

**United States Army**  
Fort Monmouth, New Jersey

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

***Building 748  
Main Post-West Area***

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**NJDEP UST Registration No. 81533-122  
DICAR No. 96-04-08-1344-01**

**June 2000**

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

**BUILDING 748**

**MAIN POST-WEST AREA  
NJDEP UST REGISTRATION NO. 81533-122  
DICAR NO. 96-04-08-1344-01**

**JUNE 2000**

**PREPARED FOR:**

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

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# EXECUTIVE SUMMARY

## UST Closure

On April 8, 1996, a fiberglass 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. 0081533-122 (Fort Monmouth ID No. 748), was located southeast of Building 748. UST No. 0081533-122 was a 550 gallon #2 fuel oil UST.

## Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes. No holes were noted in the UST. A slight sheen was observed on groundwater. The NJDEP hotline was notified and the case was assigned DICAR No. 96-04-08-1344-01. Samples contained TPHC concentration ranging from non-detect to 661.00 mg/kg. Groundwater was encountered at 5.0 feet below ground surface.

All post excavation soil samples collected from the UST excavation at Building 748 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 sheen on groundwater, two (2) groundwater samples were collected at Building 748. On March 25, 2000, and April 29, 2000, Building 748 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. 81533-122 at Building 748.

# 1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

## 1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-122, was closed at Building 748 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on April 8, 1996. 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 fiberglass 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-122 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. 81533-122 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. 81533-122 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 748 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-122 was located southeast of Building 748 and appurtenant copper piping ran approximately three (3) feet west from the excavation to Building 748. 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 748. 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. A geological map is provided on Figure 1A.

#### Regional Geology

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

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

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

#### Local Geology

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

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

### Hydrogeology

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

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

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

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

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

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

Building 748 is located approximately 400 feet north of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 748 is anticipated to be to the south.



### **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 15 gallons of liquid from the UST and its associated piping were transported by Lionetti Oil Recovery Company to Lionetti Oil Recovery Company, Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No holes or punctures were noted in the UST during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. A slight sheen was observed on groundwater. Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length. Groundwater was encountered at 5.0 feet below ground surface. 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. Please refer to Appendix D for the UST Disposal Certificate and Appendix G for photographs of the tank.

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

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

## **1.6 MANAGEMENT OF EXCAVATED SOILS**

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.

## 2.0 SITE INVESTIGATION ACTIVITIES

### 2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

- Project Manager: Eugene Lesinski  
Employer: U.S. Army, Fort Monmouth  
Phone Number: (732) 532-6224  
NJDEP Certification No.: 14537
- 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: Lorco Petroleum Services  
Contact Person: Guy Weck  
Phone Number: (908) 721-0900

### 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 and appurtenant piping, as well as the UST excavation sidewalls and bottom, did not exhibit any evidence of potential contamination. Groundwater was encountered at 5.0 feet bgs and sheen was observed.

## 2.3 SOIL SAMPLING

On April 8, 1996, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, D, E, and DUP C were collected from a total of five (5) locations of the UST excavation. Sidewall samples A, B, C, D, and DUP C were collected at a depth of 4.5 feet bgs. Piping sample E was collected at a depth of 1.5 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

DPW 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 March 25, 2000, and April 29, 2000, Building 748 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation*. Refer to Appendix F for the field sampling documentation.

## 3.0 CONCLUSIONS AND RECOMMENDATIONS

### 3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected on April 8, 1996 from a total of five (5) 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 April 8, 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 661.00 mg/kg

### 3.2 GROUNDWATER SAMPLING RESULTS

The sample collected from Building 748 on March 25, 2000, contained ethylbenzene at a concentration of 1.21 ug/l, o-xylene at 1.46 ug/l, 2-methylnaphthalene at 7.51 ug/l, acenaphthene at 3.18 ug/l, fluorene at 3.89 ug/l, n-nitrosodiphenylamine at 4.99 ug/l, phenanthrene at 3.02 ug/l, and pyrene at 1.84 ug/l. No other compounds were detected.

The sample collected from Building 748 on April 29, 2000, contained o-xylene at a concentration of 1.02 ug/l, naphthalene at 8.11 ug/l, 2-methylnaphthalene at 38.43 ug/l, acenaphthene at 4.66 ug/l, fluorene at 6.00 ug/l, n-nitrosodiphenylamine at 3.16 ug/l, and phenanthrene at 3.95 ug/l. No other compounds were detected.

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. Army Fort Monmouth, Fort Monmouth, New Jersey.

Groundwater samples collected on March 25, 2000, and April 29, 2000, were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

### 3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 748 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 748 on March 25, 2000, and April 29, 2000, groundwater quality at Building 748 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. 81533-122 at Building 748.

**TABLES**

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES  
BUILDING 748, MAIN POST-WEST AREA  
FORT MONMOUTH, NEW JERSEY

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Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	4/8/96	4/9/96	Soil	Post-Excavation	TPHC	418.1
B	4/8/96	4/9/96	Soil	Post-Excavation	TPHC	418.1
C	4/8/96	4/9/96	Soil	Post-Excavation	TPHC	418.1
D	4/8/96	4/9/96	Soil	Post-Excavation	TPHC	418.1
E	4/8/96	4/9/96	Soil	Post-Excavation	TPHC	418.1
DUP C	4/8/96	4/9/96	Soil	Post-excavation	TPHC	418.1

Note:

\* TPHC Total Petroleum Hydrocarbons



TABLE 1

SUMMARY OF SAMPLING ACTIVITIES  
 BUILDING 748, MAIN POST-WEST AREA  
 FORT MONMOUTH, NEW JERSEY

Page 2 of 2

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
5286.01	3/25/00	3/30/00	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
5386.03	4/29/00	5/3/00	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS  
 BUILDING 748, 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/4.5' =	2038.1	4/8/96	4/9/96	Total Solid	--	--	89.00 %	--	--
				TPHC	20	yes	ND	10,000	No
B/4.5' =	2038.2	4/8/96	4/9/96	Total Solid	--	--	89.00 %	--	--
				TPHC	20	Yes	73.00	10,000	No
C/4.5' =	2038.3	4/8/96	4/9/96	Total Solid	--	--	97.00 %	--	--
				TPHC	20	Yes	661.00	10,000	No
D/4.5' =	2038.4	4/8/96	4/9/96	Total Solid	--	--	89.00 %	--	--
				TPHC	20	yes	181.00	10,000	No
E/1.5' =	2038.5	4/8/96	4/9/96	Total Solid	--	--	88.00 %	--	--
				TPHC	20	yes	100.00	10,000	No
DUP C/4.5' =	2038.6	4/8/96	4/9/96	Total Solid	--	--	89.00 %	--	--
				TPHC	20	yes	ND	10,000	No

## Note:

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

Table 3  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 3/25/00Location: 748Lab Sample ID: 5286.01(748-1)

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

Table 3  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 3/25/00Location: 748Lab Sample ID: 5286.01(748-1)

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	1.21 ug/L	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	1.46 ug/L	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3  
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER  
 Date Sampled: 3/25/00 Location: 748 Lab Sample ID: 5286.01(748-1)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	1.83	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.91	Not Detected	--	20	no
62-53-3	Aniline	1.63	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	1.28	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	1.19	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	1.02	Not Detected	--	75	no
100-51-6	Benzyl alcohol	1.02	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	1.13	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	1.39	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	1.50	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.97	Not Detected	--	10	no
98-95-3	Nitrobenzene	1.01	Not Detected	--	10	no
78-59-1	Isophorone	1.21	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	1.75	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	1.22	Not Detected	--	9	no
91-20-3	Naphthalene	1.27	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	1.09	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.71	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	1.08	7.51 ug/L	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.32	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	1.01	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.79	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	1.52	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.96	Not Detected	--	nle	no

Table 3  
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER  
 Date Sampled: 3/25/00 Location: 748 Lab Sample ID: 5286.01(748-1)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.81	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.79	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.10	3.18 ug/L	--	400	no
132-64-9	Dibenzofuran	1.00	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.87	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.62	Not Detected	--	5000	no
86-73-7	Fluorene	0.99	3.89 ug/L	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.10	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	1.05	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.01	4.99 ug/L	--	20	no
103-33-3	Azobenzene	0.67	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.76	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.94	Not Detected	--	10	no
85-01-8	Phenanthrene	1.23	3.02 ug/L	--	nle	no
120-12-7	Anthracene	1.12	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.70	Not Detected	--	900	no
206-44-0	Fluoranthene	1.64	Not Detected	--	300	no
92-87-5	Benzidine	4.18	Not Detected	--	50	no
129-00-0	Pyrene	1.25	1.84 ug/L	--	200	no
85-68-7	Butylbenzylphthalate	1.05	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.19	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	1.75	Not Detected	--	60	no
218-01-9	Chrysene	1.38	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.74	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.44	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.25	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.29	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.05	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.83	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.64	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.84	Not Detected	--	nle	no

Table 3  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER  
 Date Sampled: 4/29/00 Location: 748 Lab Sample ID: 5386.03(748-1)

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

Table 3  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 4/29/00Location: 748Lab Sample ID: 5386.03(748-1)

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	1.02 ug/L	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no



Table 3  
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETLNJDEP # 13461Matrix: (soil/water) WATERDate Sampled: 4/29/00Location: 748Lab Sample ID: 5386.03(748-1)

