United States Army

Fort Monmouth, New Jersey



Underground Storage Tank Closure and Site Investigation Report

Building 671A Main Post-West Area

NJDEP UST Registration No. 81533-103 Dicar No. 97-8-20-0748-27

December 1998

UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 671A

MAIN POST-WEST AREA NJDEP UST REGISTRATION NO. 81533-103

DECEMBER 1998

PREPARED FOR:

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

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PROJECT NO. 2429-308

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EXECUTIVE SUMMARY

UST Closure

On August 19, 1997, 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. 0081533-103 (Fort Monmouth ID No. 671A), was located north of Building 671A. UST No. 0081533-103 was a 1,000-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. OVA readings taken during the assessment were non-detectable. The NJDEP hotline was notified and the case was assigned DICAR No. 97-8-20-0748-27. On August 20 and 21,1997, potentially contaminated soil was removed from the excavation area. In total, approximately 48 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 not encountered. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 574.82 mg/kg.

All post excavation soil samples collected from the UST excavation at Building 671A 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 671A. On October 24, 1998, and November 25, 1998, Building 671A 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. 81533-103 at Building 671A.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-103, was closed at Building 671A at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on August 19, 1997. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-103 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. 81533-103 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. 81533-103 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 671A is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-103 was located north of Building 671A and appurtenant piping ran approximately fifteen (15) feet southeast to Building 671A. 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 671A. 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

= 1

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 671A is located approximately 800 feet east of Wampum Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 671A is anticipated to be to the west.

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 275 gallons of liquid from the UST and its associated piping were pumped directly into a Freehold Cartage truck where it was then transported to Lionetti Oil Recovery Co., Inc. Refer to Appendix C for a copy of the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. Numerous holes were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Soils were stained and appeared to be contaminated. OVA readings were non-detectable. Approximately 48 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 not encountered. 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, 48 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 not encountered.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

 Subsurface Evaluator: Eugene W. Lesinski Employer: U.S. Army, Fort Monmouth Phone Number: (908) 532-0989
 NJDEP Certification No.: 0014537

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: Freehold Cartage

Contact Person: David Smith Phone Number: (908) 462-1001

NJDEP Company Certification No.: 52265

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. OVA readings taken during the assessment were non-detect. Approximately 48 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 not encountered.

2.3 SOIL SAMPLING

On August 21, 1997, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, D, E, F, G, H, I, and DUP A were collected from a total of nine (9) locations of the UST excavation. Floor samples A, B, and Dup A were collected at a depth of 9.0 feet bgs. Sidewall samples C, D, E, F, G, and H were collected at a depth of 8.5 feet bgs. Piping sample I was collected along the former piping length of the excavation, which was approximately thirteen (13) feet in length. The piping sample was collected at a depth of 1.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

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 November 25, 1998, Building 671A 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 August 21,1997 from a total of nine (9) 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 August 21, 1997, 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 574.82 mg/kg.

3.2 GROUNDWATER SAMPLING RESULTS

No compounds were detected in the samples collected from Building 671A on October 24, 1998, and November 25,1998. Bis (2-ethylhexyl) phthalate was detected in the field blank sample on November 24, 1998, at a concentration of 4.91 ug/l. No other compounds were detected in the field blank. 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 November 25, 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. 81533-103 at Building 671A.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 671A 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 671A on October 24, 1998, and November 25, 1998, groundwater quality at Building 671A 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. 81533-103 at Building 671A.

TABLES

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TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING 671A, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 1 of 2

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
Α	8/21/97	8/25/97	Soil	Post-Excavation	ТРНС	OQA-QAM-025
В	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
F	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
H	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
I	8/21/97	8/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUPA	8/21/97	8/25/97	Soil	Post-excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 1 SUMMARY OF SAMPLING ACTIVITIES BUILDING 671A, MAIN POST-WEST AREA

Page 2 of 2

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
4003.03	10/24/98	10/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4086.01	11/25/98	12/01/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4086.02	11/25/98	12/01/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4086.03	11/25/98	12/01/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4086.04	11/25/98	12/01/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

FORT MONMOUTH, NEW JERSEY

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 671A, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 1 of 1

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/9.0=	2926.01	8/21/97	8/25/97	Total Solid			80.47 %		
				TPHC	184	yes	574.82	10,000	No
B/9.0 =	2926.02	8/21/97	8/25/97	Total Solid			71.76 %		
				TPHC	216	Yes	302.55	10,000	No
C/8.5 =	2926.03	8/21/97	8/25/97	Total Solid			73.88 %	~-	
				TPHC	210	Yes	ND	10,000	No
D/8.5 =	2926.04	8/21/97	8/25/97	Total Solid			70.53 %		~~
				TPHC	215	yes	ND	10,000	No
E/8.5 =	2926.05	8/21/97	8/25/97	Total Solid			71.50 %		
				TPHC	201	yes	243.82	10,000	No
F/8.5 =	2926.06	8/21/97	8/25/97	Total Solid			74.78 %		
				TPHC	209	yes	ND	10,000	No
G/8.5 =	2926.07	8/21/97	8/25/97	Total Solid			71.51 %		
				TPHC	211	Yes	ND	10,000	No
H/8.5=	2926.08	8/21/97	8/25/97	Total Solid			72.60 %		
				TPHC	211	yes	ND	10,000	No
I/1.0 =	2926.09	8/21/97	8/25/97	Total Solid			81.24 %		
				TPHC	190	yes	265.28	10,000	No
DUPA/9.0=	2926.10	8/21/97	8/25/97	Total Solid			83.02 %		
				TPHC	176	yes	218.00	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 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>671A</u>

Lab Sample ID: 4003.01(Trip Blank)

Date Sampi	icu. <u>10/24/96</u>	Location	I. <u>0/1/A</u>	Lausi	imple ID. 4003.0	or (Trip Dialik)
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	ОО
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	по
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	по
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	<u></u>	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	<u></u>	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected		2	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	no
79-01-6	Trichloroethene	0.23	Not Detected		1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	no
75-27-4	Bromodichloromethane	0.55	Not Detected		1	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	по

Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 10/24/98 Location: 671A Lab Sample ID: 4003.01(Trip Blank)

F-		200411011	. 07222	Euo o	<u> 100310</u>	JI(IIIp Diame)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no
108-88-3	Toluene	0.37	Not Detected		1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no
127-18-4	Tetrachloroethene	0.32	Not Detected		1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected		10	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	по
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	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#

13461

Matrix: (soil/water) WATER

Date Sampled:

- 1

10/24/98

Location:

<u>671A</u>

Lab Sample ID: 4003.02(Field Blank)

F			<u>07212</u>		pi 0 1 15. <u>1005.0</u>	Z(I ICIG DIGIR
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected		50	no
107131	Acrylonitrile	2.78	Not Detected		50	no
75650	tert-Butyl alcohol	8.52	Not Detected		nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle	no
108203	Di-isopropyl ether	0.25	Not Detected		nle	no
	Dichlorodifluoromethane	1.68	Not Detected		nle	no
74-87-3	Chloromethane	1.16	Not Detected		30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	-	5	no
74-83-9	Bromomethane	1.10	Not Detected		10	no
75-00-3	Chloroethane	1.01	Not Detected		nle	по
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	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	по
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	~-	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected		2	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	no
79-01-6	Trichloroethene	0.23	Not Detected		1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	no
75-27-4	Bromodichloromethane	0.55	Not Detected		1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected		nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected		nle	no

Table 3 **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>671A</u>

Lab Sample ID: 4003.02(Field Blank)

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

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Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 10/24/98 Location: 671A Lab Sample ID: 4003.03(Bldg 671)

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	по
1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle	no
108203	Di-isopropyl ether	0.25	Not Detected		nle	no
	Dichlorodifluoromethane	1.68	Not Detected		nle	no
74-87-3	Chloromethane	1.16	Not Detected		30	no
75-01-4	Vinyl Chloride	1.06	Not Detected		5	по
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	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	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	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	по
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

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Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

671A

Lab Sample ID: 4003 03 (Bldg 671)

Date Sampled: <u>10/24/98</u>		Location: $6/1A$		Lab Sample ID: 4003.03 (Bldg 671)			
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA	
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no	
108-88-3	Toluene	0.37	Not Detected		1000	no	
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	no	
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no	
127-18-4	Tetrachloroethene	0.32	Not Detected		1	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	по	
1330-20-7	o-Xylene	0.62	Not Detected		nle	по	
100-42-5	Styrene	0.56	Not Detected		100	no	
75-25-2	Bromoform	0.70	Not Detected		4	по	
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected		2	ОП	
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	

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 10/24/98 Location: 671A 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	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	по
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		nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected		1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected		nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected		50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected		nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected		nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected		7000	no
208-96-8	Acenaphthylene	2.35	Not Detected		nle	no

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 10/24/98 Location: 671A Lab Sample ID: 4003.02(Field Blank)

Date Sample	su. <u>10/24/98</u>	Location	0/1A	Lao S	ample 1D: 4003.	JZ(Field Blank)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected		nle	по
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	по
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	по
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	по
117-84-0	Di-n-octylphthalate	1.30	Not Detected		100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected		10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected		2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected		20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected		20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected		20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected		nle	по
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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 10/24/98 Location: 671A Lab Sample ID: 4003.03(Bldg 671)

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	по
62-53-3	Aniline	2.90	Not Detected		nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected		10	ло
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	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	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	по
91-20-3	Naphthalene	3.03	Not Detected		nie	no
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	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected		nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected		nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected		7000	no
208-96-8	Acenaphthylene	2.35	Not Detected		nle	no

Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

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FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

10/24/98

Location:

<u>671A</u>

Lab Sample ID: 4003.03(Bldg 671)

Date Sample	5d. <u>10/24/98</u>	Location	. <u>0/1A</u>	Laus	ample 1D: 4003.0	73(Dlug 0/1)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected		nle	no
83-32-9	Acenaphthene	1.98	Not Detected		400	no
132-64-9	Dibenzofuran	2.13	Not Detected		nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected		10	по
84-66-2	Diethylphthalate	1.68	Not Detected		5000	ло
86-73-7	Fluorene	1.93	Not Detected		300	по
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	по
118-74-1	Hexachlorobenzene	1.88	Not Detected		10	по
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	по
92-87-5	Benzidine	4.11	Not Detected		50	по
129-00-0	Pyrene	1.02	Not Detected		200	по
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	по
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	no
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	по
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected		nle	no
						

Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

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FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

11/25/98

Location:

671A

Lab Sample ID: 4086.01(Trip Blank)

Date Sampl	led: 11/25/98	Location	n: <u>671A</u>	Lab Sa	ample ID: 4086.0	01(Trip Blank)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected		50	no
107131	Acrylonitrile	2.78	Not Detected		50	no
75650	tert-Butyl alcohol	8.52	Not Detected		nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle .	no
108203	Di-isopropyl ether	0.25	Not Detected		nle	no
	Dichlorodifluoromethane	1.68	Not Detected		nle	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	<u></u>	2	no
67-64-1	Acetone	1.36	Not Detected		700	no
75-15-0	Carbon Disulfide	0.46	Not Detected		nle	no
75-09-2	Methylene Chloride	0.24	Not Detected		2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected		100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	no
108-05-4	Vinyl Acetate	0.78	Not Detected		nle	no
78-93-3	2-Butanone	0.62	Not Detected		300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected		10	no
67-66-3	Chloroform	0.30	Not Detected		6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected		30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected		2	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	по
79-01-6	Trichloroethene	0.23	Not Detected		1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	по
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:

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FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sample	d: <u>11/25/98</u>	Location	<u>671A</u>	Lab Sa	ample ID: <u>4086.0</u>	01(Trip Blank)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no
108-88-3	Toluene	0.37	Not Detected		1000	по
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	по
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	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

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Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 11/25/98 Location: 671A Lab Sample ID: 4086.02(Field Blank)

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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	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	по
75-00-3	Chloroethane	1.01	Not Detected		nle	ло
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	по
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	по
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected		30	по
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	по
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#

13461

Matrix: (soil/water) WATER

Date Sampled:

11/25/98

Location:

<u>671A</u>

Lab Sample ID: 4086.02(Field Blank)

Date Sample	ed. <u>11/25/76</u>	Location	. <u>0/1A</u>	Laus	ample 11). 4000.0	22(1 leid Dialik)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no
108-88-3	Toluene	0.37	Not Detected		1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no
127-18-4	Tetrachloroethene	0.32	Not Detected		1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected		10	no
108-90-7	Chlorobenzene	0.39	Not Detected		4	no
100-41-4	Ethylbenzene	0.65	Not Detected		700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected		nle	no
1330-20-7	o-Xylene	0.62	Not Detected		nle	no
100-42-5	Styrene	0.56	Not Detected		100	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	по
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:

11/25/98

Location:

<u>671A</u>

Lab Sample ID: 4086.03(Bldg 671)

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	45	50	no
75650	tert-Butyl alcohol	8.52	Not Detected		nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle	no
108203	Di-isopropyl ether	0.25	Not Detected		nle	no
	Dichlorodifluoromethane	1.68	Not Detected		nle	no
74-87-3	Chloromethane	1.16	Not Detected	-	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected		5	no
74-83-9	Bromomethane	1.10	Not Detected		10	no
75-00-3	Chloroethane	1.01	Not Detected		nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected		nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected		2	no
67-64-1	Acetone	1.36	Not Detected		700	по
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	по
78-93-3	2-Butanone	0.62	Not Detected		300	по
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	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		1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	no
75-27-4	Bromodichloromethane	0.55	Not Detected		1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected		nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected		nle	no

Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: <u>11/25/98</u> Location: <u>671A</u> Lab Sample ID: <u>4086.03(Bldg 671)</u>

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

Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

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11/25/98

Location:

<u>671A</u>

Lab Sample ID: 4086.04(DUP)

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	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	по
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	по
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected		100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	no
108-05-4	Vinyl Acetate	0.78	Not Detected		nle	no
78-93-3	2-Butanone	0.62	Not Detected		300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected		10	no
67-66-3	Chloroform	0.30	Not Detected		6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected		30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected		2	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	no
79-01-6	Trichloroethene	0.23	Not Detected		1	по
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	по
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

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Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 11/25/98 Location: 671A Lab Sample ID: 4086.04(DUP)

<u> </u>			31.111	240 Sumple 13. 100010 ((2017)		
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no
108-88-3	Toluene	0.37	Not Detected		1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no
127-18-4	Tetrachloroethene	0.32	Not Detected		1	no
591-78-6	2-Hexanone	0.71	Not Detected		nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected		10	no
108-90-7	Chlorobenzene	0.39	Not Detected		4	no
100-41-4	Ethylbenzene	0.65	Not Detected		700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected		nle	по
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

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

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FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

11/25/98

Location:

