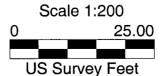
POSITION/DESC.	Y COORD.(NORTHING)	X COORD.(EASTING)
19-Jun-98		
Α	538346.380	617974.936
В	538341.868	617982.232
С	538333.744	617977.396
DUPC	538333.744	617977.396



## Bldg. 718 UST Ground Water Sample GPS Location Map

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





r010814a.cor 2/10/2000 Pathfinder Office Trimble

### **BLDG. 718 UST GROUND WATER SAMPLE GPS POSITION & COORDINATES**

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

(IN US SURVEY FEET)

### **SAMPLE POINTS**

POSITION / DESC.

Y COORD. ( NORTHING )

X COORD. (EASTING)

718 GW ( GW denotes <u>G</u>round <u>W</u>ater )

538338.789

617978.644

## **REFERENCE POINT**

POSITION / DESC.

Y COORD. ( NORTHING )

X COORD. ( EASTING )

718 HYDRANT

538415.148

618003.141