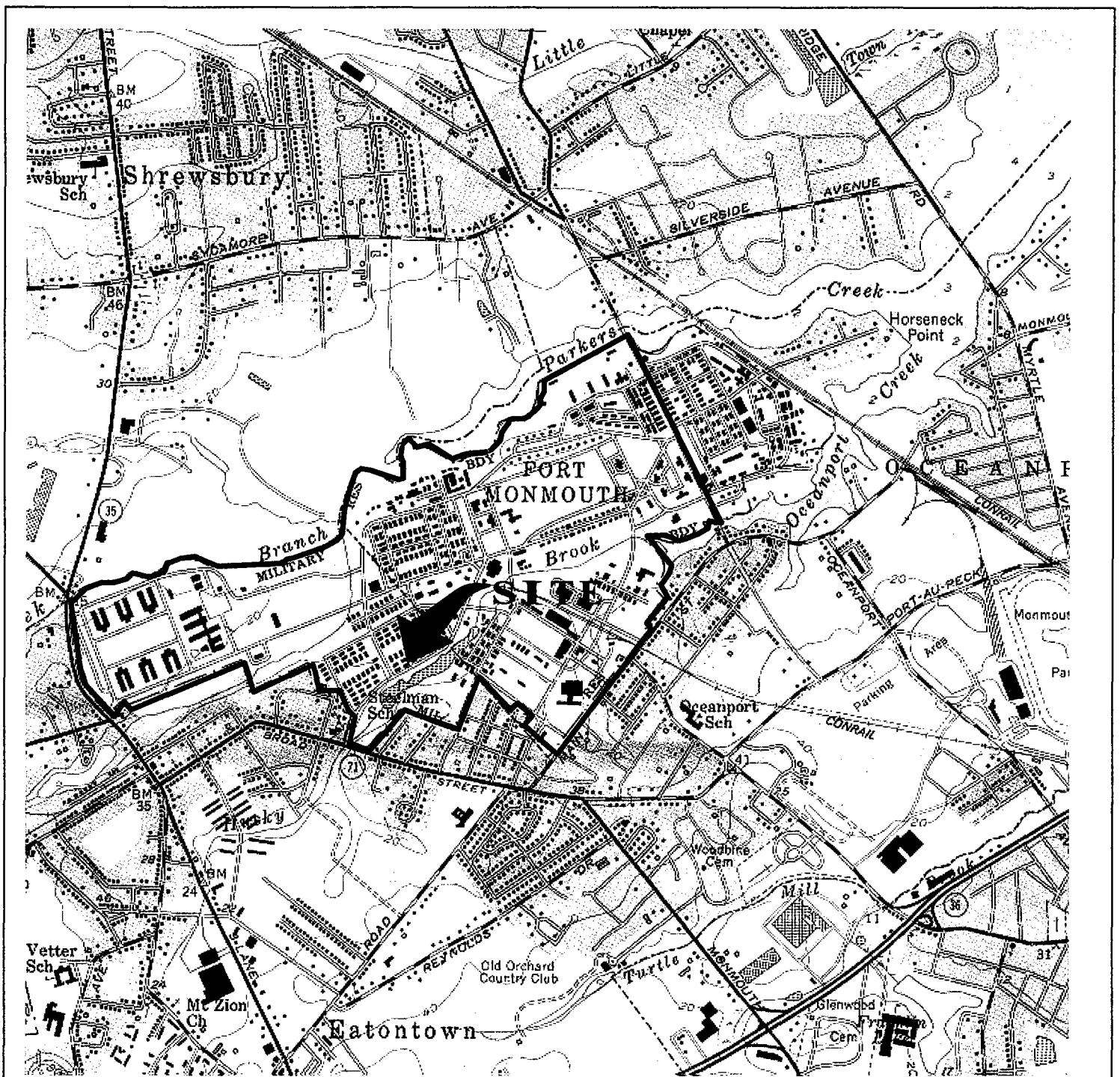
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	1.83	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.91	Not Detected	--	20	no
62-53-3	Aniline	1.63	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	1.28	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	1.19	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	1.02	Not Detected	--	75	no
100-51-6	Benzyl alcohol	1.02	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	1.13	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	1.39	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	1.50	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.97	Not Detected	--	10	no
98-95-3	Nitrobenzene	1.01	Not Detected	--	10	no
78-59-1	Isophorone	1.21	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	1.75	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	1.22	Not Detected	--	9	no
91-20-3	Naphthalene	1.27	8.11 ug/L	--	nle	no
106-47-8	4-Chloroaniline	1.09	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.71	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	1.08	38.43 ug/L	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.32	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	1.01	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.79	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	1.52	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.96	Not Detected	--	nle	no

Table 3  
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER  
 Date Sampled: 4/29/00 Location: 748 Lab Sample ID: 5386.03(748-1)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.81	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.79	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.10	4.66 ug/L	--	400	no
132-64-9	Dibenzofuran	1.00	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.87	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.62	Not Detected	--	5000	no
86-73-7	Fluorene	0.99	6.00 ug/L	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.10	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	1.05	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.01	3.16 ug/L	--	20	no
103-33-3	Azobenzene	0.67	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.76	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.94	Not Detected	--	10	no
85-01-8	Phenanthrene	1.23	3.95 ug/L	--	nle	no
120-12-7	Anthracene	1.12	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.70	Not Detected	--	900	no
206-44-0	Fluoranthene	1.64	Not Detected	--	300	no
92-87-5	Benzidine	4.18	Not Detected	--	50	no
129-00-0	Pyrene	1.25	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.05	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.19	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	1.75	Not Detected	--	60	no
218-01-9	Chrysene	1.38	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.74	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.44	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.25	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.29	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.05	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.83	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.64	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.84	Not Detected	--	nle	no

**FIGURES**



**FIGURE 1**

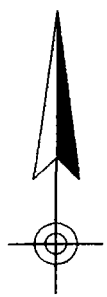
LOCATION MAP  
 Building 748  
 Main-Post West  
 Fort Monmouth Army Base  
 Monmouth County, NJ