<u>671A</u>

Lab Sample ID: 4086.02(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	по
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	no
100-51-6	Benzyl alcohol	2.09	Not Detected		nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected		600	по
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	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	по
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-Methylnaphthaiene	2.49	Not Detected		nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected		50	ло
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

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 11/25/98 Location: 671A Lab Sample ID: 4086.02(Field Blank)

Date Sample	d: <u>11/25/98</u>	Location:	671A	Lab S	ample ID: 4086.0	02(Field Blank)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected		nle	no
83-32-9	Acenaphthene	1.98	Not Detected		400	no
132-64-9	Dibenzofuran	2.13	Not Detected		nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected		10	по
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	по
92-87-5	Benzidine	4.11	Not Detected		50	по
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	по
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	4.91		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	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected		2	no
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	по
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected		nle	по

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: <u>11/25/98</u> Location: <u>671A</u> Lab Sample ID: <u>4086.03(Bldg 671)</u>

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected		nle	по
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	ро
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	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	по

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 11/25/98 Location: 671A Lab Sample ID: 4086.03(Bldg 671)

CAS NO. COMPOUN	III NI A NATE					
	ND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2 2,6-Dinitrotolu	ene	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-Dinitrotolu	ene	1.22	Not Detected		10	no
84-66-2 Diethylphthalat	e	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-Nitrosodipher	nylamine	1.73	Not Detected		20	по
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 Hexachlorobenz	zene	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-butylphtha	late	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	по
129-00-0 Pyrene		1.02	Not Detected		200	no
85-68-7 Butylbenzylphtl	nalate	1.15	Not Detected		100	по
56-55-3 Benzo[a]anthrac	ene	1.57	Not Detected		10	по
91-94-1 3,3'-Dichlorobe	enzidine	2.28	Not Detected		60	no
218-01-9 Chrysene		2.32	Not Detected		20	no
117-81-7 bis(2-Ethylhexy	l)phthalate	1.29	Not Detected		30	no
117-84-0 Di-n-octylphtha	late	1.30	Not Detected		100	no
205-99-2 Benzo[b]fluorar	ithene	1.31	Not Detected		10	по
207-08-9 Benzo[k]fluorar	thene	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]anth	racene	3.12	Not Detected		20	no
191-24-2 Benzo[g,h,i]per	ylene	1.13	Not Detected		nle	no

23 of 24

Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

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11/25/98

Location:

<u>671A</u>

Lab Sample ID: <u>4086.04(DUP)</u>

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

24 of 24

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

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

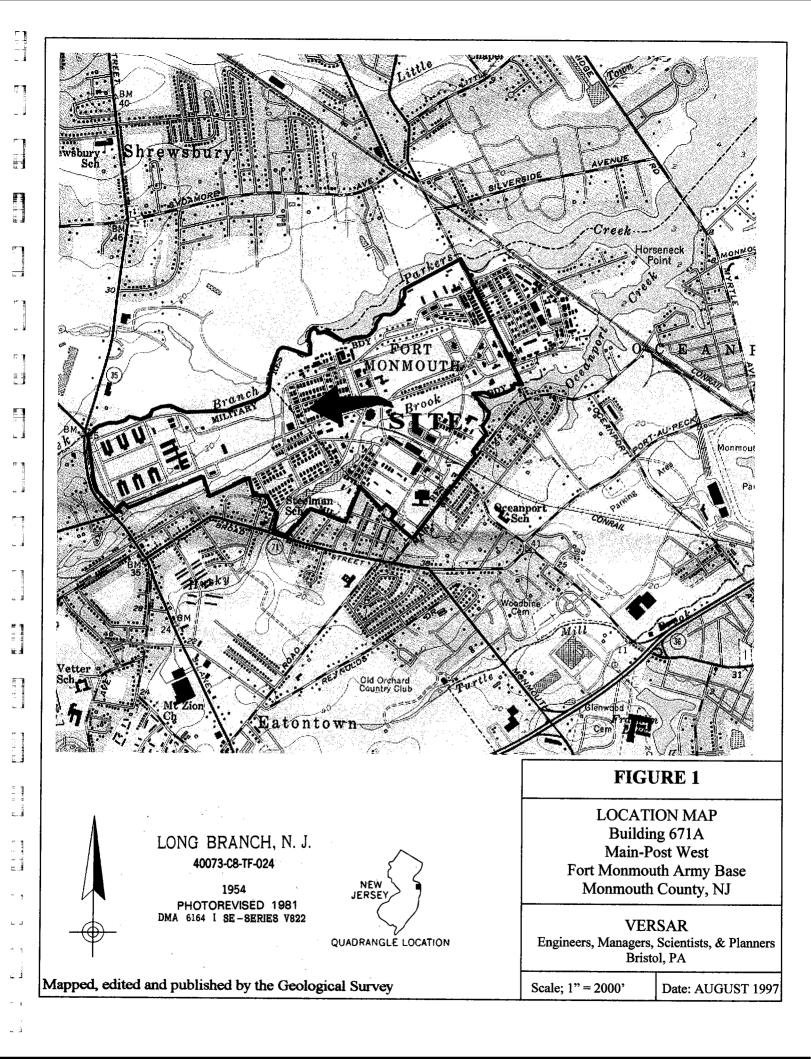
Date Sampled: 11/25/98 Location: 671A Lab Sample ID: 4086.04(DUP)

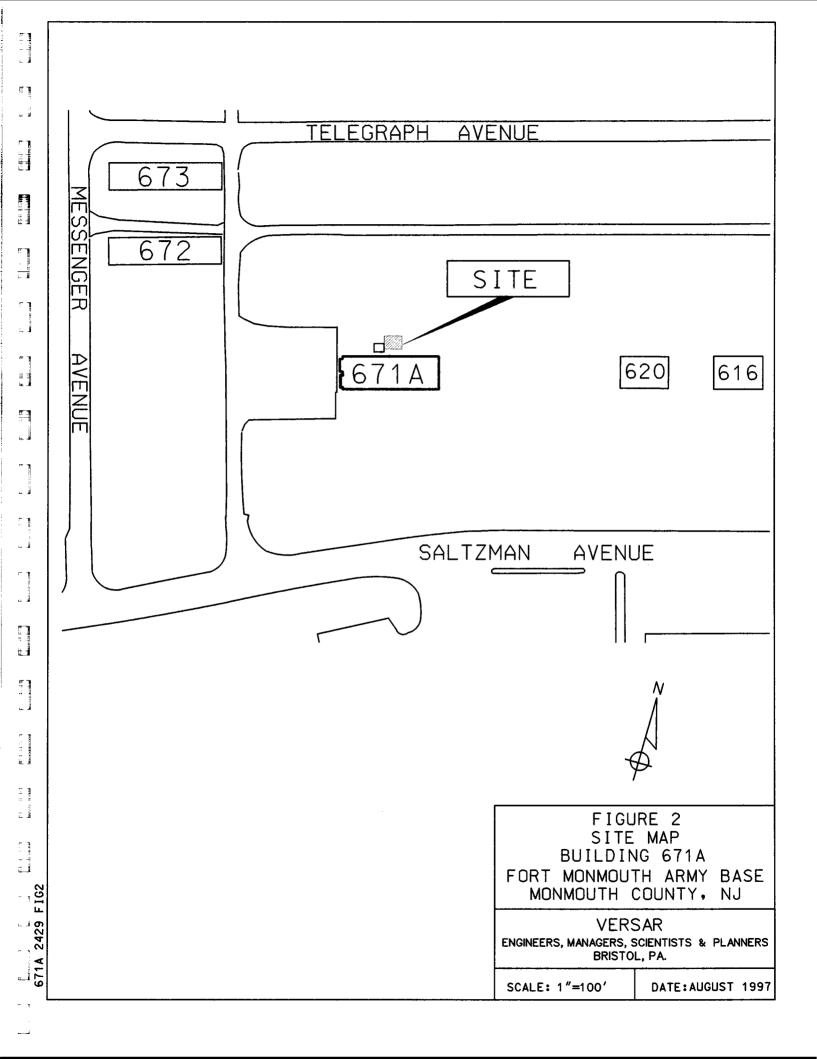
Date Sample	ed: <u>11/23/98</u>	Location	6/1A	Lab S	ample ID: 4086.0	<u> </u>
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected		nle	по
99-09-2	3-Nitroaniline	1.62	Not Detected		nle	no
83-32-9	Acenaphthene	1.98	Not Detected		400	no
132-64-9	Dibenzofuran	2.13	Not Detected		nle	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	по
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	по
85-01-8	Phenanthrene	1.67	Not Detected		nle	по
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	по
85-68-7	Butylbenzylphthalate	1.15	Not Detected		100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected		10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected		60	no
218-01-9	Chrysene	2.32	Not Detected		20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected		30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected		100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected		10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected		2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected		20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected		20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected		20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected		nle	no

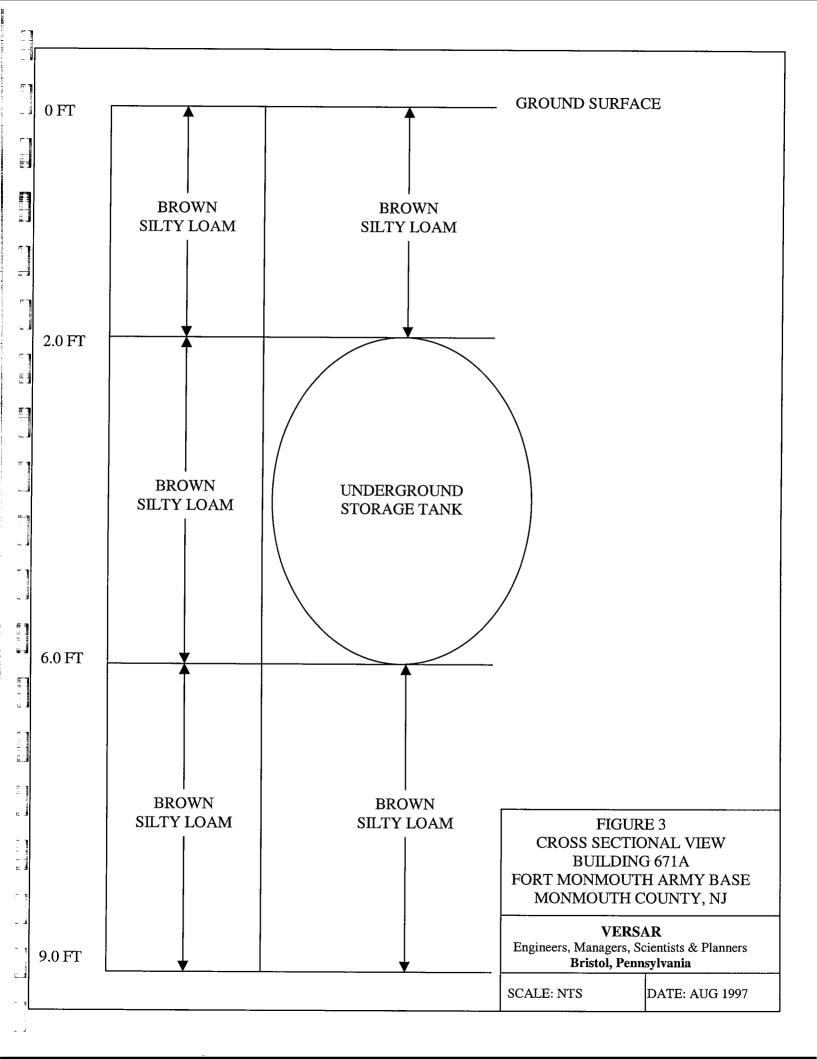
FIGURES

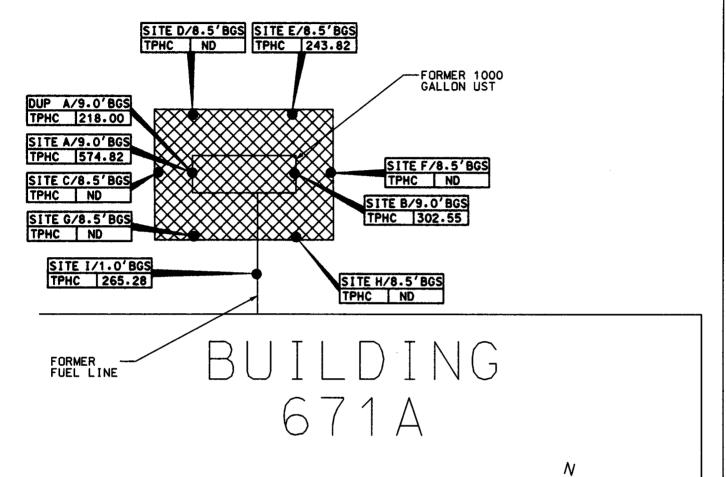
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LEGEND

SOIL SAMPLE LOCATION (AUGUST 21, 1997)

LIMIT OF EXCAVATION (AUGUST 21, 1997)

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 671A
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

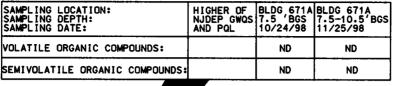
VERSAR ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS BRISTOL, PA.