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

Scale: 1" = 2000'      Date: April 1996

LONG BRANCH, N. J.  
 40073-C8-TF-024

1954  
 PHOTOREVISED 1981  
 DMA 6164 I SE-SERIES V822



# Geologic Map of New Jersey

## SEDIMENTARY ROCKS

### CENOZOIC

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

### MESOZOIC

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

### PALEOZOIC

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

## IGNEOUS AND METAMORPHIC ROCKS

### MESOZOIC

- Jurassic: basalt
- Jurassic: diabase

### PRECAMBRIAN

- marble
- gneiss, granite

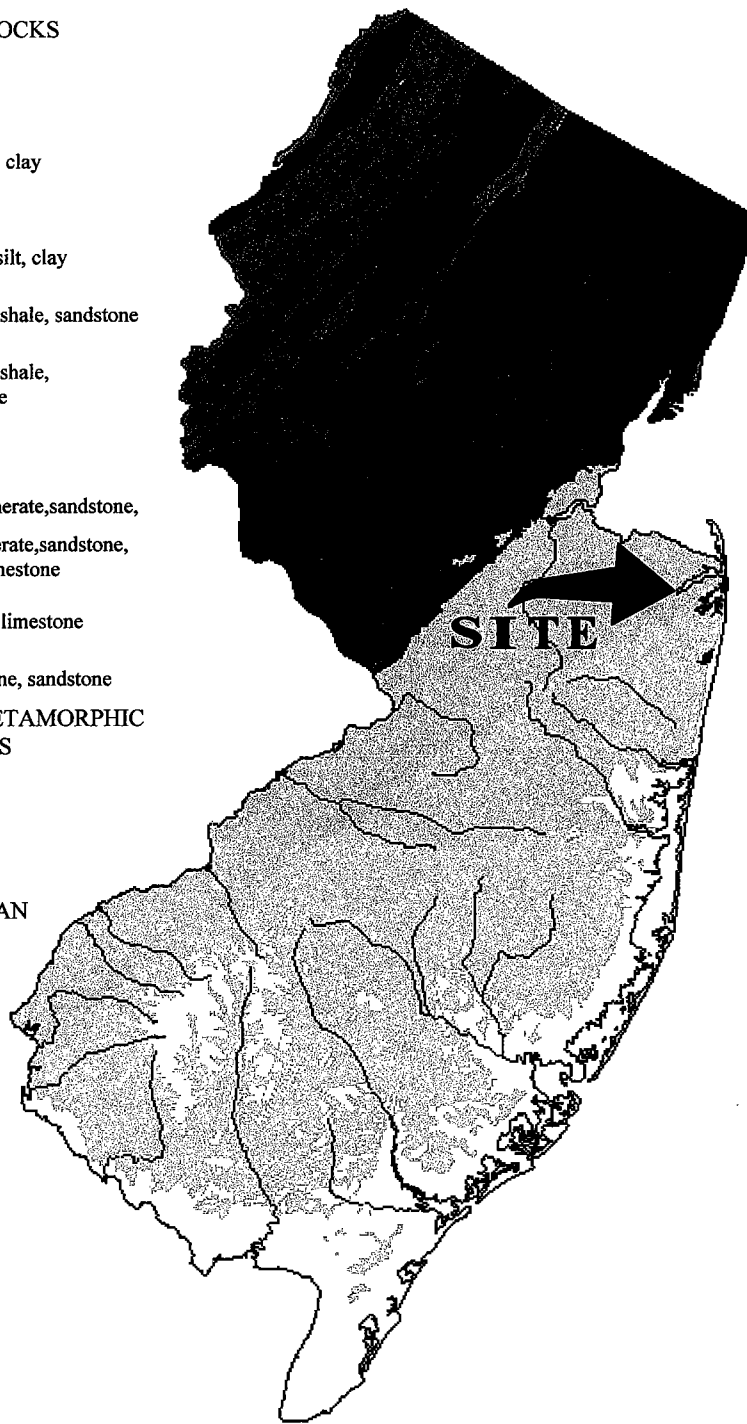
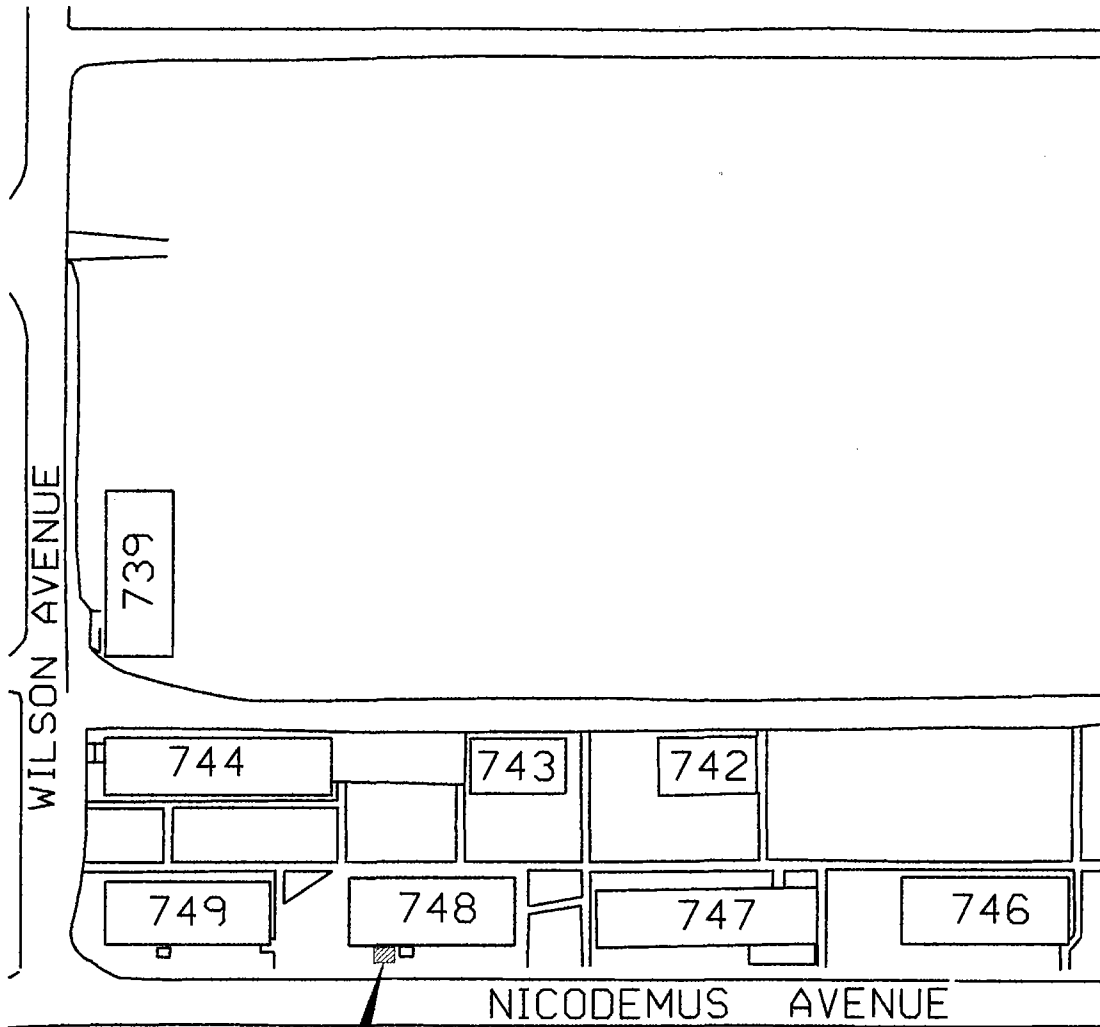
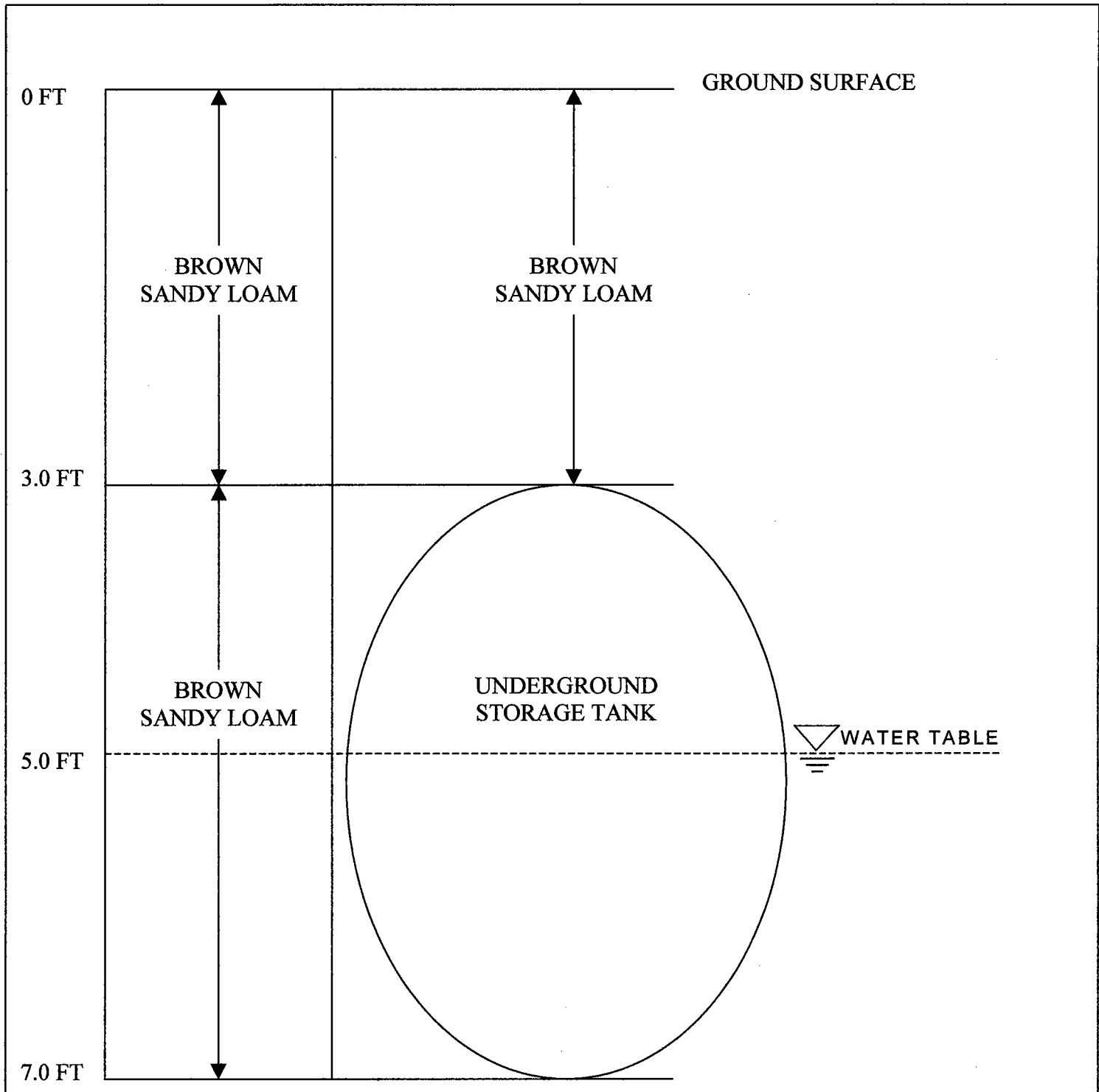


FIGURE 1A  
 GEOLOGICAL MAP  
 FORT MONMOUTH ARMY BASE  
 MONMOUTH COUNTY, NJ

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 Bristol, Pennsylvania



<p>FIGURE 2          SITE MAP          BUILDING 748          FORT MONMOUTH ARMY BASE          MONMOUTH COUNTY, NJ</p>	
<p>VERSAR          ENGINEERS, MANAGERS, SCIENTISTS &amp; PLANNERS          BRISTOL, PA.</p>	
<p>SCALE: 1"=100'</p>	<p>DATE: APRIL 1996</p>



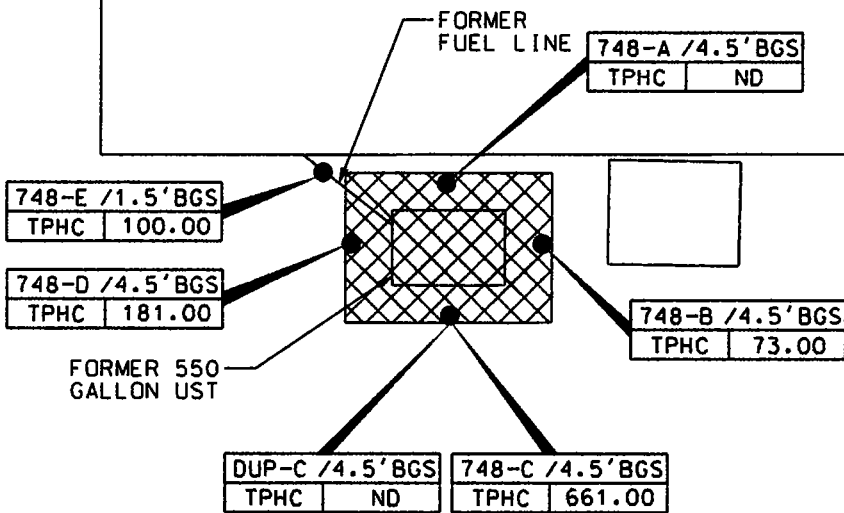
**FIGURE 3**  
**CROSS SECTIONAL VIEW**  
**BUILDING 748**  
**FORT MONMOUTH ARMY BASE**  
**MONMOUTH COUNTY, NJ**

**VERSAR**  
 Engineers, Managers, Scientists & Planners  
 Bristol, Pennsylvania

SCALE: NTS

DATE: April 1996

# BUILDING 748



### LEGEND

- SOIL SAMPLE LOCATION (APRIL 8, 1996)
- ▨ LIMIT OF EXCAVATION (APRIL 8, 1996)

### 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 748  
FORT MONMOUTH ARMY BASE  
MONMOUTH COUNTY, NJ

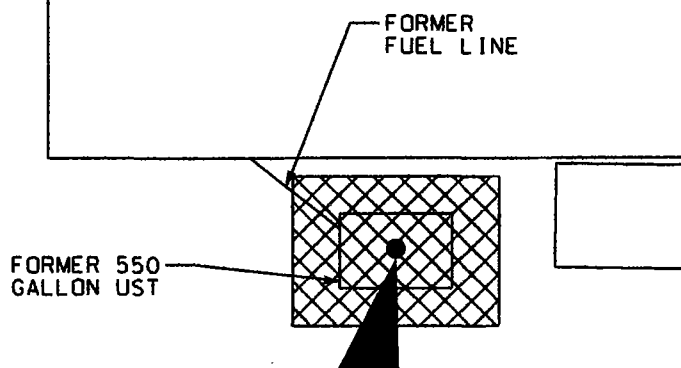
VERSAR  
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS  
BRISTOL, PA.

SCALE: 1"=10'

DATE: APRIL 1996



# BUILDING 748



SAMPLING LOCATION: SAMPLING DEPTH: SAMPLING DATE:	HIGHER OF NJDEP GWOS AND POL	BLDG 748 5-8' BGS 3/25/00	BLDG 748 5-8' BGS 4/29/00
<b>VOLATILE ORGANIC COMPOUNDS:</b>			
ETHYLBENZENE:	700	1.21	ND
O-XYLENE:	NLE	1.46	1.02
<b>SEMIVOLATILE ORGANIC COMPOUNDS:</b>			
2-METHYLNAPHTHALENE:	NLE	7.51	38.43
ACENAPHTHENE:	400	3.18	4.66
FLUORENE:	300	3.89	6.00
N-NITROSODIPHENYLAMINE:	20	4.99	3.16
PHENANTHRENE:	NLE	3.02	3.95
PYRENE:	200	1.84	ND
NAPHTHALENE:	NLE	ND	8.11



## LEGEND

- GROUNDWATER SAMPLE LOCATION  
(MARCH 25, 2000 AND APRIL 29, 2000)
- ▣ LIMIT OF EXCAVATION  
(APRIL 8, 1996)

## 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 748  
FORT MONMOUTH ARMY BASE  
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10'

DATE: APRIL 1996

**APPENDIX A**  
**NJDEP-STANDARD REPORTING FORM**



State of New Jersey  
Department of Environmental Protection and Energy  
Division of Responsible Party Site Remediation  
CN 028  
Trenton, NJ 08625-0029

ATTN: UST Program  
(609) 984-3156

For State Use Only

Date Rec'd. \_\_\_\_\_  
Auth. \_\_\_\_\_  
Routing \_\_\_\_\_  
UST NO. \_\_\_\_\_

STANDARD REPORTING FORM  
for reporting activities at an UST facility:

- |  |   |
|--|---|
| <input type="checkbox"/> General Facility Information Changes        | <input type="checkbox"/> Sale or Transfer         |
| <input checked="" type="checkbox"/> Closure (Abandonment or Removal) | <input type="checkbox"/> Substantial Modification |
| <input type="checkbox"/> Temporary Closure                           | <input type="checkbox"/> Financial Responsibility |
| <input type="checkbox"/> Change in Service                           | <input type="checkbox"/> Address Change Only      |

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

(More than one tank can be listed per activity)

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

Answer questions 1 through 5 and others as applicable.

- Company name and address (as it appears on registration questionnaire):  
U.S. ARMY - FORT MONMOUTH  
DPW - BUILDING 173  
FORT MONMOUTH NJ 07703  
ATTN: EUGENE W. LESINSKI
- Facility name and location (if different from above):  
\_\_\_\_\_  
\_\_\_\_\_
- Contact person for this activity:  
GENE LESINSKI  
Telephone Number: (908) 532-0989
- The identification number of the affected tank as it appears in Question Number 12 on the Registration Questionnaire:  
BLDG 748      122
- Registration Number (if known):  
UST - 0081533
- For GENERAL FACILITY INFORMATION changes (address, telephone, contact person, etc. - supply NEW information only):
  - Facility name: \_\_\_\_\_
  - Facility location: \_\_\_\_\_
  - Owner's mailing address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ NJ \_\_\_\_\_
  - Block: \_\_\_\_\_ Lot: \_\_\_\_\_
  - Contact person (facility operator): \_\_\_\_\_
  - Contact telephone number: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
  - Other (Specify): \_\_\_\_\_

(OVER)



**APPENDIX B**

**SITE ASSESSMENT SUMMARY**

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New Jersey

Facility Street Address : Directorate 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)

- Site Investigation Report (SIR) \$500 Fee
Remedial Investigation Report (RIR) \$1000 Fee
X NA - Federal Agreement

D. (Complete all that apply)

- Assigned Case Manager : Ian Curtis, Federal Case Manager
UST Registration Number : 81533-122 (7 digits)
Incident Report Number 96 - 04 - 08 - 1344 - 01 (10 or 12 digits)
Tank Closure Number : Federal Case Manager

E. Certification by the Subsurface Evaluator:

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

Name: Eugene Lesinski Signature: See signed subsurface removal log UST Cert. No.: 14537

Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: NA-U.S. Army

Firm Address: Directorate of Public Works Building 173 City: Fort Monmouth

State: NJ Zip: 07703 Telephone Number : 732-532-6224

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

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

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

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

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

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

Signature: [Handwritten Signature]

Company Name: U.S. Army Fort Monmouth Date: 7/31/00

**US ARMY, SELFM-PW- 7**  
**DAILY UST SUBSURFACE REMOVAL LOG**

BLDG.#: 748 REG.#: 0081533 - 122 CLOSURE#: NJDEP VERBAL 4/11/96  
 DATE: 4/8/96 TOA: \* 11:00 TOD: 1600  
 GOV. SSE: LESINSKI NJDEP CERT.#: 00145307  
 REMOVAL CONTRACTOR: SAI Inc. TECOM  
 CLOSURE SUPERVISOR: G. DeMartino NJDEP CERT.#: ~~00145307~~  
 WEATHER: Cloudy - 42°F

ACTIVITY	YES / NO
THE SUPERVISOR (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED TO THE NJDEP (609-292-7172), CASE# <u>96-04-08-1344-01</u>	OPER#
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT <u>7</u> FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
IF OVA/Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	N/A
THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	NO
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), <u>SRF-CLOSURE</u> , CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS <sup>3</sup> ), <u>PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)</u>	Y

CHECK ALL BOXES. LEAVE NO BLANKS

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

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**APPENDIX C**  
**WASTE MANIFEST**





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.)

Form Approved OMB No. 2050-0039 Expires 9-30-96

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		Generator's US EPA ID No. <b>NJ32100005979</b>	Manifest Document No. <b>139</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>USI REPAIR COMPANY ELECTRONIC COMPONENTS DIV 110 TRAVIS STREET SUITE 2173 NEW BRUNSWICK NJ GUYTON INDUSTRIAL GROUP USE ONLY NJ32100005979</b>			A. State Manifest Document Number <b>NJA 2594129</b>		B. State Generator ID (New Site Address) <b>SAUC</b>	
4. Generator's Phone <b>908 532-0959</b>			6. US EPA ID Number <b>NJDD0840000000</b>		C. State Trans ID (NDEPE) <b>06947</b>	
5. Transporter 1 Company Name <b>LIONETTI OIL RECOVERY CO., INC.</b>			8. US EPA ID Number		D. Transporter's Phone <b>908 721-0900</b>	
7. Transporter 2 Company Name			8. US EPA ID Number		E. State Trans ID (NDEPE)	
9. Designation of Facility Name and Address <b>LIONETTI OIL RECOVERY CO., INC/DRA PORCO PETROLEUM SVCS RUNYON &amp; CHERSEQUAKE ROADS OLD BRIDGE NJ 08857</b>			F. State Facility ID <b>NJDD0840000000</b>		G. Facility's Phone <b>908 721-0900</b>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group) HM			12. Containers		13. Total Quantity	
			No. Type		Unit Wt/Vol Waste No.	
a. <b>X</b> PETROLEUM OIL (PETROLEUM OIL) (BLDG 1160) COMBUSTIBLE LIQUID UN 1270 PG III <b>0092010-D</b>			<b>001 TTX135</b>		<b>X 722</b>	
b. <b>X</b> PETROLEUM OIL (PETROLEUM OIL) COMBUSTIBLE LIQUID UN 1270 PG III (DRUMS)			<b>001 TTX3049</b>		<b>X 722</b>	
c.						
d.						
J. Additional Description of Materials Listed Above <b>WATER</b>			K. Handling Codes for Wastes Listed Above <b>104-FILTRATION</b>			
15. Special Handling Instructions and Additional Information <b>NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NEW JERSEY 24 HOUR EMERGENCY RESPONSE (908) 721-0900 DECAL 2360! ERG 27 DEXHIL TEST KIT RESULTS &lt; 100 PPM</b>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am 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 determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future 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 generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name <b>EUGENE W LESINSKI</b>			Signature <i>Eugene W Lesinski</i>		Month Day Year <b>05 20 96</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials			Printed/Typed Name <b>WFC</b>		Signature <i>WFC</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials			Printed/Typed Name		Signature	
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.			Printed/Typed Name <b>TOM WYKOFF</b>		Signature <i>Tom Wykoff</i>	
					Month Day Year <b>05 20 96</b>	