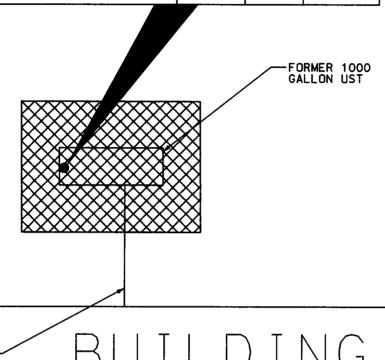
SCALE: 1"=10'

DATE: AUGUST 1997

571A 2429 FIG

Z 3





BUILDING 671A



LEGEND

FORMER FUEL LINE

GROUNDWATER SAMPLE LOCATION
(OCTOBER 24, 1998 AND NOVEMBER 25, 1998)

LIMIT OF EXCAVATION

XX

(AUGUST 24, 1997)

NOTES:

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

FIGURE 5
GROUNDWATER SAMPLING MAP
BUILDING 671A
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

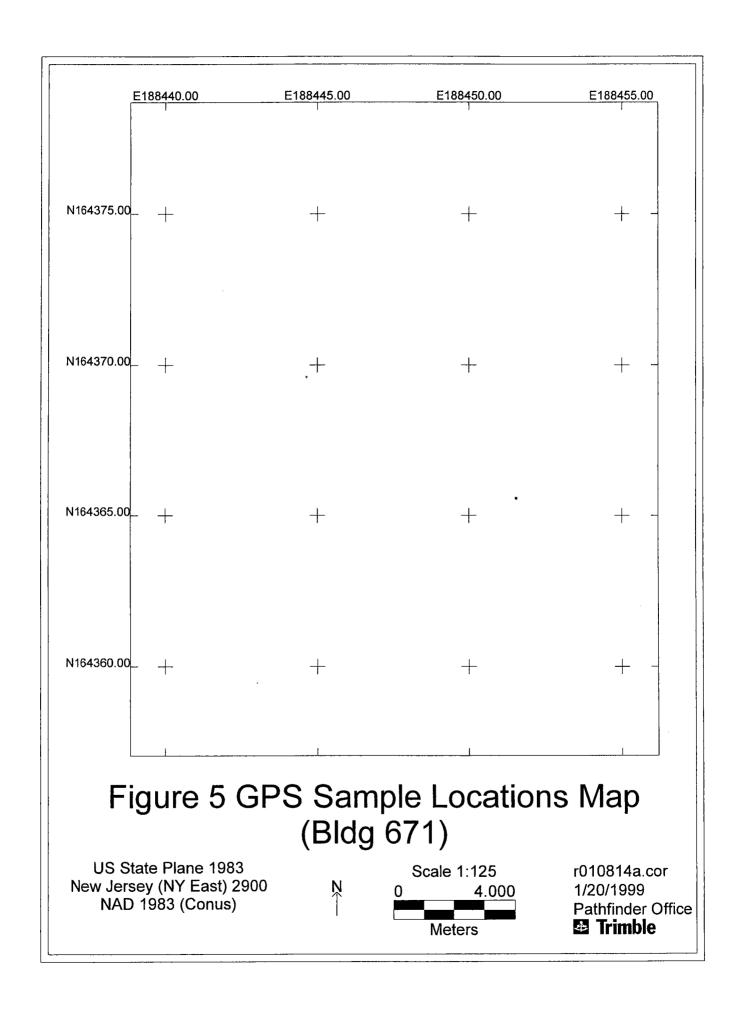
VERSAR ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS BRISTOL, PA.

SCALE: 1"=10'

DATE: AUGUST 1997

71A 2429 FIGE

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Figure 5 GPS Sample Point Location Data

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

(in Meters)

Sample Point

Location / Desc. Y Coord. (Northing) X Coord. (Easting)

671GW 164365.593 188451.527

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

Reference Point

Location / Desc. Y Coord. (Northing) X Coord. (Easting)

671 ST.BASIN 164369.617 188444.633

APPENDIX A NJDEP-STANDARD REPORTING FORM



Environmental Protection and Et. . 5 Departs, 4 Divisio. of Responsible Party Site Remediation CN 028 Trenton, NJ 08625-0029

ATTN: UST Program (609) 984-3156

Date Rec'd.	
Auth.	
Routing	
UST NO.	

-	7
STAN for reco	NDARD REPORTING FORM tring activities at an UST facility:
General Facility Information Closure (Abandonment or Temporary Closure Change in Service	n Changes Sale or Transfer
Check ONLY One Type	e of Activity - Complete Form For That Activity
(More than	one tank can be listed per activity)
facilities must submit a l	IEW tank installations at existing registered Registration Questionnaire for the new tanks.
Answer questions 1 through 5 and others as appl	licable.
Company name and address (as it appears on registration questionnaire):	U.S. ARMY - FORT MONMOUTH DPW - BUILDING 173 FORT MONMOUTH NIT OTTOS ATTN: EUGENE'W LESINSKY
2. Facility name and location (if different from above):	
3. Contact person for this activity:	GENE LESINSKI Telephone Number: (98) 532-0989
8. The Identification number of the affected tank BUDG 671	k as it appears in Question Number 12 on the Registration Questionnaire
5. Registration Number (If known):	UST. 008/533 - 10
E. FOR GENERAL FACILITY INFORMATION CHARK	ges (actiress, telephone, contact person, etc. – supply NEW information only)
a. Facility name: b. Facility location: c. Owner's mailing address:	
	NJ
d. Block: Let: e. Contact person (facility operator): f. Contact telephone number: (g. Other (Specify):	
	(OVER)

~ n At	The state of the s		,			e
	bandonment Da	nplementa isched	ile (3 copies) and	all documta., ?	eaded for	
Anach	h the necessary in	molementa issues	2.0 (- 1	975	20-0748-25	/ = -
	ふってんけ ひさい バンゴー		7 Case N	10. 77-8-	0110	•
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				k all that apply):	- " hasardaur	
-, 8. For CHA	NGES IN HAZAR	DOUS SUBSTANCE	vima - sae Nal-A	_C. 7:14B-9.1(b)). Re	move all trazationus	•
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ي الله	tances; leave tank	en place.		crulated substance.	Tank must be cleaned	
В. □ С	hange in service	hom a regulated sub	Sidize to a 1/0)			•
and s	ste assessment p	erformed per NJA.C	,, /,140-3.3(u).	me to amilher regul	ated hazardous substance	f.
- c. 🗆 C	Changes in service	e trom one required	Mazaroous austra	'Naw	·	
•	Tank No.					
13	Tank No.			New		
_ 5	Tank No.			140×		
		(Anach additio	nal sheets it more	space is needed)		
	•	· ·	ctive Date: _	/ /		•
9. For TRA	WSFER OF OW	JERSHIP: FILE	ELIAS DETE			
a. New	Owner (operator	·)				
h. New	Facility Name					
#	-			N	•	
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e Clas	sina Attorney	·				mtaction
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11. For C2	ANGES HI PRODUC	Environment []	d Com	pany/Carrier: 🛘		•
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NOTE:	ALL appropriate local state and/o			centificates require separately from this	i by the above activity (se notification.	s) from any
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- 1	DCSI, State D.	and applicable perforted in	nits, licenses and sust be obtained t			
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This re	egistration forms	and applicable permor lederal agencies in the signed by th	oust be obtained a CERTIFICA e highest ranking	ATION individual at the fa	ality with overall responsi	outy for the
This re	egistration forms	and applicable permor lederal agencies in the signed by th	oust be obtained a CERTIFICA e highest ranking	ATION individual at the fa	ality with overall responsi	outy for the
This re	egistration form s LLAC. 7:148-22 under penalty of a are significant	and applicable permor lederal agencies in that the signed by the signed by the same that the informative and priminal permissal permissa	oust be obtained a CERTIFICA e highest ranking	ATION individual at the fa	ality with overall responsi	outy for the
This re	egistration forms	and applicable permor federal agencies in thall be signed by the same that the information and criminal performance in the same crim	oust be obtained a CERTIFICA e highest ranking	ATION individual at the fa	ality with overall responsi	outy for the
This resulty (N	egistration form s LLAC. 7:148-22 under penalty of a are significant d/or imprisonment	and applicable permor lederal agencies in that the signed by the signed by the same that the informative and priminal permissal permissa	oust be obtained a CERTIFICA e highest ranking	ATION individual at the fa	ality with overall responsi	outy for the
This resulty (No. 1) certify in the trees and single an	egistration form s LLAC. 7:148-23 under penaity of a are significant d/or imprisonment	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa-	ality with overall responsi	olity for the
This resulty (No. 1) certify in the trees and single an	egistration form s LLAC. 7:148-22 under penalty of a are significant d/or imprisonment	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa-	ality with overall responsi	olity for the
This retained the first that their fires and Signature Name	egistration form s LIAC. 7:148-22 under penalty of a are significant d/or imprisonment ure: (print or type):	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa-	ality with overall responsi	olity for the
This retained the first that their fires and Signature Name	egistration form s LLAC. 7:148-23 under penaity of a are significant d/or imprisonment	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa	ality with overall responsi	olity for the
This results (No. 1 certify (No. 1 c	egistration form s LIAC. 7:148-22 under penalty of a are significant d/or imprisonment ure: (print or type):	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa-	ality with overall responsi	olity for the
This retained the first that their fires and Signature Name	egistration form s LIAC. 7:148-22 under penalty of a are significant d/or imprisonment ure: (print or type):	and applicable permor federal agencies in that the signed by the signed by the same control and criminal permore a	CERTIFICATE Highest ranking	ATION individual at the fa-	ality with overall responsi	outy for the

APPENDIX B SITE ASSESSMENT SUMMARY

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Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name: <u>U.S. Army F</u>	rt Monmouth New Jersey
Facility Street Address : <u>Dir</u>	ctorate of Public Works Building 173
Municipality: Oceanport	County: Monmouth
Block:Lot	s):Telephone Number :732-532-6224
B. Owner (RP)'s Name:	
Street Address:	City :
State:	Zip: Telephone Number :
C. (Check as appropriate)	O. (Complete all that apply)
Site Investigation	Assigned Case Manager: Ian Curtis, Federal Case Manager
Report (SIR) \$500 Fee	UST Registration Number: 81533-103 (7 digits)
Remedial Investigation Report (RIR) \$1000 Fee	Incident Report Number•••• (10 or 12 digits)
X NA – Federal Agreement	Tank Closure Number : Federal Case Manager
	to the specific reporting requirements of N.J.A.C. 7:26E
•	ablic Works Building 173 City: Fort Monmouth
	<u>07703</u> Telephone Number : <u>732-532-6224</u>
	uired only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)
 For a Corporation by a persor resolution, certified as a true of the control of the certified as a true of the certi	ble Party(ies) of the Facility: be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)] as follows: a authorized by a resolution of the board of directors to sign the document. A copy of the copy by the secretary of the corporation, shall be submitted along with the certification; or interesting, by a general partner or the proprietor, respectively; or real or other public agency by either a principal executive officer or ranking elected Official. Ity of law that I have personally examined and am familiar with the information submitted in this stacked documents, and that based on my inquiry of those individuals responsible for obtaining the verthat the submitted information is true, accurate, and complete. I am aware that there are malties for knowingly submitting false, inaccurate, or incomplete information and that I am of the fourth degree if I make a written false statement which I do not believe to be true. I am also
aware that if I knov	ngly direct or authorize the violation of any statute, I am personally liable for the penalties."
Name (Print or Type):	mes Ott Title: Directorate of Public Works
Signature:	2/25-19G
Company Name: U	SArmy Fort Monmouth Date: S/S //)

ARMY, SELFM-PW- V DAILY UST SUBSURFACE REMOVAL LOG

	BLDG.#: 6 // REG.#: 008/533 - 103 CLOSURE#: DEPLICE	10-7-4
~ m	DATE: 7-19-97 TOA: 1600 TOD: 800 GOV. SSE: 120/0/5/6/ NJDEP CERT. #: 80/4537	. •
File: 1	GOV. SSE: (E) (N) (C) NJDEP CERT. #: 0014537 REMOVAL CONTRACTOR: SAL Inc. 7/5	•
	CLOSURE SUPERVISOR: DE MONTINIS NUMBER CERT. #:	<u>.</u> .
151 - 151 -	WEATHER: SUNNY - SO	
1	ACTIVITY	YES/
E TOURSE .	ACIIVIII	ио
<u>-</u> -∰	THE SUPERVISOR (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	У
- 1	THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Ý
_ = =	ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	4
= 1	A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	WA
	THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
lie 1:	A DISCHARGE WAS REPORTED TO THE NUMBER (609-292-7172), CASE# 97-8-20-07/8-27	ý
14 - Marie	PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Ý
-1	GROUNDWATER WAS ENCOUNTERED AT FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	1/
.—,	IF OVA/Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	MA
- -	IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	NA
_ 3	ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	WA
~ p	ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NA
. j	ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NIA
had al	THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	NIA
	ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
F. H. of	THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH)	
1	SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN	A
S #	FILL TICKETS (IN YDS ³), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS) CHECK ALL BOXES, LEAVE	NO BLANKS
	ertify under penalty of law that tank decommissioning activitie	s were
peri	ormed in compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 et seq I as there are significant penalties for submitting false, inaccura	m aware
Tuco	emplete information, including fines and/or imprisonment.	ce, or
IGN	DATE: DATE:	
_ca\ms\	ust\removal\sitessls.doc	

APPENDIX C WASTE MANIFEST

ΞÌ



State of New Jersey Department of Environmental Protection and Energy Hazardous Waste Regulation Program Manifest Section CN 421, Trenton, NJ 08625-0421

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)	50-0039. Expires 9-30-94
WASTE MANIFEST N J 3 2 1 0 0 2 0 5 9 7 0 0 0 0 2 of 1 Is not require	the shaded areas od by Federal law.
3. Generator's Name and Malling Address US Army Communications Electronics Command	umie 97259
Main Post, c/o James Shirghio, Bldg 2504, ATIN: SELFM-DL-EM-NS Fine General General PW-EV B Space General Company Comp	プロープの 才 (es.) (blace) という
4. Generator's Phone (908) 532-6223	
Freehold Cartage Inc. INIJIDIO 514 112 16 11 16 14	
Cause Parid Number D. Transparies Phone (CO)	\$124622=1(00)I
9. Designated Facility Name and Site Address 10. US EPA ID Number E State Trans. ID NUDEPES	
Lionetti Oil Recovery Co., Inc. Cheesequake & Runyon Rds.	
Old Bridge, NJ 08857 [NIJID101814101414101614 H. Facility of Phone 1, 908]	7/2: 1=09(0,0;2::2:
11 US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group) 12. Containers 13. 14. Unit Unit Wit/Vo	
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Combustible Liquid UN 1270 PG III	× 17 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
b X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil)	
Combustible Liquid UN 1270 PC III	V-17 40 40
C X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil)	
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5 Watter 104 Ft 1 or 1 to 104 Ft 1 or 1	
NOT EPA REGULATED. REGULATED AS HAZARDOUS WASTE IN NJ //q. 0081533-103 MI 24 HOUR EMERGENCY PHONE: 201-427-2881 No 0081533-90 11d. Bldq 206	60081533-107
11a, b, c, d ERG# 2/	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper states of the classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable inter-	hipping name and are national
government regulations. If fam a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the degree I have a program in place to reduce the volume and toxicity of waste generated to the place to the volume and toxicity of waste generated to the volume and toxicity of the volume and toxicit	ave determined to be
economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which mining the threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste the best waste management method that is available to me and that I can afford.	mizes the present and
Printed/Typed Name M C 1/. Signature () J SM T//	Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials	11/2/14
Printed/Typed Name Signature	Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials	1/1/12/29/4
Printed/Typed Name Signature	Month Day Year
19. Discrepancy Indication Space	
\mathscr{U}	K
	K
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name Signature	

In case of an emergency or epill immediate



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State of New Jersey Department of Environmental Protection and Energy Hazardous Waste Fegulation Program Manifest Section CN 421, Trenton, NJ 08525-0421

are type or print in block letters. (Form designed for use on citte (12-pitch)	typeerner.j				gost Erores 630-94
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Fort Theremeatre, all 07703 4 Generator's Phone (978 577-6777				n rost	41.14
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Repriete Come a Line Little	<u> </u>	اعلفا		Deca No.	
7. Transporter 2 Company Name 8.	US EPA ID HUMBH			ID-NUDEPE .	1.462=1001
	US EPA ID NUTION			Dacal No.	
8. Designated Facility Name and Site Address 10. Liquictti Uil Recurrery Co., Lot.		7.	Transporter's		7-7-1
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		12. Contain	975 TO	B. 114	Waste No.
11. US DOT Description (including Proper Shipping Name, Hazard Class or HM.		No. T	Fe Riva	OVINE VILIN	A MARKE MB
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90/90'd

FAX NO. 1908 636 7816

CUTE INC.

APPENDIX D UST DISPOSAL CERTIFICATE

MAZZA & SONS, INC.

Metal Recyclers 3230 Shafto Rd. Tinton Falls, NJ (908) 922-9292 NO. 26+

DATE. 20 12, 87

DID NOT PICK UP CHECK.

Customer's Nas		
Address Weight Price		Weight Price
Cast Iron		Lt. Copper
Steel	13920 LB	Brass
744 28 00 Lt. Iron	13120 LB	Alum Clean
Copper #1		Lead
Copper #2	800	Stainless
	BUG. 671	Battery
	1000 GAL.	TOTAL AMOUNT:
Weigher	Customer _ C	Later Fam

APPENDIX E SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

REPORT OF ANALYSIS

Client:

三寸

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

Total Petroleum Hydrocarbons

96-1262 Bldg. 671

> Project # 2926 Date Rec. 08/22/97 Date Comp. 08/26/97 Released by:

> > Daniel K. Wright Laboratory Director

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MS/MSD Results Summary	11
Quality Control Spike Summary	12
Raw Sample Data	13-32
Laboratory Deliverable Checklist	33

Fi IIII 7

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

	<u>No</u> 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).	<u>~</u>
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)	
Additional Comments:	

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: GEM	ELESINSKI-DPW	Project No:	96-12	17		Γ		Anal	vaia Dans					
Phone #: 20989	2		Project No: 96-1262				4	Allai	ysis Paran	leter	<u>S</u>		Comments:	اسود
()DERA (X)OMA ()Other:		Location: B. 67/			١.,	Solver	3					X=SAMPLES KEP BELOW 4°C.	/	
Samplers Name / Company : GARY DiM		RTINIS-	TUS	Sample	Sample #		13	huser				8	BELOW 9°C.	
Lab Sample I.D.	Sample Location	Date	Time	1 .	bottles	16	2	12				ANO	Pamarka / Processia NA d	
2926.01	671-A	8-21-97	1517	SOIL	1	X	X	X					Remarks / Preservation Metho	
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06	671-F		1538							ļ		NO		-
	671-6		1530					71	-		1	NO		İ
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Report of Analysis U.S. Army, Fort Monmouth Environmental Laboratory NJDEP Certification # 13461

Client:

U.S. Army

Lab. ID#:

2926

DPW. SELFM-PW-EV

Date Rec'd:

22-Aug-97

Bldg. 173

Analysis Start:

25-Aug-97

Ft. Monmouth, NJ 07703

Analysis Complete:

26-Aug-97

Analysis:

OQA-QAM-025

UST Reg. #:

NA

Matrix:

Closure #:

= **j**

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Soil

NA

Analyst:

D.DEINHARDT

DICAR #:

NA

Ext. Meth:	Shake			Location #:		B.671
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2926.01	671-A	1.00	15.88	80.47	184	574.82
2926.02	671-B	1.00	15.19	71.76	216	302.55
2926.03	671-C	1.00	15.12	73.88	210	ND
2926.04	671-D	1.00	15.52	70.53	215	ND
2926.05	671-E	1.00	16.38	71.50	201	243.82
2926.06	671-F	1.00	15.06	74.78	209	ND
2926.07	671-G	1.00	15.56	71.51	211	ND
2926.08	671-H	1.00	15.32	72.60	211	ND
2926.09	671-I	1.00	15.20	81.24	190	265.28
2926.10	671-DUP	1.00	16.10	83.02	176	218.00
METHOD BLANK	25-Aug-97	1.00	15.00	100.00	157	ND

NA = Not Applicable

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright

Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <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	1
9.	Results submitted on a dry weight basis	
10.	Method Detection Limits submitted	<u>~</u>
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

= 3

^{*}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

3 3 - 3

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. 671

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
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. 671 – 7.5'	4003.03	Aqueous	24-Oct-98 09:15	10/26/98

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

> Daniel Wright/Date Laboratory Director

ENCLOSURE: CHAIN OF CUSTODY FIELD DOCUMENTATION RESULTS

: 1

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CHAIN OF CUSTODY



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/v	ersar_	Project No:		·				Anal	lysis F	aram	eters			Comments:
Phone #: X2(22)	4	Location: B	LOGS 67	1,718,	906	V	13							
()DERA (96MA ()Other:				 	V04+	≥ ⊆							
Samplers Name / Cor	mpany:	· 		Sample	#	7	+ 15							
Lab Sample I.D.	Sample Location	Date	'Time	Туре	bottles	15	٥							Remarks / Preservation Method
4093. 1	TRIP BUNNE	10-24-08		AQ.	2	X								HCL
2	FIELD BLANK	11	0845	AQ.	3	×	×							HCL/ Lyon
3	BLOG. 671- 7.5'	11	0915	AQ.	3	×	×							11
4	BLOG. 718-6.0'	· 11	1015	AQ.	3	×	×				<u>-</u> .			11
5	BLAG. 906 - 13.0	11	1145	AQ.	3	×	X							1)
6	FICED DUP, -	н		AQ.	3	×.	X							11
								ļ						
				ļ		<u> </u>								
					 				<u> </u>	ļ				
						<u></u>							ļ	
				<u> </u>										
Relinquished by (signatu		Keceived by	(signature):	1/1	Relin	quished	l by (si	gnature):	Date	Time:	Recei	ved by	(signature):
Relinquished by (signate	Date/Time: 1	77		<u></u>	Relin	nquished by (signature):			Date/Time: Received		ved by	d by (signature):		
Report Type: (_)Full, X)Reduced, Standard, ()Screen	en / non-certif	ied		دا	Remarks:								
Turnaround time: (\Star		s, (_)ASAP V		rs.		l								

グラウン

FIELD DOCUMENTATION

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

FOR BLDG. #671

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

Objective:

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

1. Methods

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

2. Installation

- A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 12 feet. The water table was at 7.5 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 6.5 11.5 feet. Riser casing from 6.5 +1 feet.

3. Purging

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

4. Sampling

A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field

Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

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

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

5. Quality Assurance/Quality Control

A. Decontamination

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

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

B. Field Blanks

- 1 Field blank was taken at this site.
- C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif. The sample bottles are certified clean and are sealed upon delivery.
- D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

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

Mark/Laura / Date

METHODOLOGY SUMMARY

Methodology Summary

EPA Method 624 Gas Chromatographic Determination of Volatiles in Water

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

EPA Method 3510/8270 Gas Chromatographic Determination of Semi-volatiles in Water

ΞĖ

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

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
1.	Chromatograms lab	eled/Compounds identified	
1.		and method blanks)	405
2.	Retention times for	chromatograms provided	<u>ycs</u>
3.	GC/MS Tune Specif	fications	
	a.	BFB Meet Criteria	<u>yes</u>
	b.	DFTPP Meet Criteria	Yes.
4.		quency – Performed every 24 hours for 600	, ,
	series and 12 hours	for 8000 series	yes_
5.	GC/MS Calibration	- Initial Calibration performed before sample	
		ing calibration performed within 24 hours of 600 series and 12 hours for 8000 series	yes_
6.	GC/MS Calibration	requirements	
	a.	Calibration Check Compounds Meet Criteria	45
	b.	System Performance Check Compounds Meet Criteria	yes
7.	Blank Contamination	n - If yes, List compounds and concentrations in each blank:	<u>NO</u>
	a.	VOA Fraction	
	b.	B/N Fraction	
	c.	Acid Fraction NA	
8.	Surrogate Recoverie	s Meet Criteria	yes
	If not met, list to outside the acce	hose compounds and their recoveries, which fall ptable range:	·
	a.	VOA Fraction	
	Ъ.	B/N Fraction	
	c.	Acid Fraction NA	
	If not met, were as "estimated"?	the calculations checked and the results qualified	<u>yes</u>
9.	Matrix Spike/Matrix	Spike Duplicate Recoveries Meet Criteria	yes_
		e compounds and their recoveries, which fall	l——
	a.	VOA Fraction	
	ъ.	B/N Fraction	
	c.	Acid Fraction NA	
		•	

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

		Indicate Yes, No, N/A
10.	Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range)	<u>yes</u>
	a. VOA Fraction	
	b. B/N Fraction	
	c. Acid Fraction NA	
11.	Extraction Holding Time Met	<u>yes</u>
	If not met, list the number of days exceeded for each sample:	
12.	Analysis Holding Time Met	yes
	If not met, list the number of days exceeded for each sample:	ı
Add F	itional Comments: reld duplicate purprised on 4003.05 (Blog 906)	
Labo	oratory Manager:	

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 4003 Site: Bldg. 671

		Date	Hold Time
Da	nte Sampled	10/24/98	NA
Re	eceipt/Refrigeration	10/26/98	NA
Ex	tractions Base Neutrals	10/27/98	14 days
An	nalyses		
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

- 1

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 Skelton Operator

Sample Name Field ID

Date Acquired 28 Oct 98 9:12 am

VBLK61 Sample Multiplier

VBLK61

				n. 1	Regulatory Level	MDI	Ouelifiem
CAS#	Compound Name	R.T.	Response	Result	(ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile		<u> </u>	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		L	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	<u> </u>
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		<u> </u>	not detected	2	0.24 ug/L	
67-64-1	Acetone		<u> </u>	not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide		<u> </u>	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	
70 30 0	cis-1,2-Dichloroethene		T	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/I	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/I	4
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/I	4
79-01-6	Trichloroethene			not detected	1	0.23 ug/I	
78-87-5	1,2-Dichloropropane			not detected	11	0.40 ug/I	<u></u>
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/I	<u> </u>
110-75-8	2-Chloroethyl vinyl ethe			not detected	nle	0.65 ug/I	
	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/l	
108-10-1	4-Methyl-2-Pentanone	 	1	not detected	400	0.59 ug/l	
108-10-1	Toluene	 	 	not detected	1000	0.37 ug/l	
108-88-3	trans-1,3-Dichloroprope	\vdash	 	not detected	nle	0.87 ug/l	L
	1,1,2-Trichloroethane	╁	 	not detected	3	0.48 ug/	L
79-00-5	Tetrachloroethene	├-		not detected	1	0.32 ug/	L _
127-18-4		┼		not detected	nle	0.71 ug/	L
591-78-6	2-Hexanone	+-	 	not detected	10	0.86 ug/	
126-48-1	Dibromochloromethane	+		not detected	4	0.39 ug/	_
108-90-7	Chlorobenzene	$\vdash \vdash$	+	not detected	700	0.65 ug/	
100-41-4	Ethylbenzene	+	+	not detected	nle	1.14 ug/	
1330-20-7	m+p-Xylenes	+-	- 	not detected	nle	0.62 ug/	
1330-20-7	o-Xylene	 	 	not detected	100	0.56 ug/	_
100-42-5	Styrene	┼		not detected	4	0.70 ug/	_
75-25-2	Bromoform	₩	+	not detected	2	0.47 ug/	
79-34-5	1,1,2,2-Tetrachloroethar	4	 	not detected	600	0.47 ug/	
541-73-1	1,3-Dichlorobenzene	+		not detected	75	0.55 ug/	
106-46-7	1,4-Dichlorobenzene	↓	+	not detected	600	0.57 ug/	
95-50-1	1,2-Dichlorobenzene			not detected and Ground Water Quality Crite			

* 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

- 1

1E **VOLATILE ORGANICS ANALYSIS DATA SHEET** TENTATIVELY IDENTIFIED COMPOUNDS

FI	EL	D	ID
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							١,	Vblk61	1
Lab Name:	FMETL			_ Project	980932			ADIKOI	<u> </u>
NJDEP#	13461	Case	No.: 4003	SDG N	о	_ Lo	cation	UST	
Matrix (soil/w	vater)	WATER		La	ab Sample	ID:	VBLK61	1	
Sample wt/vo	ol:	5.0	(g/ml) ML	La	ab File ID:		VB0188	31.D	
Level: (low/n	ned)	LOW		Da	ate Receiv	ed:	10/26/9	8	
% Moisture: r	not dec.			Da	ate Analyz	ed:	10/28/9	8	_
GC Column:	HP5M	S ID: 0.25	(mm)	Di	lution Fact	or:	1.0		_
Soil Extract V	/olume:		(uL)	Sc	oil Aliquot \	V olur	ne:		_ (uL)
Number TICs	s found:	0	-	ONCENTRA g/L or ug/Kg					
CAS NO.		COMPOUN	D NAME		RT	ES	T. CON	c.	Q

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

Data File Nam vb01898.d Skelton Operator

Date Acquired 28 Oct 98 10:08 pm

Sample Name Field ID

4003.01 Trip Blank

Sample Multiplier

			D	Result	Regulatory Level (ug/l)*	MDL	Qualifier
CAS#	Compound Name	R.T.	Response	not detected	50	1.85 ug/L	
107028	Acrolein		 	not detected	50	2.78 ug/L	
107131	Acrylonitrile			not detected	nle	8.52 ug/L	
75650	tert-Butyl alcohol			not detected	nle	0.16 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	1.68 ug/L	
	Dichlorodifluoromethan			not detected	30	1.16 ug/L	
74-87-3	Chloromethane		ļ.——	not detected	5	1.06 ug/L	
75-01-4	Vinyl Chloride		 	not detected	10	1.10 ug/L	
74-83-9	Bromomethane					1.00 ug/L	
75-00-3	Chloroethane			not detected	nle		
75-69-4	Trichlorofluoromethane		ļ.,	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		<u> </u>	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		<u> </u>	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/I	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/I	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene	L		not detected	1 1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/I	
79-01-6	Trichloroethene			not detected	1	0.23 ug/I	
78-87-5	1,2-Dichloropropane		<u> </u>	not detected	1	0.40 ug/I	
75-27-4	Bromodichloromethane	<u> </u>		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		ļ.,	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	L		not detected	1000	0.37 ug/l	
10061-02-6	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/l	
79-00-5	1,1,2-Trichloroethane		·	not detected	3	0.48 ug/l	
127-18-4	Tetrachloroethene			not detected	11	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/	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/	
100-42-5	Styrene			not detected	100	0.56 ug/	니
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	1		not detected	600	0.55 ug/	<u>L</u>
	1,4-Dichlorobenzene	1	1	not detected	75	0.57 ug/	L
106-46-7 95-50-1	1,2-Dichlorobenzene	t^-	1	not detected	600	0.64 ug/	L

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

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit NLE = No Limit Established