In case of an emergency or spill immediately call the state the emergency occurred in and the Dept. of Environmental Protection at (908) 292-2000

**APPENDIX D**  
**UST DISPOSAL CERTIFICATE**

**APPENDIX E**  
**SOIL ANALYTICAL DATA PACKAGE**

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #:		Sampler: Gary DiMartinis - TVS		Date / Time: 4-8-96 / 1300		Analysis Parameters		Start:	
Customer: GENE LESINSKI SELF-PAID-EV		Site Name: BUILDING #748						Finish:	
Phone: (908) 532-0989		CASE # 96-4-8-1344-01						Preservation Method	
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	5% SOLIDS	MUNSEL	OVA	Remarks
	4-8-96/1451	748-A (SIDEWALL @ 4.5')	SOIL	2	X	X	X	ND	*
	1457	748-B (SIDEWALL @ 4.5')						ND	* = SAMPLES *
	1501	748-C (SIDEWALL @ 4.5')						ND	KEPT BELOW *
	1508	748-D (SIDEWALL @ 4.5')						ND	4°C *
	1515	748-E (Piping Run @ 1.5')						ND	*
	—	748-DUP (DUPLICATE)						—	*
<p>NOTE: OVA CALIBRATED TO 95 PPM METER. READING W/ 95 PPM CH4 + ZERO (0) AIR BY G. DiMartinis @ 1300 HRS</p>									
Relinquished By (signature): <i>[Signature]</i>		Date / Time: 4-8-96/1600		Received By (signature): <i>[Signature]</i>		Shipped By: HAND		ON: 4-8-96 (SERIAL #A51803)	
Relinquished By (signature): <i>[Signature]</i>		Date / Time:		Received for Lab by (signature): <i>[Signature]</i>		Date / Time: 4-8-96		Date / Time: 4-8-96 / 1600	
<p>Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS</p>									

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

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

Lab. ID #: 2038.1-.6  
Sample Rec'd: 04/08/96  
Analysis Start: 04/09/96  
Analysis Comp: 04/10/96

Analysis: 418.1 (TPH) NJDEP UST Reg. #:  
Matrix: Soil Closure #:  
Analyst: S. Hubbard DICAR #: 96-4-8-1344-01  
Ext. Meth: Sox. Location #: Bldg. 748

Lab ID.	Description	OVA	%Solid	Result (mg/Kg)	MDL mg/Kg)
2038.1	748-A, Sidewall @ 4.5'	ND	89	ND	20
2038.2	748-B, Sidewall @ 4.5'	ND	89	73	20
2038.3	748-C, Sidewall @ 4.5'	ND	97	661	20
2038.4	748-D, Sidewall @ 4.5'	ND	89	181	20
2038.5	748-E, Piping run @ 1.5'	ND	88	100	20
2038.6	748-Dup(duplicate)	NA	89	ND	20
M. Bl.	Method Blank		100	ND	3.3

**Notes:** ND = Not Detected, MDL = Method Detection Limit  
\* = Silica Gel Added, NA = Not Applicable  
2038.3S=107%, 2038.3SD=112%, RPD= 4.5%, 2038.3dup, 100%  
QC Limits: Recovery = 60% to 140%, RPD = 14.9% AT 2 Std. Dev.

 For

Brian K. McKee  
Laboratory Director

**APPENDIX F**

**GROUNDWATER ANALYTICAL DATA PACKAGE**

# FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-6224 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



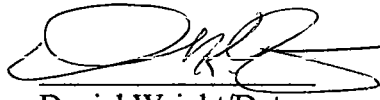
ANALYTICAL DATA REPORT  
Fort Monmouth Environmental Laboratory  
ENVIRONMENTAL DIVISION  
Fort Monmouth, New Jersey  
PROJECT: UST Program

## Bldg. 748

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
748-1 5-8'	5286.01	Aqueous	25-Mar-00 11:05	03/27/00

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

ENCLOSURE:  
CHAIN OF CUSTODY  
RESULTS

  
Daniel Wright/Date  
Laboratory Director

4-25-00

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# CHAIN OF CUSTODY

100000



# Fort Monmouth Environmental Testing Laboratory

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

Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil

NJDEP Certification #13461

## Chain of Custody Record

Customer: <u>D. DESAI</u>		Project No:		Analysis Parameters						Comments:								
Phone #: <u>X21475</u>		Location: <u>BLDG. 748</u>		VOC + IS	X	Y	E	N	E		%	S	H	I	L	D		
( ) DERA (X) OMA ( ) Other:		Sample #																
Samplers Name / Company: <u>MARK LAURA - TVS - PWS 07</u>		Sample #		Remarks / Preservation Method														
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles	VOC + IS	X	Y	E	N	E	%	S	H	I	L	D	Remarks / Preservation Method
* <u>52861</u>	<u>748-1 5-8'</u>	<u>3-25-00</u>	<u>1105</u>	<u>AQ.</u>	<u>3</u>	X	X	X										<u>HCL/240c</u>
Relinquished by (signature): <u>[Signature]</u>		Date/Time: <u>3-27-00 0730</u>	Received by (signature): <u>[Signature]</u>		Relinquished by (signature):		Date/Time:	Received by (signature):										
Relinquished by (signature):		Date/Time:	Received by (signature):		Relinquished by (signature):		Date/Time:	Received by (signature):										
Report Type: <input type="checkbox"/> Full, <input checked="" type="checkbox"/> Reduced, <input type="checkbox"/> Standard, <input type="checkbox"/> Screen / non-certified, <input type="checkbox"/> EDD					Remarks: <u>* TANK PAD @ 8' / SHEEN + ODOOR OF FUEL</u> <u>SHARON T.B. + E.B. W/ BLDG. 500</u>													
Turnaround time: <input checked="" type="checkbox"/> Standard 3 wks, <input type="checkbox"/> Rush Days, <input type="checkbox"/> ASAP Verbal Hrs.																		

000000

# METHODOLOGY SUMMARY

000003

# 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

000005

**GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT**

Indicate  
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified  
(Field Samples and Method Blanks) yes
  
2. Retention times for chromatograms provided yes
  
3. GC/MS Tune Specifications
  - a. BFB Meet Criteria yes
  - b. DFTPP Meet Criteria yes
  
4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series yes
  
5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series yes
  
6. GC/MS Calibration Requirements
  - a. Calibration Check Compounds Meet Criteria yes
  - b. System Performance Check Compounds Meet Criteria yes
  
7. Blank Contamination - If yes, List compounds and concentrations in each blank: yes
  - a. VOA Fraction \_\_\_\_\_
  - b. B/N Fraction unknown 95 ug/l
  - c. Acid Fraction NA
  
8. Surrogate Recoveries Meet Criteria No

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

  - a. VOA Fraction \_\_\_\_\_
  - b. B/N Fraction Terphenyl-d14 Low at 26
  - c. Acid Fraction NA

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

yes
  
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria  
(If not met, list those compounds and their recoveries, which fall outside the acceptable range) yes
  - a. VOA Fraction \_\_\_\_\_
  - b. B/N Fraction \_\_\_\_\_
  - c. Acid Fraction NA

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

Indicate  
Yes,  
No,  
N/A

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

Yes

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

11. Extraction Holding Time Met

Yes

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

12. Analysis Holding Time Met

Yes

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

Additional Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Laboratory Manager:  Date: 4-25-00

# LABORATORY CHRONICLE

000008



# Laboratory Chronicle

Lab ID: 5286

Site: Bldg. 748

	Date	Hold Time
Date Sampled	03/25/00	NA
Receipt/Refrigeration	03/25,27/00*	NA

## Extractions

1. Base Neutral	03/31/00	14 days
-----------------	----------	---------

## Analyses

1. Volatile Organics	03/30,31/00	14 days
2. Base Neutral	04/04/00	40 days

- Samples collected and refrigerated on 03/25/00, Laboratory received the sample on Monday 03/27/00.