R.T. = Retention Time

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

							I т∞	n Blani	,
Lab Name:	FMETL			Project	980932			ip Blani	ĸ
NJDEP#	13461	Case	No.: 4003	SDG N	lo	Lo	cation	UST	
Matrix (soil/w	vater)	WATER		La	ab Sample	ID:	4003.01	_	
Sample wt/vo	ol:	5.0 (9	g/ml) <u>ML</u>	La	ab File ID:	_	VB0189	8.D	_
Level: (low/n	ned)	LOW		D	ate Receiv	ed:	10/26/98	3	-
% Moisture: r	not dec.			D	ate Analyz	ed:	10/28/98	3	-
GC Column:	HP5M	S ID: 0.25	_ (mm)	D	ilution Fac	tor:	1.0		_
Soil Extract V	/olume:	((uL)	S	oil Aliquot	Volun	ne:		(uL
Number TICs	s found:	0	_	ONCENTRA g/L or ug/Kg					
CAS NO.		COMPOUND	NAME		RT	ES	Γ. CONO	5 .	Q

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

Data File Nam vb01899.d

- 1

Sample Name Field ID

4003.02 Field Blank

Skelton Operator Date Acquired 28 Oct 98 10:53 pm

Sample Multiplier

C + 511	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL	Qualifier
CLINIT	Acrolein	K. 1.	Response		detected	50	1.85 ug/L	
107028	Acrylonitrile				detected	50	2.78 ug/L	
	tert-Butyl alcohol				detected	nle	8.52 ug/L	
					detected	nle	0.16 ug/L	
	Methyl-tert-Butyl ether				detected	nle	0.25 ug/L	
108203	Di-isopropyl ether Dichlorodifluoromethan				detected	nle	1.68 ug/L	
7107.2					detected	30	1.16 ug/L	
74-87-3	Chloromethane		 		detected	5	1.06 ug/L	
75-01-4	Vinyl Chloride		 		detected	10	1.10 ug/L	
74-83-9	Bromomethane		 		detected	nle	1.01 ug/L	
75-00-3	Chloroethane				detected	nle	0.50 ug/L	
75-69-4	Trichlorofluoromethane				detected	2	0.24 ug/L	
75-35-4	1,1-Dichloroethene		-		detected	700	1.36 ug/L	
67-64-1	Acetone		 		detected	nle	0.46 ug/L	
75-15-0	Carbon Disulfide		 		detected	2	0.24 ug/L	
75-09-2	Methylene Chloride		 		detected	100	0.16 ug/L	
156-60-5	trans-1,2-Dichloroethene		 		detected	70	0.12 ug/L	
75-35-3	1,1-Dichloroethane		 		detected	nle	0.78 ug/L	
108-05-4	Vinyl Acetate		 		detected	300	0.62 ug/L	1
78-93-3	2-Butanone		 		detected	10	0.02 ug/L	
	cis-1,2-Dichloroethene				detected	6	0.30 ug/L	
67-66-3	Chloroform		 		detected	30	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane		<u> </u>		detected	2	0.23 ug/L	
56-23-5	Carbon Tetrachloride					1	0.47 ug/L	
71-43-2	Benzene		 		detected	2	0.23 ug/L	
107-06-2	1,2-Dichloroethane		ļ <u> </u>		detected	1	0.18 ug/I	
79-01-6	Trichloroethene		 		detected		0.23 ug/L 0.40 ug/L	
78-87-5	1,2-Dichloropropane				detected	1 1	0.40 ug/I	
75-27-4	Bromodichloromethane		 		detected	1	0.55 ug/I	
110-75-8	2-Chloroethyl vinyl ethe		<u> </u>		detected	nle		
10061-01-5	cis-1,3-Dichloropropene		 		detected	nle	0.69 ug/I	
108-10-1	4-Methyl-2-Pentanone				detected	400	0.59 ug/I	
108-88-3	Toluene		 		detected	1000	0.37 ug/I	
10061-02-6	trans-1,3-Dichloroprope				detected	nle	0.87 ug/I	
79-00-5	1,1,2-Trichloroethane		<u> </u>		detected	3	0.48 ug/I	
127-18-4	Tetrachloroethene		<u> </u>		detected	1 1	0.32 ug/I	
591-78-6	2-Hexanone		1		detected	nle	0.71 ug/l	
126-48-1	Dibromochloromethane		<u>l</u>		detected	10	0.86 ug/l	
108-90-7	Chlorobenzene				detected	4	0.39 ug/l	
100-41-4	Ethylbenzene				detected	700	0.65 ug/l	
1330-20-7	m+p-Xylenes				detected	nle	1.14 ug/l	
1330-20-7	o-Xylene				t detected_	nle	0.62 ug/l	
100-42-5	Styrene				t detected	100	0.56 ug/l	
75-25-2	Bromoform				t detected	4	0.70 ug/l	
79-34-5	1,1,2,2-Tetrachloroethan			no	t detected	2	0.47 ug/	
541-73-1	1,3-Dichlorobenzene			no	t detected	600	0.55 ug/.	
106-46-7	1,4-Dichlorobenzene	Γ		no	t detected	75	0.57 ug/	
	I A . LAVALUA OU OUT				t 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

FIELD ID

Lab Name:	FMETL		Project	980932		Fie	eld Bla	ank
NJDEP#	13461	Case No.: 400		No	Loc	cation	UST	
Matrix (soil/w	vater)	WATER	l	_ab Sample	ID: 4	4003.02	2	
Sample wt/vo	ol:	5.0 (g/ml) <u>ML</u>		_ab File ID:	_	VB0189	9.D	
Level: (low/n	ned)	LOW]	Date Receiv	ed: _	10/26/9	8	
% Moisture: r	not dec.		[Date Analyz	ed: _	10/28/9	88	
GC Column:	HP5M	S ID: 0.25 (mm)	ī	Dilution Fac	tor: _	1.0		
Soil Extract V	/olume:	(uL)	5	Soil Aliquot	Volum	ne:		(uL
			CONCENTR					
Number TICs	s found:	0	(ug/L or ug/K	(g) UG	'L			
CAS NO.		COMPOUND NAME		RT	EST	Γ. CON	c.	Q

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

Data File Nam vb01900.d Skelton Operator

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Sample Name Field ID

4003.03 Bldg 671 7.5'

Date Acquired 28 Oct 98 11:38 pm

Sample Multiplier

CASH	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
CAS# 107028	Acrolein	101.	, ACOPONEDO	not detected	50	1.85 ug/L	
				not detected	50	2.78 ug/L	
107131	Acrylonitrile tert-Butyl alcohol			not detected	nle	8.52 ug/L	
75650	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	
74.07.2			 	not detected	30	1.16 ug/L	
74-87-3	Chloromethane		 	not detected	5	1.06 ug/L	
75-01-4	Vinyl Chloride		 	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			not detected	nle	0.46 ug/L	
75-15-0	Carbon Disulfide	<u> </u>	 	not detected	2	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	100	0.16 ug/L	†
156-60-5	trans-1,2-Dichloroethene			not detected	70	0.10 ug/L	
75-35-3	1,1-Dichloroethane		 	not detected	nle	0.78 ug/L	
108-05-4	Vinyl Acetate		 	not detected	300	0.62 ug/L	
<u>78-93-3</u>	2-Butanone			not detected	10	0.02 ug/L	
	cis-1,2-Dichloroethene	<u> </u>		not detected	6	0.30 ug/L	1
67-66-3	Chloroform		 	not detected	30	0.23 ug/L	
75-55-6	1,1,1-Trichloroethane	ļ		not detected	2	0.47 ug/L	<u> </u>
56-23-5	Carbon Tetrachloride	<u> </u>	 	not detected	1	0.47 ug/L	·
71-43-2	Benzene		 	not detected	2	0.23 ug/I	<u>' </u>
107-06-2	1,2-Dichloroethane	<u> </u>	<u> </u>	not detected	1	0.13 ug/I	
79-01-6	Trichloroethene			not detected	1	0.40 ug/I	1
78-87-5	1,2-Dichloropropane		 		1	0.40 ug/I	
<u>75-27-4</u>	Bromodichloromethane		 	not detected		0.65 ug/I	
110-75-8	2-Chloroethyl vinyl ethe		 	not detected	nle	0.69 ug/I	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.59 ug/I	
108-10-1	4-Methyl-2-Pentanone			not detected	400		
108-88-3	Toluene	ļ		not detected	1000	0.37 ug/I	
	trans-1,3-Dichloroprope			not detected	nle	0.87 ug/I 0.48 ug/I	
79-00-5	1,1,2-Trichloroethane		<u> </u>	not detected	3		
127-18-4	Tetrachloroethene		ļ	not detected	1 1	0.32 ug/I	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/I	
126-48-1	Dibromochloromethane	<u> </u>		not detected	10	0.86 ug/l	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/I	
100-41-4	Ethylbenzene	<u> </u>		not detected	700	0.65 ug/l	
1330-20-7	m+p-Xylenes	<u> </u>		not detected	nle	1.14 ug/l	
1330-20-7	o-Xylene	<u> </u>		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/	
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			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

FIEL	D ID
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	F8 4 FT1			Project	980932		E	3dg671	
Lab Name:	FMETL			Piojeci	900932	···			
NJDEP#	13461	Cas	se No.: 4003	SDG N	o	_ Loc	ation	UST	
Matrix (soil/w	vater)	WATER	<u>-</u>	La	b Sample	ID: 4	003.03	3	
Sample wt/vo	ol:	5.0	(g/ml) ML	La	b File ID:	<u>v</u>	B0190	0.D	
Level: (low/r	ned)	LOW	_	Da	ate Receiv	ed: 1	0/26/9	8	_
% Moisture:	not dec.			Da	ate Analyz	ed: <u>1</u>	0/28/9	8	_
GC Column:	HP5M	S ID: 0.2	25 (mm)	Di	lution Fact	or: <u>1</u>	.0		_
Soil Extract \	/olume:		_ (uL)	Sc	oil Aliquot \	/olum	e:		_ (uL)
			c	ONCENTRA	TION UNI	rs:			
Number TIC:	s found:	0		ug/L or ug/Kg) <u>UG</u> /	L			
CAS NO.		COMPOU	ND NAME		RT	EST	. CON	C.	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

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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		. ऽत्तर के	not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene		* * * * * * * * * * * * * * * * * * * *	not detected	10	2.45 ug/L	
111-91-1	bis(2-Chloroethoxy)methane	:	4	not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene		•	not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	,
83-32-9	Acenaphthene		1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name 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	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

Lab Name:	FMETL			Lab Cod	de 13461		Sblk153
Project	980932	C	ase No.: <u>4003</u>	Local	tion UST	s	DG No.:
Matrix: (soil/	water)	WATER		Į	Lab Sample	D:	SBLK153
Sample wt/v	ol:	1000	(g/ml) <u>ML</u>	1	Lab File ID:		BNA01125.D
Level: (low/	med)	LOW		ļ	Date Recei	ved:	10/26/98
% Moisture:		de	canted: (Y/N)	N I	Date Extrac	ted:	10/27/98
Concentrate	d Extract	Volume:	1000 (uL)	I	Date Analyz	zed:	11/04/98
Injection Vol	ume: 1.	0 (uL)		i	Dilution Fac	ctor:	1.0
GPC Cleanu	ip: (Y/N)	N	pH: <u>7</u>				
Number TIC	s found:	0		CONCE	NTRATION ua/Ka)	UNI UG/	
TAUTIDET TIO	Journa.		<u> </u>		~9,1\9/ 		<u>-</u>
CAS NUM	BER	СОМРО	UND 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	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		10 4 114 1	not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine		1 1 1 1 1	not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane		i dia	not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	_7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline		. ,,	not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene		~ 4 4	not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name bna01078.d

Sample Name

4003.02

Operator

Skelton

Misc Info

Field Blank

Date Acquired

31 Oct 1998 5:56 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	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	e2 .	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	1	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 COMPOUNDS

Lab Name:	FMETL			Lab Code	13461		Field Bl	ank
Project	980932	Case No.: 40	003	Location	n <u>UST</u>	_ SE	DG No.:	
Matrix: (soil/	water)	WATER		La	b Sample	ID:	4003.02	
Sample wt/vo	ol:	1000 (g/ml) M	1L	La	b File ID:		BNA01078.D	· · · · ·
Level: (low/r	med)	LOW		Da	te Receiv	/ed:	10/26/98	
% Moisture:		decanted: (Y/N	۱) <u> </u>	N Da	te Extrac	ted:	10/27/98	
Concentrate	d Extract	Volume: <u>1000</u> (u	L)	Da	ite Analyz	ed:	10/31/98	
Injection Vol	ume: <u>1.</u>	0 (uL)		Dil	ution Fac	tor:	1.0	
GPC Cleanu	p: (Y/N)	N pH: 7						
Number TICs	s found:	0		CONCENT		UNIT UG/L		
CAS NUME	3ER	COMPOUND NAME	<u> </u>		RT	ES	T. CONC.	Ø

- 1

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

Data File Name bna01079.d

Sample Name

Operator

Skelton

Misc Info

4003.03 Bldg 671 7.5'

Date Acquired

31 Oct 1998 6:38 am

Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	GW Çriteria	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE_	2.52 ug/I	4
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/I	,
62-53-3	Aniline			not detected	NLE	2.90 ug/I	,
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/I	
541-73-1	1,3-Dichlorobenzene	<u> </u>	,	not detected	600	2.65 ug/I	,
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/I	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/I	_
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/l	,
108-60-1	bis(2-chloroisopropyl)ether		,	not detected	300	2.96 ug/l	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/l	,
67-72-1	Hexachloroethane			not detected	10	2.59 ug/l	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/l	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/l	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/I	,
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	<u>. </u>
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/l	ال
77-47-4	Hexachlorocyclopentadiene		1.11.25 #	not detected	50	1.59 ug/l	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	L
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/	<u>L</u>
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/	L L
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/	ւ
83-32-9	Acenaphthene			not detected	400	1.98 ug/	L
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/	ւ [

Semi-Volatile Analysis Report Page 2

Data File Name bna01079.d

Sample Name

4003.03

Operator

5 ∄

Skelton

Misc Info

Bldg 671 7.5'

Date Acquired

31 Oct 1998 6:38 am

Sample Multiplier 1

121-14-2	2.4-Dinitrotoluene		not detected	10	1 22	ug/L	
84-66-2	Diethylphthalate		not detected	5000		ug/L ug/L	
86-73-7	Fluorene	 	not detected	300		ug/L	
7005-72-3	4-Chlorophenyl-phenylether	 	not detected	NLE		ug/L	
	4-Chlorophenyl-phenylether 4-Nitroaniline		not detected			ug/L	
100-01-6			not detected	NLE		ug/L	
86-30-6	n-Nitrosodiphenylamine	1		20			
103-33-3	Azobenzene	-	not detected	NLE		ug/L	
101-55-3	4-Bromophenyl-phenylether	 	not detected	NLE		ug/L	
118-74-1	Hexachlorobenzene	 	not detected	10		ug/L	
85-01-8	Phenanthrene		not detected	NLE		ug/L	
120-12-7	Anthracene	 	not detected	2000		ug/L	 .
84-74-2	Di-n-butylphthalate	***,	not detected	900		ug/L	
206-44-0	Fluoranthene		not detected	300	1.85	ug/L	
92-87-5	Benzidine		not detected	50		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	<u> </u>	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	1	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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

7	FN	ΤΔΤΙ	VFI Y	IDENTIFIED	COMPO	LINIDS
•	T-14	17711	VLLI	IDENTIFIED	COMPO	UNUS

FIELD ID

Lab Name:	FMETL		Lab Cod	le 13461		Bldg (671
Project	980932	Case No.: 4003	Locat	ion UST	s	DG No.:	
Matrix: (soil/	water)	WATER	L	.ab Samp	le ID:	4003.03	
Sample wt/v	ol:	1000 (g/mi) ML		.ab File II) :	BNA01079.D)
Level: (low/	med)	LOW	C	Date Rece	eived:	10/26/98	
% Moisture:		decanted: (Y/N)	N E	Date Extra	cted:	10/27/98	
Concentrate	d Extract	Volume: 1000 (uL)	[Date Analy	yzed:	10/31/98	
Injection Vol	ume: <u>1.</u>	<u>0</u> (uL)	[Dilution Fa	actor:	1.0	
GPC Cleanu	ıp: (Y/N)	NpH: 7					
			CONCE	NTRATIO	N UNI	TS:	
Number TIC	s found:	0	(ug/L or u	ıg/Kg)	UG/	<u>L</u>	,
CAS NUMI	BER	COMPOUND NAME		RT	ES	ST. CONC.	Q

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	<u>/</u>
5.	Chain of Custody submitted	<u> </u>
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	7

*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

FORT MONMOUTH ENVIRONMENTAL

TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732)632-6224 FAX: (732)632-3484

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. 671

Field Location No. &	Laboratory	Matrix	Date and Time	Date Received
Location	Sample ID#		Of Collection	
Trip Blank	4086.01	Aqueous	14-Nov-98	11/25/98
Field Blank	4086.02	Aqueous	25-Nov-98 09:10	11/25/98
Bldg. 671 7.5-10.5°	4086.03	Aqueous	25-Nov-98 10:25	11/25/98
Field Dup.	4086.04	Aqueous	25-Nov-98	11/25/98

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

ENCLOSURE: CHAIN OF CUSTODY FIELD DOCUMENTATION RESULTS

-1

Daniel Wright/Date

Laboratory Director

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CHAIN OF CUSTODY



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. APPC	YBY / WERSAR	Project No:				Analysis Parameters						Comments:		
Phone #: X26	224	Location: BCO6, 671												
()DERA (V)OMA ()Other:	.				V	B							
Samplers Name / Cor	mpany: Mann Loura	T.V.S. PWS	07	Sample	#	V04+	2+							.1
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	15	15							Remarks / Preservation Method
4081,	TRIP BLANK	11-25-98		AQ.	2	×								Hei
2	FIELD BLANK		0915	11	3	X	ኣ							HCC/#4°C
3	BLDG. 671- 7.5-10.5'		0939	11	3	×	ス							N
4	FIELD DUP. X			11	3	X	X							(1
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Relinquished by (signatu	11-24-94 1260	Received by			Relin	quished	by (sig	gnature):	Date/	Time:	Recei	ved by	(signature):
Relinquished by (signatu		Received by	.,		Relin	elinquished by (signature):):	Date/Time: Received by		ved by	(signature):	
1 /	Reduced, (_)Standard, (_)Screen			ro		Rema	rks:							
Turnaround time: (A)Star	ndard 4 wks, (_)Rush Day	o, ()MOME VI	uuII	ı.										

FIELD DOCUMENTATION

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

FOR BLDG. # 671

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

Objective:

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

1. Methods

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

2. Installation

- A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 12 feet. The water table was at 7.5 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 6.5 11.5 feet. Riser casing from 6.5 +1 feet.

3. Purging

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

4. Sampling

A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field

Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

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

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

5. Quality Assurance/Quality Control

A. Decontamination

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

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

B. Field Blanks

- 1 Field blank was taken at this site.
- C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif. The sample bottles are certified clean and are sealed upon delivery.
- D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura

Employer: U.S. Army, Fort Monmouth

Phone Number: [732] 532-8990

NJDEP License #: J-1486

METHODOLOGY SUMMARY

Methodology Summary

EPA Method 624 Gas Chromatographic Determination of Volatiles in Water

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

EPA Method 3510/8270 Gas Chromatographic Determination of Semi-volatiles in Water

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

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
1.	Chromatograms labo	eled/Compounds identified	
		and method blanks)	_ γ೬ಽ
2.	Retention times for o	chromatograms provided	yes
3.	GC/MS Tune Specif	ications .	
	a.	BFB Meet Criteria	<u>yes</u>
	b.	DFTPP Meet Criteria	<u>yes</u>
4.		quency – Performed every 24 hours for 600	
	series and 12 hours	for 8000 series	yes
5.		– Initial Calibration performed before sample ing calibration performed within 24 hours of	
	sample analysis for	500 series and 12 hours for 8000 series	<u>yes</u>
6.	GC/MS Calibration	requirements	
	a.	Calibration Check Compounds Meet Criteria	yes
	ь.	System Performance Check Compounds Meet Criteria	<u>jes</u>
7.	Blank Contamination	n - If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction	
	c.	Acid Fraction	
8.	Surrogate Recoverie	s Meet Criteria	NB
	If not met, list the outside the acce	nose compounds and their recoveries, which fall ptable range:	
	a.	VOA Fraction	
	b.	B/N Fraction Field blank double Spiked	
	c.	Acid Fraction NA	
	If not met, were as "estimated"?	the calculations checked and the results qualified	<u>yes</u>
9.		Spike Duplicate Recoveries Meet Criteria e compounds and their recoveries, which fall le range)	yes
	a.	VOA Fraction	
	b .	B/N Fraction	
	c.	Acid Fraction NA	

= #

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

		Indicate Yes, No, N/A
10.	Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range)	yes
	a. VOA Fraction	
	b. B/N Fraction	
	c. Acid Fraction	
11.	Extraction Holding Time Met	<u>yes</u>
	If not met, list the number of days exceeded for each sample:	·
12.	Analysis Holding Time Met If not met, list the number of days exceeded for each sample:	yes
Add Fi	itional Comments: cld dup performed on 4086.03 Bldq. 671 75-10.5	·
Labo	oratory Manager: Date: 12-10-94	

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 4086

= 1

Site: Bldg 671

		Date	Hold Time		
Da	te Sampled	11/25/98	NA		
Re	ceipt/Refrigeration	11/25/98	NA		
Ex	tractions				
1.	Base Neutrals	11/30/98	14 days		
An	alyses				
1. 2.	Volatile Organics Base Neutrals	12/01/98 12/02,03/98	14 days 40 days		

VOLATILE ORGANICS

= 1

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

Definition of Qualifiers

MDL: Method Detection Limit

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

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

Data File Nam vb02266.d

Sample Name

Vblk69

Operator Skelton

Field ID

Vblk69

1

Date Acquired 1 Dec 98 12:16 pm

Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein Acrolein	10,11	1 1		detected	50	1.85 ug/L	
107028	Acrylonitrile				detected	50	2.78 ug/L	
75650	tert-Butyl alcohol				detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether				detected	nle	0.16 ug/L	
108203	Di-isopropyl ether				detected	nle	0.25 ug/L	
108203	Dichlorodifluoromethan				detected	nle	1.68 ug/L	
74-87-3	Chloromethane		-		detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride				detected	5	1.06 ug/L	,
74-83-9	Bromomethane		<u> </u>		detected	10	1.10 ug/L	
75-00-3	Chloroethane				detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane		 		detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene		 		detected	2	0.24 ug/L	
67-64-1	Acetone				detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide	 -			detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride				detected	2	0.24 ug/L	
	trans-1,2-Dichloroethene				detected	100	0.16 ug/L	
156-60-5	1,1-Dichloroethane		-		detected	70	0.12 ug/L	
75-35-3			-		detected	nle	0.78 ug/L	
108-05-4	Vinyl Acetate 2-Butanone	_			detected	300	0.62 ug/L	
78-93-3	cis-1,2-Dichloroethene		 		detected	10	0.17 ug/I	1
(7.66.2	Chloroform		 		detected	6	0.30 ug/I	
67-66-3	1.1.1-Trichloroethane		 		detected	30	0.23 ug/I	
75-55-6	Carbon Tetrachloride				detected	2	0.47 ug/I	
56-23-5					detected	1	0.23 ug/I	
71-43-2	Benzene 1,2-Dichloroethane		 		detected	2	0.18 ug/I	
107-06-2					detected	1	0.23 ug/I	
79-01-6	Trichloroethene		 		detected	i	0.40 ug/I	
78-87-5	1,2-Dichloropropane Bromodichloromethane				detected	1	0.55 ug/I	
75-27-4					detected	nle	0.65 ug/I	
110-75-8	2-Chloroethyl vinyl ethe				detected	nle	0.69 ug/I	
10061-01-5	cis-1,3-Dichloropropene		<u> </u>		detected	400	0.59 ug/I	
108-10-1	4-Methyl-2-Pentanone		 		detected	1000	0.37 ug/l	
108-88-3	Toluene				detected	nle	0.87 ug/l	
10061-02-6	trans-1,3-Dichloroprope		<u> </u>		detected	3	0.48 ug/l	
79-00-5	1,1,2-Trichloroethane				detected	1	0.32 ug/l	
127-18-4	Tetrachloroethene	 	 		detected	nle	0.32 ug/l	
591-78-6	2-Hexanone				detected	10	0.71 ug/l	
126-48-1	Dibromochloromethane		ļ		detected	4	0.39 ug/l	
108-90-7	Chlorobenzene		 		detected	700	0.55 ug/l	_
100-41-4	Ethylbenzene		 		t detected	nle	1.14 ug/	
1330-20-7	m+p-Xylenes	<u> </u>	 				0.62 ug/	_
1330-20-7	o-Xylene	<u> </u>	 		t detected t detected	nle	0.56 ug/	
100-42-5	Styrene		 			100	0.70 ug/	
75-25-2	Bromoform		 		t detected	4		
79-34-5	1,1,2,2-Tetrachloroethan	ļ			t detected	2	0.47 ug/	
541-73-1	1,3-Dichlorobenzene	_	 		t detected	600	0.55 ug/	
106-46-7	1,4-Dichlorobenzene		<u> </u>		t detected_	75	0.57 ug/	
95-50-1	1.2-Dichlorobenzene	ı	1	l no	t detected	600	0.64 ug/	니

* 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

_	• • • •					
TE	NT.	ATI	VELY	IDEN	NTIFIED	COMPOUNDS

F	IELD	ID
_		_

Lab Name:	FMETL		Project	980932		Vbik6	9
		Case No.: 4086			L oc	ation UST	
NJDEP#	13461	Case No.: 4000				<u> </u>	
Matrix: (soil/	water)	WATER _	L	_ab Sample	ID: <u>V</u>	/blk69	
Sample wt/v	ol:	5.0 (g/ml) ML	L	_ab File ID:	V	/B02266.D	
Level: (low/r	med)	LOW	[Date Receiv	/ed: <u>1</u>	1/25/98	
% Moisture:	not dec.		Ι	Date Analyz	zed: <u>1</u>	2/01/98	
GC Column:	nn: HP5MS ID: 0.25 (mm) Dilution Factor: 1.0						
Soil Extract	Volume:	(uL)	•	Soil Aliquot	Volum	ne:	(uL)
			CONCENTR	ATION UN	ITS:		
Number TIC:	s found:	0	(ug/L or ug/K	(g) UG	/L		
							
CAS NO.		COMPOUND NAME		RT	EST	CONC.	Q

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

Data File Nam vb02270.d

Sample Name

4086.01

Operator Skelton
Date Acquired 1 Dec 98 3:30 pm

Field ID

Trip Blank

Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL		Qualifier
107028	Acrolein			not	detected	50	1.85	ug/L	
107131	Acrylonitrile			not	detected	50	2.78	ug/L	
75650	tert-Butyl alcohol			not	detected	nle	8.52	ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	nle	0.16	ug/L	
108203	Di-isopropyl ether			not	detected	nle	0.25		
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	
75-69-4	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		i	not	detected	700	1.36		
75-15-0	Carbon Disulfide				detected	nle	0.46		
75-09-2	Methylene Chloride				detected	2	0.24		
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.16		
75-35-3	1,1-Dichloroethane				detected	70	0.12		
108-05-4	Vinyl Acetate			not	detected	nle	0.78		
78-93-3	2-Butanone				detected	300	0.62		
76-93-3	cis-1,2-Dichloroethene				detected	10	0.17		
67-66-3	Chloroform				detected	6	0.30		
75-55-6	1.1.1-Trichloroethane				detected	30	0.23		
56-23-5	Carbon Tetrachloride		 		detected	2	0.47		
71-43-2	Benzene		 		detected	1	0.23		
107-06-2	1,2-Dichloroethane		 		detected	2	0.18		
79-01-6	Trichloroethene		 		detected	1	0.23		
78-87-5	1,2-Dichloropropane				detected	1	0.40		
75-27-4	Bromodichloromethane				detected	1	0.55		
110-75-8	2-Chloroethyl vinyl ethe	 	 		detected	nle	0.65	_	
	cis-1,3-Dichloropropene				detected	nle	0.69		T
108-10-1	4-Methyl-2-Pentanone				detected	400	0.59		7
108-88-3	Toluene		<u> </u>		detected	1000	0.37		Υ
	trans-1,3-Dichloroprope	-	 		detected	nle	0.87		
79-00-5	1,1,2-Trichloroethane				detected	3	0.48		
127-18-4	Tetrachloroethene		 		detected	1	0.32		
591-78-6	2-Hexanone	 	 		detected	nle	0.71		
	Dibromochloromethane		 		detected	10	0.86		
	Chlorobenzene	┝┈─	 		detected	4	0.39		
108-90-7		 	 		detected	700	0.65		
100-41-4	Ethylbenzene		 		detected	nle	1.14		
1330-20-7	m+p-Xylenes	 	 	·	detected	nle	0.62		
1330-20-7	o-Xylene	 	 		detected	100	0.56		
100-42-5	Styrene		-		detected	4	0.70		
75-25-2	Bromoform	<u> </u>	 		detected	2		_	
79-34-5	1,1,2,2-Tetrachloroethan	 	 		detected		0.47 0.55		
541-73-1	1,3-Dichlorobenzene		-			600	0.55		
106-46-7	1,4-Dichlorobenzene	-	 		detected	75	1		
95-50-1	1,2-Dichlorobenzene	L	<u> </u>	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