# VOLATILES ORGANICS

000010

**US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY  
NJDEP CERTIFICATION # 13461**

**Definition of Qualifiers**

- MDL : Method Detection Limit**
- J : Compound Identified Below Detection Limit**
- B : Compound is in Both Sample and Blank**
- D : Results are from a Dilution of the Sample**
- U : Compound Searched for but not Detected**
- E : Compound Exceeds Calibration Limit**

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

Data File **VB006505.D**  
 Operator **Skelton**  
 Date Acquired **30 Mar 2000 1:18 pm**

Sample Name **Vblk197**  
 Field ID **Vblk197**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

**Vblk197**

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5286 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: Vblk197

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006505.D

Level: (low/med) LOW Date Received: 3/27/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 3/30/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

Number TICs found: 0

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

Data File **VB006534.D**  
 Operator **Skelton**  
 Date Acquired **31 Mar 2000 8:59 am**

Sample Name **5286.01**  
 Field ID **748-1**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene	27.67	88158	1.21 ug/L	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.96	83362	1.46 ug/L	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-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

748-1

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5286 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 5286.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006534.D

Level: (low/med) LOW Date Received: 3/27/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 3/31/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 11

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000108-67-8	Benzene, 1,3,5-trimethyl-	31.19	13	JN
2. 000611-14-3	Benzene, 1-ethyl-2-methyl-	31.81	37	JN
3. 000095-36-3	1,2,4-Trimethylbenzene	32.12	51	JN
4. 000526-73-8	Benzene, 1,2,3-trimethyl-	33.23	33	JN
5. 001074-43-7	Benzene, 1-methyl-3-propyl-	33.57	15	JN
6. 000934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	33.74	20	JN
7. 000496-11-7	Indane	33.97	25	JN
8. 001074-55-1	Benzene, 1-methyl-4-propyl-	34.18	12	JN
9. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	34.38	12	JN
10. 002870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	34.46	13	JN
11. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	34.64	15	JN

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL Project: UST  
 NJDEP#: 13461 Case No.: 5286 Location: 748 SDG No.: \_\_\_\_\_  
 Lab File ID: VB006400.D BFB Injection Date: 3/27/00  
 Instrument ID: GCMS#2 BFB Injection Time: 8:11  
 GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.7
75	30.0 - 66.0% of mass 95	52.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 ( 0.0)1
174	50.0 - 120.0% of mass 95	61.3
175	4.0 - 9.0% of mass 174	4.4 ( 7.2)1
176	93.0 - 101.0% of mass 174	59.5 ( 97.0)1
177	5.0 - 9.0% of mass 176	3.9 ( 6.6)2

1-Value is % mass 174

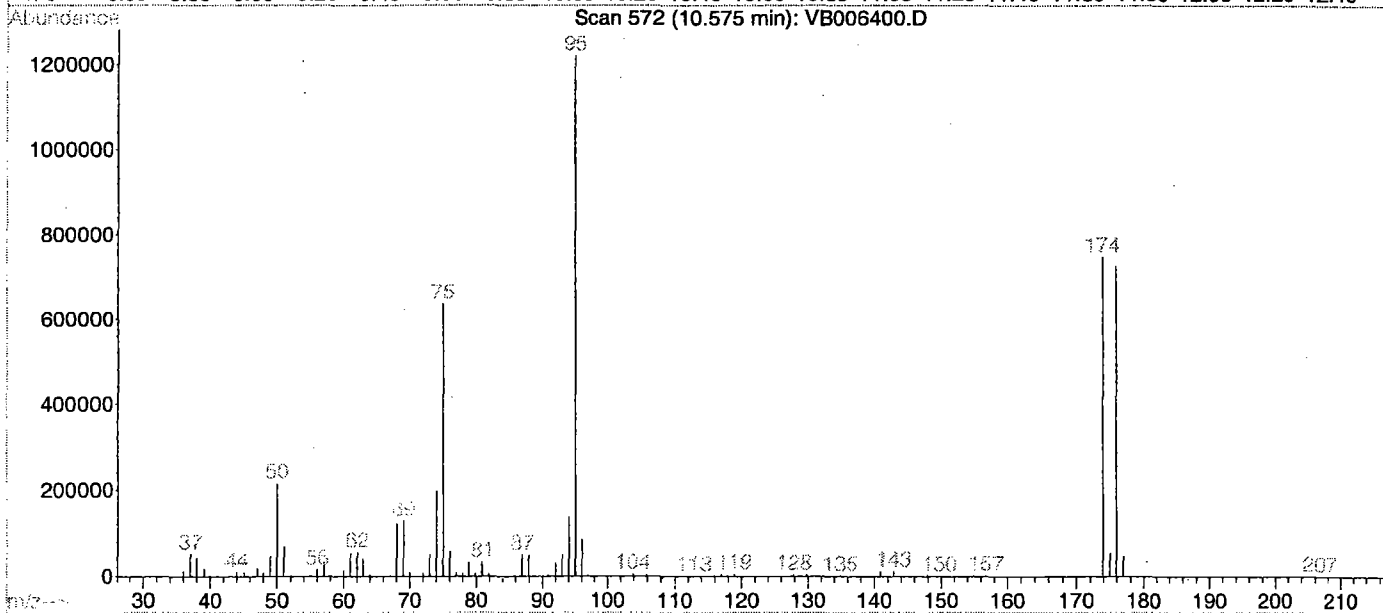
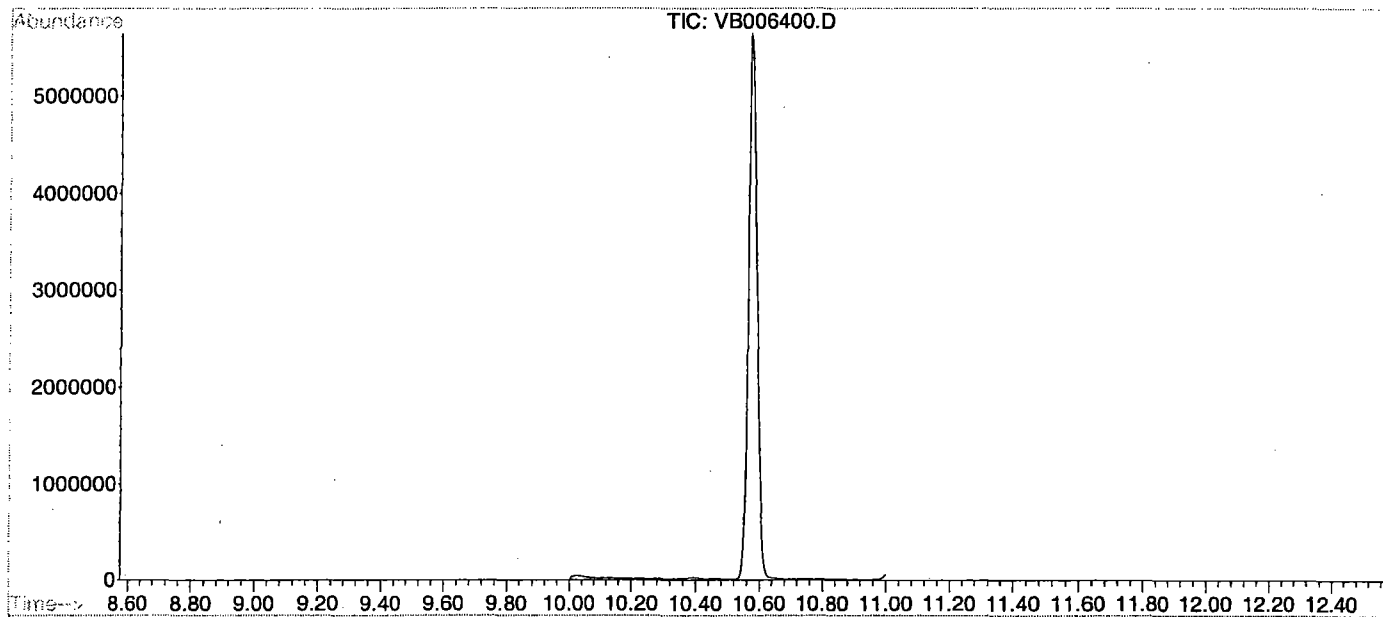
2-Value is % mass 176

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VB006401.D	3/27/00	8:45
02	VSTD100	VSTD100	VB006402.D	3/27/00	9:24
03	VSTD050	VSTD050	VB006403.D	3/27/00	10:04
04	VSTD010	VSTD010	VB006404.D	3/27/00	10:43
05	VSTD005	VSTD005	VB006405.D	3/27/00	11:23



Data File : C:\HPCHEM\1\DATA\MARCH2000\000327\VB006400.D Vial: 1  
 Acq On : 27 Mar 2000 8:11 am Operator: Skelton  
 Sample : BFB Tune Inst : GC VOA 2  
 Misc : BFB Tune Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Method : C:\HPCHEM\1\METHODS\M262452.M (RTE Integrator)  
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP



## Spectrum Information: Scan 572

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	215936	PASS
75	95	30	60	52.1	637056	PASS
95	95	100	100	100.0	1221632	PASS
96	95	5	9	7.1	86320	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	61.3	749312	PASS
175	174	5	9	7.2	53856	PASS
176	174	95	101	97.0	726592	PASS
177	176	5	9	6.6	48160	PASS

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL Project: UST  
 NJDEP#: 13461 Case No.: 5286 Location: 748 SDG No.: \_\_\_\_\_  
 Lab File ID: VB006503.D BFB Injection Date: 3/30/00  
 Instrument ID: GCMS#2 BFB Injection Time: 10:42  
 GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	22.8
75	30.0 - 66.0% of mass 95	54.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 ( 0.0)1
174	50.0 - 120.0% of mass 95	74.8
175	4.0 - 9.0% of mass 174	5.4 ( 7.3)1
176	93.0 - 101.0% of mass 174	71.0 ( 95.0)1
177	5.0 - 9.0% of mass 176	4.5 ( 6.4)2