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD I)
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Lab Name:	FMETL			Project	980932		Tr	ip Blan	ık
NJDEP#	13461	Cas	se No.: 4086	SDG N	10	Lo	cation	UST	
Matrix: (soil/	water)	WATER	_	La	ab Sample	D:	4086.01	<u> </u>	
Sample wt/ve	ol:	5.0	(g/ml) ML	L:	ab File ID:		VB0227	'0.D	_
Level: (low/r	ned)	LOW	_	D	ate Receiv	ved:	11/25/9	8	_
% Moisture:	not dec.			D	ate Analyz	zed:	12/01/9	8	_
GC Column:	HP5M	S ID: 0.2	25 (mm)	D	ilution Fac	tor:	1.0		_
Soil Extract \	√olume:		(uL)	s	oil Aliquot	Volu	ne:		(uL)
Number TICs	s found:	0	-	CONCENTRA (ug/L or ug/Ko					
CAS NO.		COMPOL	ND NAME		RT	ES'	T. CON	C.	Q

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

Data File Nam vb02271.d
Operator Skelton

Sample Name Field ID 4086.02 Field Blank

Date Acquired 1 Dec 98 4:15 pm

Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not d	etected	50	1.85 ug/L	
107131	Acrylonitrile				etected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not d	etected	nle	8.52 ug/L	
	Methyl-tert-Butyl ether			not d	etected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not d	etected	nle	0.25 ug/L	
100203	Dichlorodifluoromethan			not d	etected	nle	1.68 ug/L	
74-87-3	Chloromethane			not d	etected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not d	etected	5	1.06 ug/L	
74-83-9	Bromomethane			not d	etected	10	1.10 ug/L	
75-00-3	Chloroethane			not d	etected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not d	etected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene				etected	2	0.24 ug/L	
67-64-1	Acetone			not d	etected	700	1.36 ug/L	-
75-15-0	Carbon Disulfide				etected	nle	0.46 ug/L	
75-09-2	Methylene Chloride				etected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene		 		etected	100	0.16 ug/L	-
	1,1-Dichloroethane		 		etected	70	0.12 ug/L	
75-35-3	Vinyl Acetate		 		letected	nle	0.78 ug/L	
108-05-4					letected	300	0.62 ug/L	
78-93-3	2-Butanone				letected	10	0.17 ug/L	
67.663	cis-1,2-Dichloroethene		 		letected	6	0.30 ug/L	
67-66-3	Chloroform		 		letected	30	0.23 ug/L	
75-55-6	1,1,1-Trichloroethane		 		letected	2	0.47 ug/L	
56-23-5	Carbon Tetrachloride		 		letected	1	0.47 ug/L 0.23 ug/L	
71-43-2	Benzene		 		letected	2	0.23 ug/L	
107-06-2	1,2-Dichloroethane		 		letected	1	0.13 ug/L	
79-01-6	Trichloroethene				letected	1	0.40 ug/L	
78-87-5	1,2-Dichloropropane		 		letected	1 1	0.40 ug/L	
75-27-4	Bromodichloromethane		 		letected	nle	0.65 ug/L	
110-75-8	2-Chloroethyl vinyl ethe		 		letected	nle	0.69 ug/L	
10061-01-5	cis-1,3-Dichloropropene				letected	400	0.59 ug/L	
108-10-1	4-Methyl-2-Pentanone		├		letected	1000	0.37 ug/L	
108-88-3	Toluene		<u> </u>				0.37 ug/L 0.87 ug/L	
	trans-1,3-Dichloroprope		 		letected	nle 3	0.87 ug/L 0.48 ug/L	-
79-00-5	1,1,2-Trichloroethane				letected		0.48 ug/L 0.32 ug/L	
127-18-4	Tetrachloroethene				letected	1		
591-78-6	2-Hexanone		 		letected	nle	0.71 ug/L	
	Dibromochloromethane		 		letected	10	0.86 ug/L	
108-90-7	Chlorobenzene		 		letected	4	0.39 ug/L	-
100-41-4	Ethylbenzene				letected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes		 		letected	nle	1.14 ug/L	r
1330-20-7	o-Xylene		ļ		letected	nle	0.62_ug/L	
100-42-5	Styrene				letected	100	0.56 ug/L	
75-25-2	Bromoform				letected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethan				letected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene				letected	600	0.55 ug/L	T
106-46-7	1,4-Dichlorobenzene				letected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not o	letected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit NLE = No Limit Established

R.T. = Retention Time

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Lab Name:	FMETL			Project	980932		Fie	eld Blar	nk
NJDEP#	13461	Са	se No.: 4086	SDG N	0	Loc	ation	UST	
Matrix: (soil/	water)	WATER	_	La	b Sample	- ID: 4	1086.02	!	
Sample wt/v	ol:	5.0	(g/ml) ML	La	b File ID:	<u>\</u>	/B0227	1.D	_
Level: (low/	med)	LOW	_	Da	ate Receiv	/ed: <u>1</u>	1/25/98	8	.
% Moisture:	not dec.			Da	ate Analyz	ed: 1	2/01/9	8	
GC Column:	HP5M	S_ ID: 0.:	25 (mm)	Di	lution Fac	tor: 1	.0		_
Soil Extract	Volume:		_ (uL)	Sc	il Aliquot	Volun	ne:		_ (uL)
Number TIC	s found:	0		CONCENTRA (ug/L or ug/Kg)					
CAS NO.		COMPOL	JND NAME		RT	EST	. CON	c.	Q

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

Data File Nam vb02272.d

Sample Name

4086.03 Bldg671

Operator Skelton
Date Acquired 1 Dec 98 5:00 pm

Field ID Sample Multiplier

DIU;

CYCH	Company d Norma	R.T.	Response	Result	Regulatory Level (ug/I)*	MDL	Oualifier
CAS#	Compound Name Acrolein	K. I.	Response	not detected	50	1.85 ug/L	Quinties
107028		-		not detected	50	2.78 ug/L	
107131	Acrylonitrile			not detected	nle	8.52 ug/L	
75650	tert-Butyl alcohol			not detected	nle	0.16 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.15 ug/L	
108203	Di-isopropyl ether			not detected	nle	1.68 ug/L	
71.07.3	Dichlorodifluoromethan		-	not detected	30	1.16 ug/L	
74-87-3	Chloromethane			not detected	5	1.16 ug/L	
75-01-4	Vinyl Chloride		 	not detected	10	1.10 ug/L	
74-83-9	Bromomethane			not detected	nle	1.10 ug/L 1.01 ug/L	
75-00-3	Chloroethane						
75-69-4	Trichlorofluoromethane		<u> </u>	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	<u> </u>
108-05-4	Vinyl Acetate		ļ	not detected	nle	0.78 ug/L	
78-93-3	2-Butanone		ļ .	not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene		 	not detected	10	0.17 ug/L	<u></u>
67-66-3	Chloroform_			not detected	6	0.30 ug/L	<u> </u>
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride		<u> </u>	not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected_	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane		<u> </u>	not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	<u> </u>
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		<u> </u>	not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloroprope			not_detected_	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone		<u> </u>	not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane		<u> </u>	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		T	not detected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Lab Name:	FMETL		Project	980932	!	Bldg6	571
NJDEP#	13461	Case No.: 4086	SDG N	10	Lo	ocation US	Γ
Matrix: (soil/	water)	WATER	L	ab Sample	e ID:	4086.03	
Sample wt/v	ol:	5.0 (g/ml) ML	L:	ab File ID:	:	VB02272.D	
Level: (low/	med)	LOW	D	ate Recei	ved:	11/25/98	
% Moisture:	not dec.		D	ate Analya	zed:	12/01/98	
GC Column:	HP5M	S ID: 0.25 (mm)	D	ilution Fac	ctor:	1.0	
Soil Extract Volume		(uL)	s	oil Aliquot	Volu	me:	(uL)
		C	ONCENTRA	TION UN	ITS:		
Number TIC	s found:	0(i	ug/L or ug/Kg	ı) <u>UG</u>	/L		,
CAS NO.		COMPOUND NAME		RT	ES	T. CONC.	Q

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

Data File Nam vb02273.d Skelton

Sample Name

4086.04 Field Dup

Operator Date Acquired 1 Dec 98 5:46 pm Field ID Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not	detected	50	1.85 ug/L	
107131	Acrylonitrile			not	detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not	detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	nle	0.16 ug/L	
108203	Di-isopropyl ether				detected	nle	0.25 ug/L	
108203	Dichlorodifluoromethan				detected	nle	1.68 ug/L	
74-87-3	Chloromethane				detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not	detected	5	1.06 ug/L	
74-83-9	Bromomethane				detected	10	1.10 ug/L	
75-00-3	Chloroethane			not	detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane				detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene				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				detected	300	0.62 ug/L	
10-23-3	cis-1,2-Dichloroethene				detected	10	0.17 ug/L	
67-66-3	Chloroform				detected	6	0.30 ug/L	
75-55-6	1.1.1-Trichloroethane				detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride				detected	2	0.47 ug/L	
71-43-2	Benzene				detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane				detected	2	0.18 ug/L	
79-01-6	Trichloroethene				detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane				detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane		<u> </u>		detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ethe				detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene				detected	nle	0.69 ug/L	1
108-10-1	4-Methyl-2-Pentanone				detected	400	0.59 ug/L	
108-88-3	Toluene				detected	1000	0.37 ug/L	
	trans-1,3-Dichloroprope				detected	nle	0.87 ug/L	
79-00-5	1.1.2-Trichloroethane				detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene				detected	1	0.32 ug/L	
591-78-6	2-Hexanone				detected	nle	0.71 ug/I	
126-48-1	Dibromochloromethane				detected	10	0.86 ug/I	
108-90-7	Chlorobenzene				detected	4	0.39 ug/L	
100-41-4	Ethylbenzene				detected	700	0.65 ug/I	
1330-20-7	m+p-Xylenes				detected	nle	1.14 ug/I	
	o-Xylenes	-	 		detected	nle	0.62 ug/I	
1330-20-7		 	┝──┤		detected	100	0.56 ug/I	
100-42-5	Styrene Bromoform	<u> </u>			detected	4	0.70 ug/I	7
75-25-2			 		detected	2	0.47 ug/I	
79-34-5	1,1,2,2-Tetrachloroethan		 		detected	600	0.47 ug/I	
541-73-1	1,3-Dichlorobenzene		 		detected	75	0.55 ug/I	
106-46-7	1,4-Dichlorobenzene	 			detected		0.57 ug/I	•
95 - 50-1	1,2-Dichlorobenzene	L	CDOLL		detected	600	0.04 ug/1	

* 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

F	IEI	_D	ID
-	IEI	-D	ID

Lab Name:	FMETL.			Project	980932		Field I	Dup
NJDEP#	13461	Cas	se No.: 4086	SDG	No	Loc	ation US	<u> </u>
Matrix: (soil/w	vater)	WATER	_	1	_ab Sample	e ID: 4	086.04	
Sample wt/vo	ol:	5.0	(g/ml) ML	i	_ab File ID:	<u> </u>	B02273.D	
Level: (low/m	ned)	LOW	_	ι	Date Recei	ved: <u>1</u>	1/25/98	
% Moisture: n	ot dec.			[Date Analyz	zed: <u>1</u>	2/01/98	
GC Column:	HP5M	S ID: 0.2	25 (mm)	Ι	Dilution Fac	ctor: 1	.0	
Soil Extract V	olume:		_ (uL)	5	Soil Aliquot	Volum	ie:	(uL)
Number TICs	found:	0	_	CONCENTR (ug/L or ug/K				
CAS NO.		СОМРОИ	ND NAME		RT	EST	. CONC.	Q

BASE NEUTRAL

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

Data File Name BNA01477.D

Sample Name

Sblk172

Operator

Skelton

Misc Info

Sblk172 A 98113

Date Acquired

2 Dec 1998 3:32 pm

Sample Multiplier 1

110-86-1 62-75-9 62-53-3 111-44-4 541-73-1	Pyridine N-nitroso-dimethylamine				(ug/l)*	MDL		Qualifie
62-53-3 111-44-4	N-nitroso-dimethylamine		1	not detected	NLE	2.52	ug/L	<u> </u>
111-44-4				not detected	20		ug/L	
	Aniline			not detected	NLE		ug/L	
541-73-1	bis(2-Chloroethyl)ether			not detected	10		ug/L	
	1,3-Dichlorobenzene			not detected	600	1——	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75		ug/L	
100-51-6	Benzyl alcohol			not detected	NLE		ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600		_	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300		ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20		ug/L	
67-72-1	Hexachloroethane			not detected	10		ug/L	
98-95-3	Nitrobenzene			not detected	10		ug/L	
78-59-1	Isophorone			not detected	100		ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE		ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9		$\overline{}$	
91-20-3	Naphthalene			not detected			_	
106-47-8	4-Chloroaniline	\Box		not detected	NLE		ug/L	
87-68-3	Hexachlorobutadiene	┌─┤		not detected	NLE		ug/L	
91-57-6	2-Methylnaphthalene	1			 	0.64		
77-47-4	Hexachlorocyclopentadiene	1		not detected	NLE		ug/L	
91-58-7	2-Chloronaphthalene	 		not detected	50		ug/L	
88-74-4	2-Nitroaniline	 		not detected	NLE	2.15		
131-11-3		 		not detected	NLE		ug/L	
208-96-8	Dimethylphthalate	├─┤		not detected	7000	2.74	ug/L	
	Acenaphthylene	 		not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene	╀		not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline	 		not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran	 		not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate	\longmapsto		not detected	5000	1.68	ug/L	
	Fluorene			not detected	300	1.93	ug/L	
	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
	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		T	not detected	NLE	1.67		· · · · ·
	Anthracene			not detected	2000	1.79	_	
84-74-2	Di-n-butylphthalate			not detected	900		ug/L	
206-44-0	Fluoranthene			not detected	300		ug/L	
92-87-5	Benzidine			not detected	50	4.11	-	•
129-00-0	Ругеле			not detected	200	1.02	_	
85-68-7	Butylbenzylphthalate			not detected	100	1.15		
56-55-3	Benzo[a]anthracene			not detected	100	1.57		
91-94-1	3,3'-Dichlorobenzidine	一		not detected	60	2.28		
	Chrysene	\neg		not detected	20			
	bis(2-Ethylhexyl)phthalate			not detected		2.32 1		
	Di-n-octylphthalate	$\neg \dagger$			30	1.29	_	
117-81-7	Oi-m-octylphilialaie :			not_detected	100	1.30 t		
117-81-7 [117-84-0]		- 1						
117-81-7 I 117-84-0 I 205-99-2 I	Benzo[b]fluoranthene	-+		not detected	10		ug/L	
117-81-7 1 117-84-0 1 205-99-2 1 207-08-9 1	Benzo[b]fluoranthene Benzo[k]fluoranthene	\dashv		not detected	2	1.57 ı	ug/L	
117-81-7 1 117-84-0 1 205-99-2 1 207-08-9 1 50-32-8 1	Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene			not detected	2 20	1.57 t	ug/L ug/L	
117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	Benzo[b]fluoranthene Benzo[k]fluoranthene			not detected	2	1.57 ı	ug/L ug/L ug/L	

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

Qualifiers

E = Value exceded linear range

D = Value from dilution

- j

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

		I CIVII	AUAFFI IDENIIL		VIFUU	פטאו			
Lab Name:	FMETL			Lab (Code	13461		Sblk	172 ———
Project	980932		Case No.: 4086	Lo	cation	UST	S	DG No.:	
Matrix: (soil/	water)	WATER	<u> </u>		Lab	Sample	ID:	Sblk172	
Sample wt/ve	ol:	1000	(g/ml) ML		Lab	File ID:		BNA01477.	D
Level: (low/r	ned)	LOW			Date	e Receiv	ed:	11/25/98	
% Moisture:		d	ecanted: (Y/N)	N	Date	e Extrac	ted:	11/30/98	
Concentrated	d Extract	Volume:	1000 (uL)		Date	e Analyz	ed:	12/02/98	
Injection Volu	ume: <u>1.0</u>	0 (uL)		Dilution Factor: 1				1.0	
GPC Cleanu	p: (Y/N)	N	pH: <u>7</u>						
				CONC	ENTR	RATION	UNIT	ΓS:	
Number TICs	s found:	0		(ug/L	or ug/k	(g)	UG/I		
CAS NUME	BER	COMP	OUND NAME			RT	ES	T. CONC.	Q

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

Data File Name bna01489.d

Sample Name

4086.02 Field Blank

Operator

Skelton

Misc Info

Sample Multiplier 1 Date Acquired 3 Dec 1998 12:08 am

CAS#	Name	R.T.	Darmonea	Result		Regulatory Level	MDL		Qualifier
110-86-1	Pyridine	<u> </u>	Response	,	detected	(ug/l)* NLE		υg/L	Quantiter
62-75-9	N-nitroso-dimethylamine	Н			detected			_	
						20		ug/L	
62-53-3	Aniline Li-(2, Chl	-			detected	NLE		ug/L	
111-44-4	bis(2-Chloroethyl)ether				detected	10		ug/L	\vdash
541-73-1	1,3-Dichlorobenzene	├			detected	600		ug/L	
106-46-7	1,4-Dichlorobenzene				detected	75		ug/L	
100-51-6	Benzyl alcohol				detected	NLE		ug/L	-
95-50-1	1,2-Dichlorobenzene				detected	600		ug/L	
108-60-1	bis(2-chloroisopropyl)ether				detected	300		ug/L	
621-64-7	n-Nitroso-di-n-propylamine				detected	20	2.22	_	
67-72-1	Hexachloroethane				detected	10		ug/L	
98-95-3	Nitrobenzene			not	detected	10	2.45	ug/L	
78-59-1	Isophorone			not	detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not	detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not	detected	9	2,58	ug/L	
91-20-3	Naphthalene	igspace		not	detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not	detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not	detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not	detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not	detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not	detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not	detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not	detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not	detected	NLE	1.62		
83-32-9	Acenaphthene	i i		not	detected	400	1.98	ug/L	1
132-64-9	Dibenzofuran			not	detected	NLE	2.13	_	
121-14-2	2,4-Dinitrotoluene			not	detected	10	1.22	_	1
84-66-2	Diethylphthalate				detected	5000		ug/L	†
86-73-7	Fluorene				detected	300	1.93		†
7005-72-3	4-Chlorophenyl-phenylether				detected	NLE	1.53	-	t
100-01-6	4-Nitroaniline				detected	NLE		ug/L	
86-30-6	n-Nitrosodiphenylamine	<u> </u>			detected	20	1.73	_	
103-33-3	Azobenzene				detected	NLE	1.92	_	
			-					 ~	${f -}$
101-55-3	4-Bromophenyl-phenylether	1			detected	NLE		ug/L	
118-74-1	Hexachlorobenzene				detected	10		ug/L	┼
85-01-8	Phenanthrene	\vdash			detected	NLE	1.67	-	₩
120-12-7	Anthracene	\vdash			detected	2000		ug/L	+
84-74-2	Di-n-butylphthalate	\vdash			detected	900	1.83	<u> </u>	┼
206-44-0	Fluoranthene	\vdash			detected	300	1.85	<u> </u>	├──
92-87-5	Benzidine	\vdash		not	detected	50	4.11	ug/L	
129-00-0	Pyrene				detected	200		ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100		ug/L	
56-55-3	Benzo[a]anthracene			not	detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine	$ldsymbol{ldsymbol{eta}}$		not	detected	60	2.28	ug/L	ļ
218-01-9	Chrysene	L		not	detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	24.51	150618	4,91	ug/L	30	1.29	ug/L	
117-84-0	Di-π-octylphthalate			not	detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene				detected	10		ug/L	1
207-08-9	Benzo[k]fluoranthene				detected	2	_	ug/L	1
50-32-8	Benzo[a]pyrene				detected	20		ug/L	_
193-39-5	Indeno[1,2,3-cd]pyrene				detected	20		ug/L	
		t							
53-70-3	Dibenz[a,h]anthracene		1	l not	detected	20	1 17	ug/L	

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

Qualifiers

E = Value exceded 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

						Field Bl	lank
Lab Name:	FMETL		Lab Cod	le <u>13461</u>			
Project	980932	Case No.: 4086	Locat	ion <u>UST</u>	_ SD	G No.:	
Matrix: (soil/	water)	WATER	L	_ab Sample	ID: 4	4086.02	
Sample wt/vo	ol:	1000 (g/ml) ML	l	ab File ID:	Ī	3NA01489.D	
Level: (low/r	med)	LOW		Date Receiv	red: _	11/25/98	
% Moisture:		decanted: (Y/N)	<u>N</u> [Date Extrac	ted: '	11/30/98	
Concentrated	d Extract	Volume: 1000 (uL)	[Date Analyz	ed: _	12/03/98	
Injection Volu	ume: 1.	0 (uL)	[Dilution Fac	tor: _	1.0	
GPC Cleanu	p: (Y/N)	N pH: 7					
Number TICs	s found:	0	CONCEN	NTRATION ug/Kg)	UNIT		
CAS NUME	BER	COMPOUND NAME		RT	EST	Г. CONC.	Q

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

Data File Name bna01490.d

Date Acquired

3 Dec 1998 12:53 am

Sample Name

Operator Skelton Misc Info

Sample Multiplier 1

4086.03

Bldg671

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifie
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20		ug/L	
62-53-3	Aniline			not detected	NLE	2.90		
111-44-4	bis(2-Chloroethyl)ether			not detected	10		ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600		ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	_	
100-51-6	Benzyl alcohol			not detected	NLE		ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600		ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96		
621-64-7	n-Nitroso-di-n-propylamine		_	not detected	20	1	ug/L	
67-72-1	Hexachloroethane			not detected	10		ug/L	
98-95-3	Nitrobenzene			not detected	10		_	
78-59-1	Isophorone	-		not detected			ug/L	
111-91-1	† - 				100		ug/L	
	bis(2-Chloroethoxy)methane	 		not detected	NLE		ug/L	
120-82-1	1,2,4-Trichlorobenzene	\vdash		not detected	9		ug/L	
91-20-3	Naphthalene	├─┤		not detected	NLE		ug/L	
106-47-8	4-Chloroaniline	 		not detected	NLE		ug/L	<u> </u>
87-68-3	Hexachlorobutadiene	├		not detected	1 1		ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE		ug/L	—
77-47-4	Hexachlorocyclopentadiene	\vdash		not detected	50		ug/L	├
91-58-7	2-Chloronaphthalene			not detected	NLE		ug/L	<u> </u>
88-74-4	2-Nitroaniline			not detected	NLE		ug/L	<u> </u>
131-11-3	Dimethylphthalate			not detected	7000		ug/L	!
208-96-8	Acenaphthylene	\vdash		not detected	NLE		ug/L	—
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline	 		not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene	\vdash		not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate	<u> </u>		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	<u> </u>
118-74-1	Hexachlorobenzene	L		not detected	10	1.88	ug/L	<u> </u>
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	_	
85-68-7	Butylbenzylphthalate			not detected	100	1,15		
56-55-3	Benzo[a]anthracene			not detected	10	1.57		
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28		
218-01-9	Chrysene			not detected	20	2.32		<u> </u>
117-81-7	bis(2-Ethylhexyl)phthalate		•••	not detected	30		ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30		
205-99-2	Benzo[b]fluoranthene	$\vdash \vdash$		not detected			ug/L ug/L	
207-08-9	T	\vdash			10			
50-32-8	Benzo[k]fluoranthene			not detected	2	1.57		
	Benzo[a]pyrene	┝┈┤	·	not detected	20	1.36		—
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		

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

Qualifiers

E = Value exceded linear range

MDL = Method Detection Limit

D = Value from dilution

NLE = No Limit Established

B = Compound in related blank

R.T. = Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET FIELD ID TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:	FMETL			Lab Code	13461		Bldg671
Project	980932	Ca	se No.: 4086	Location	UST	_ SD	OG No.:
Matrix: (soil/v	water)	WATER	_	Lat	Sample	D: 4	4086.03
Sample wt/vo	ol:	1000	(g/ml) ML	Lat	File ID:	<u> </u>	BNA01490.D
Level: (low/n	ned)	LOW	_	Dat	te Receiv	ved:	11/25/98
% Moisture:		dec	canted: (Y/N)	N Dat	te Extrac	ted:	11/30/98
Concentrated	d Extract	Volume:	1000 (uL)	Dat	te Analyz	zed: _	12/03/98
Injection Volu	ume: <u>1.0</u>) (uL)		Dilu	ution Fac	tor:	1.0
GPC Cleanu	p: (Y/N)	N	pH: <u>7</u>	_			
		•					
				CONCENT	RATION	UNIT	S:
Number TICs	s found:	0		(ug/L or ug/	'Kg)	UG/L	

COMPOUND NAME

CAS NUMBER

EST. CONC.

Q

RT

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

Data File Name BNA01491.D

Sample Name Misc Info

4086.04 Field Dup

Operator Date Acquired Skelton 3 Dec 1998 1:37 am

Sample Multiplier 1

C15#	Mana	рт	Despesses	Result	Regulatory Level	MDL	Oualifier
CAS#	Name In addition	R.T.	Response		(ug/l)^		Quanner
110-86-1	Pyridine	┥		not detected	NLE	2.52 ug/L	1
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	<u> </u>
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether	+-		not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine	-		not detected	20	2.22 ug/L	-
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	-
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
78-59-1	Isophorone			not detected	100	2.31 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	1
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	<u> </u>
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene	Ĭ		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	1		not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	1
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	1
83-32-9	Acenaphthene	1		not detected	400	1,98 ug/L	
132-64-9	Dibenzofuran	┪━┈		not detected	NLE	2.13 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	1
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	1
86-73-7	Fluorene	+-		not detected	300	1.93 ug/L	
		1-		not detected	NLE	1.53 ug/L	+
7005-72-3	4-Chlorophenyl-phenylether 4-Nitroaniline	+	 	not detected	1		+
100-01-6		+		·	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		<u> </u>	not detected	10	1.88 ug/L	_
85-01-8	Phenanthrene	+		not detected	NLE	1.67 ug/L	
120-12-7	Anthracene	+-	ļ	not detected	2000	1.79 ug/L	_
84-74-2	Di-n-butylphthalate	+	ļ	not detected	900	1.83 ug/L	
206-44-0	Fluoranthene	-		not detected	300	1.85 ug/L	
92-87-5	Benzidine	+-	<u> </u>	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	4
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/I	<u></u>
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	T		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/I	_
193-39-5	Indeno[1,2,3-cd]pyrene	1-	T	not detected	20	1.22 ug/I	
53-70-3	Dibenz[a,h]anthracene		 	not detected	20	3.12 ug/I	
33.10-3		-	-	not detected		J. 12 08/1	+

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

Qualifiers

E = Value exceded linear range

D = Value from dilution

Benzo[g,h,i]perylene

191-24-2

B = Compound in related blank

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLE

1.13 ug/L

NLE = No Limit Established

R.T. = Retention Time

not detected

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

EST. CONC.

Q

JN

Lab Name:	FMETL		Lab Code 13461	Field Dup
Project	980932	Case No.: 4086	Location UST SI	DG No.:
Matrix: (soil/	water)	WATER	Lab Sample ID:	4086.04
Sample wt/vo	ol:	1000 (g/ml) ML	Lab File ID:	BNA01491.D
Level: (low/r	med)	LOW	Date Received:	11/25/98
% Moisture:		decanted: (Y/N)	N Date Extracted:	11/30/98
Concentrated	d Extract	Volume: 1000 (uL)	Date Analyzed:	12/03/98
Injection Volu	ume: 1.0	0 (uL)	Dilution Factor:	1.0
GPC Cleanu	p: (Y/N)	N pH: 7		
Number TICs	s found:	1	CONCENTRATION UNIT	

RT

26.20

COMPOUND NAME

1. 000301-02-0 9-Octadecenamide, (Z)-

CAS NUMBER

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	<u>/</u>
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	/
Lat Dat	poratory Manager or Environmental Consultant's Signature	3

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

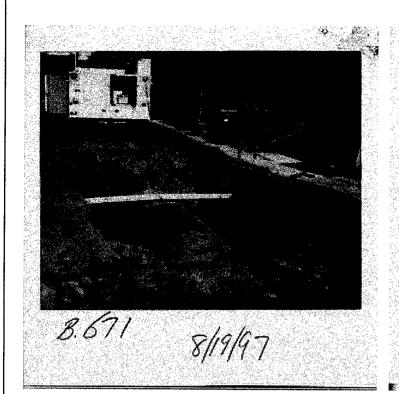
Laboratory Certification #13461

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.

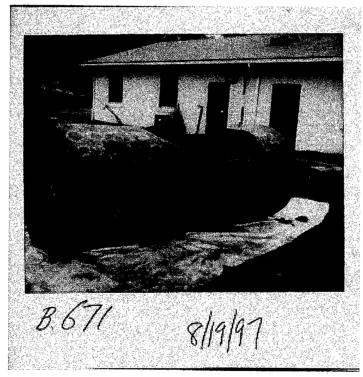
Daniel K. Wright Laboratory Manager

APPENDIX G PHOTOGRAPHS



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AUGUST 19, 1997 PHOTOGRAPHIC LOG

UST NO. 81533-103

Building 671A Main Post-West Fort Monmouth

VERSAR Engineers, Managers, Scientists & Planners Bristol, PA