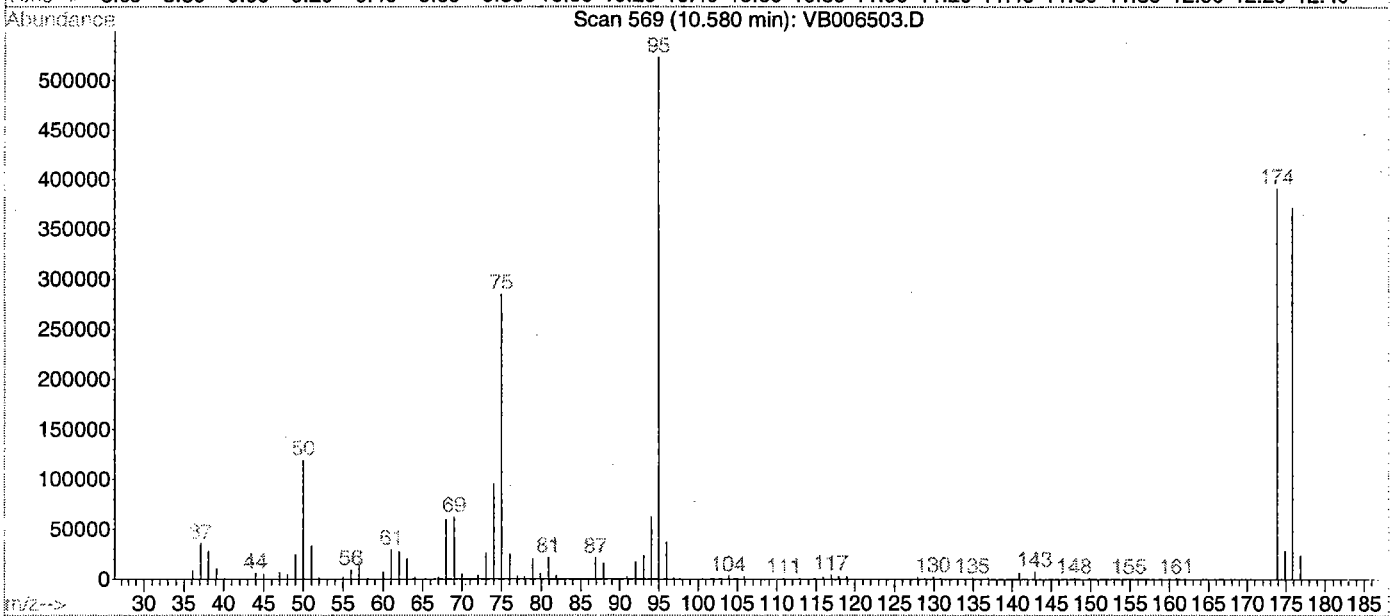
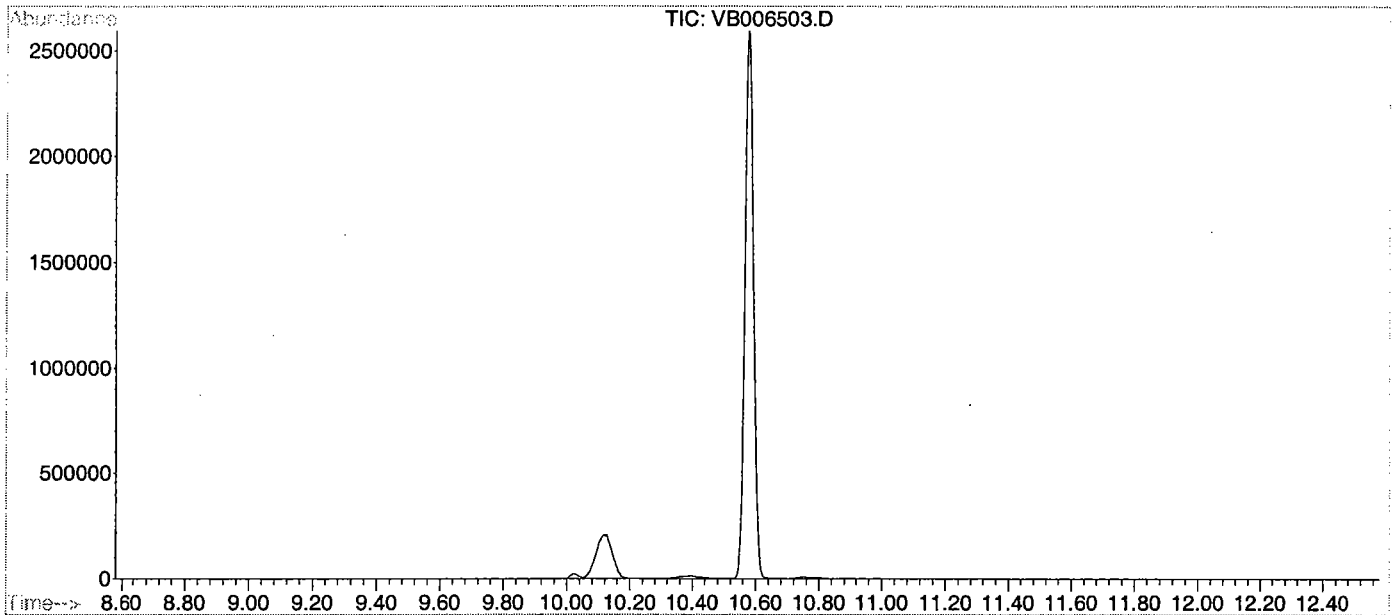
1-Value is % mass 174

2-Value is % mass 176

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VB006504.D	3/30/00	12:09
02	VBLK197	VBLK197	VB006505.D	3/30/00	13:18
03	748-1	5286.01	VB006534.D	3/31/00	8:59

Data File : C:\HPCHEM\1\DATA\MARCH2000\000330\VB006503.D Vial: 2  
 Acq On : 30 Mar 2000 10:42 am Operator: Skelton  
 Sample : BFB Tune Inst : GC VOA 2  
 Misc : BFB Tune Multiplr: 1.00  
 MS Integration Params: RTEINT.P  
 Method : C:\HPCHEM\1\METHODS\M262452.M (RTE Integrator)  
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 569

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.8	119576	PASS
75	95	30	60	54.4	284608	PASS
95	95	100	100	100.0	523456	PASS
96	95	5	9	7.0	36888	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.8	391360	PASS
175	174	5	9	7.3	28400	PASS
176	174	95	101	95.0	371904	PASS
177	176	5	9	6.4	23800	PASS

# BASE NEUTRAL

000035

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

Data File Name **BNA03820.D**  
 Operator **Bhaskar**  
 Date Acquired **4-Apr-00**

Sample Name **Sblk360**  
 Misc Info **Sblk360**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene			not detected	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene			not detected	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	

## Semi-Volatile Analysis Report

### Page 2

Data File Name **BNA03820.D**  
 Operator **Bhaskar**  
 Date Acquired **4-Apr-00**

Sample Name **Sblk360**  
 Misc Info **Sblk360**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benizidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene			not detected	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

#### Qualifiers

E= Value Exceeds Linear Range  
 D= Value from dilution  
 B= Compound in Related Blank  
 PQL= Practical Quantitation Limit

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

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Sblk360

Lab Name: FMETL Lab Code 13461  
Project 100004 Case No.: 5286 Location Bl.748 SDG No.: \_\_\_\_\_  
Matrix: (soil/water) WATER Lab Sample ID: Sblk360  
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03820.D  
Level: (low/med) LOW Date Received: 3/27/00  
% Moisture: \_\_\_\_\_ decanted: (Y/N) N Date Extracted: 3/31/00  
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/4/00  
Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.01	9	J

# Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03824.D**  
 Operator **Bhaskar**  
 Date Acquired **4-Apr-00**

Sample Name **5286.01**  
 Misc Info **748-1**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene	15.07	211667	7.51 ug/L	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene	17.78	83430	3.18 ug/L	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene	18.94	119419	3.89 ug/L	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine	19.22	110380	4.99 ug/L	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene	21.03	137379	3.02 ug/L	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	

000039



**Semi-Volatile Analysis Report**  
**Page 2**

Data File Name **BNA03824.D**  
Operator **Bhaskar**  
Date Acquired **4-Apr-00**

Sample Name **5286.01**  
Misc Info **748-1**  
Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benzidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene	23.98	89234	1.84 ug/L	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

**Qualifiers**

E= Value Exceeds Linear Range  
D= Value from dilution  
B= Compound in Related Blank  
PQL= Practical Quantitation Limit

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

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

748-1

Lab Name: FMETL      Lab Code 13461  
 Project 100004      Case No.: 5286      Location Bl.748      SDG No.: \_\_\_\_\_  
 Matrix: (soil/water) WATER      Lab Sample ID: 5286.01  
 Sample wt/vol: 1000 (g/ml) ML      Lab File ID: BNA03824.D  
 Level: (low/med) LOW      Date Received: 3/27/00  
 % Moisture: \_\_\_\_\_      decanted: (Y/N) N      Date Extracted: 3/31/00  
 Concentrated Extract Volume: 1000 (uL)      Date Analyzed: 4/4/00  
 Injection Volume: 1.0 (uL)      Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N      pH: 7

CONCENTRATION UNITS:

Number TICs found: 15      (ug/L or ug/Kg)      UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 001120-21-4	Undecane	11.80	38	JN
2.	unknown	12.81	39	J
3. 000629-50-5	Tridecane	14.85	96	JN
4. 000629-59-4	Tetradecane	16.33	110	JN
5. 000544-76-3	Hexadecane	17.14	42	JN
6. 000629-62-9	Pentadecane	17.62	98	JN
7. 000544-76-3	Hexadecane	18.77	99	JN
8. 000629-78-7	Heptadecane	19.81	110	JN
9. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.86	65	JN
10. 000593-45-3	Octadecane	20.77	86	JN
11. 000629-59-4	Tetradecane	20.86	40	JN
12. 000629-92-5	Nonadecane	21.67	73	JN
13. 000112-95-8	Eicosane	22.50	61	JN
14. 000629-94-7	Heneicosane	23.30	54	JN
15. 000629-97-0	Docosane	24.05	38	JN

# LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature   
Date 9/25/90

Laboratory Certification #13461

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

## Laboratory Authentication Statement

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



**Daniel K. Wright**  
Laboratory Manager

000067

# FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-6224 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



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

## Bldg. 748

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Trip Blank	5386.01	Aqueous	29-Apr-00	05/01/00
Field Blank	5386.02	Aqueous	29-Apr-00 08:20	05/01/00
748-1 5-8'	5386.03	Aqueous	29-Apr-00 0900	05/01/00
Field Dup	5386.04	Aqueous	29-Apr-00	05/01/00

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

ENCLOSURE:  
CHAIN OF CUSTODY  
RESULTS

  
Daniel Wright/Date  
Laboratory Director

5-18-00

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# CHAIN OF CUSTODY

000001



# Fort Monmouth Environmental Testing Laboratory

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

Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil

NJDEP Certification #13461

## Chain of Custody Record

Customer: <u>D. DESAI</u>		Project No:		Analysis Parameters							Comments:		
Phone #: <u>X21475</u>		Location: <u>BLOG. 748</u>		VOA + 15	X MURE E	BN + 15							
( ) DERA (X) OMA ( ) Other: _____													
Samplers Name / Company: <u>MARK LAURA-TVS-PWS 07</u>				Sample #									
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles							Remarks / Preservation Method	
<u>5386.</u>	<u>1 TRIP BLANK</u>	<u>4-29-00</u>	<u>-</u>	<u>AQ.</u>	<u>2</u>	X						<u>HCL</u>	
	<u>2 Field BLANK</u>	<u>"</u>	<u>0820</u>	<u>"</u>	<u>3</u>	X	X	X				<u>HCL, 4°C</u>	
	<u>3 748-1 5-8'</u>	<u>"</u>	<u>0900</u>	<u>"</u>	<u>3</u>	X	X	X				<u>" , "</u>	
	<u>4 Field Dup "</u>	<u>"</u>	<u>-</u>	<u>"</u>	<u>3</u>	X	X	X				<u>" , "</u>	
Relinquished by (signature): <u>[Signature]</u>		Date/Time: <u>5-1-00 7:30</u>	Received by (signature): <u>[Signature]</u>		Relinquished by (signature):		Date/Time:	Received by (signature):					
Relinquished by (signature):		Date/Time:	Received by (signature):		Relinquished by (signature):		Date/Time:	Received by (signature):					
Report Type: ( ) Full, (X) Reduced, ( ) Standard, ( ) Screen / non-certified, ( ) EDD					Remarks:								
Turnaround time: (X) Standard 3 wks, ( ) Rush _____ Days, ( ) ASAP Verbal _____ Hrs.													



# METHOD SUMMARY

000003

## Method 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 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.

000004

**CONFROMANCE/NON-  
CONFORMANCE  
SUMMARY**

**000005**

**GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT**

Indicate  
Yes, No, N/A

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

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

  - a. VOA Fraction \_\_\_\_\_
  - b. B/N Fraction \_\_\_\_\_
  - c. Acid Fraction N/A \_\_\_\_\_

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

\_\_\_\_\_
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria yes

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

  - a. VOA Fraction \_\_\_\_\_
  - b. B/N Fraction \_\_\_\_\_
  - c. Acid Fraction N/A \_\_\_\_\_

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

Indicate  
Yes, No, N/A

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

yes

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

11. Extraction Holding Time Met

yes

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


12. Analysis Holding Time Met

yes

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

Additional Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Laboratory Manager: 

Date: 5-18-00

000007

# LABORATORY CHRONICLE

000008

# Laboratory Chronicle

Lab ID: 5386

Site: Bldg. 748

	Date	Hold Time
Date Sampled	04/29/00	NA
Receipt/Refrigeration	05/01/00	NA

## Extractions

1. Base Neutral	05/03/00	14 days
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## Analyses

1. Volatile Organics	05/03,04/00	14 days
2. Base Neutral	05/04/00	40 days

Samples collected and refrigerated on 04/29/00. Laboratory received the samples on Monday 01/05/00.

000009

# VOLATILES

000010



**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  
**E** : Compound exceeds calibration limit

**000011**

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

Data File **VB006720.D**  
 Operator **Skelton**  
 Date Acquired **3 May 2000 12:23 pm**

Sample Name **Vblk205**  
 Field ID **Vblk205**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-97

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Vblk205

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5386 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: Vblk205

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006720.D

Level: (low/med) LOW Date Received: 5/1/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 5/3/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

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

Number TICs found: 0

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

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

Data File **VB006740.D**  
 Operator **Skelton**  
 Date Acquired **4 May 2000 1:46 am**

Sample Name **5386.01**  
 Field ID **Trip Blank**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride	11.42	56514	2.63 ug/L	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-97

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

**Trip Blank**

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5386 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 5386.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006740.D

Level: (low/med) LOW Date Received: 5/1/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 5/4/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

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

Number TICs found: 0

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

Data File **VB006741.D**  
 Operator **Skelton**  
 Date Acquired **4 May 2000 2:26 am**

Sample Name **5386.02**  
 Field ID **Field Blank**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-97

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

**Field Blank**

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5386 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 5386.02

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006741.D

Level: (low/med) LOW Date Received: 5/1/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 5/4/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

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

Number TICs found: 0

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

Data File **VB006743.D**  
 Operator **Skelton**  
 Date Acquired **4 May 2000 3:46 am**

Sample Name **5386.04**  
 Field ID **Field Dup**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.97	88764	1.23 ug/L	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-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-97

**Qualifiers**

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

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



1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Field Dup

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5386 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 5386.04

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006743.D

Level: (low/med) LOW Date Received: 5/1/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 5/4/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	27.75	29	JN
2. 002039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	28.50	50	JN
3. 000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	30.13	46	JN
4. 018321-36-3	Benzene, (1,1-dimethyl-2-propen	30.82	14	JN
5. 000108-67-8	Benzene, 1,3,5-trimethyl-	31.20	18	JN
6. 000611-14-3	Benzene, 1-ethyl-2-methyl-	31.81	39	JN
7. 000095-36-3	1,2,4-Trimethylbenzene	32.13	61	JN
8. 000095-36-3	1,2,4-Trimethylbenzene	33.24	35	JN
9. 001074-43-7	Benzene, 1-methyl-3-propyl-	33.58	19	JN
10. 000098-06-6	Benzene, tert-butyl-	33.74	20	JN
11. 000496-11-7	Indane	33.97	21	JN
12. 001074-55-1	Benzene, 1-methyl-4-propyl-	34.18	14	JN
13.	unknown	34.38	27	J
14.	unknown	34.47	19	J
15.	unknown	34.64	17	J

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

Data File **VB006742.D**  
 Operator **Skelton**  
 Date Acquired **4 May 2000 3:06 am**

Sample Name **5386.03**  
 Field ID **748-1**  
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	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	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.97	49557	1.02 ug/L	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	1,1,1,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

\*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-97

**Qualifiers**

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

748-1

Lab Name: FMETL Project: UST

NJDEP#: 13461 Case No.: 5386 Location: 748 SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 5386.03

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006742.D

Level: (low/med) LOW Date Received: 5/1/00

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 5/4/00

GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 11

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000108-67-8	Benzene, 1,3,5-trimethyl-	31.20	14	JN
2. 000611-14-3	Benzene, 1-ethyl-2-methyl-	31.81	33	JN
3. 000108-67-8	Benzene, 1,3,5-trimethyl-	32.13	60	JN
4. 000526-73-8	Benzene, 1,2,3-trimethyl-	33.24	35	JN
5. 001074-43-7	Benzene, 1-methyl-3-propyl-	33.58	18	JN
6. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	33.74	27	JN
7. 000496-11-7	Indane	33.97	19	JN
8. 001074-55-1	Benzene, 1-methyl-4-propyl-	34.18	15	JN
9. 001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	34.38	18	JN
10. 000535-77-3	Benzene, 1-methyl-3-(1-methylet	34.46	19	JN
11. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	34.64	19	JN

# BASE NEUTRAL

000045

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

Data File Name **BNA03866.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **Sblk366**  
 Misc Info **Sblk366 A 000503**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene			not detected	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene			not detected	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	

## Semi-Volatile Analysis Report Page 2

Data File Name **BNA03866.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **Sblk366**  
 Misc Info **Sblk366 A 000503**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benzidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene			not detected	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

### Qualifiers

E= Value Exceeds Linear Range  
 D= Value from dilution  
 B= Compound in Related Blank  
 PQL= Practical Quantitation Limit

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

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

**Sblk366**

Lab Name: FMETL Lab Code 13461  
Project 100004 Case No.: 5386 Location Bl.748 SDG No.: \_\_\_\_\_  
Matrix: (soil/water) WATER Lab Sample ID: Sblk366  
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03866.D  
Level: (low/med) LOW Date Received: 5/1/00  
% Moisture: \_\_\_\_\_ decanted: (Y/N) N Date Extracted: 5/3/00  
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/4/00  
Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

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

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

Data File Name **BNA03870.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **5386.02**  
 Misc Info **Field Blank**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene			not detected	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene			not detected	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	



## Semi-Volatile Analysis Report Page 2

Data File Name **BNA03870.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **5386.02**  
 Misc Info **Field Blank**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benzidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene			not detected	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

### Qualifiers

E= Value Exceeds Linear Range  
 D= Value from dilution  
 B= Compound in Related Blank  
 PQL= Practical Quantitation Limit

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

Page 2 of 2

**000050**

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Blank

Lab Name: FMETL Lab Code 13461  
Project 100004 Case No.: 5386 Location BI.748 SDG No.: \_\_\_\_\_  
Matrix: (soil/water) WATER Lab Sample ID: 5386.02  
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03870.D  
Level: (low/med) LOW Date Received: 5/1/00  
% Moisture: \_\_\_\_\_ decanted: (Y/N) N Date Extracted: 5/3/00  
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/4/00  
Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

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

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

Data File Name **BNA03872.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **5386.04**  
 Misc Info **Field Dupe**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene	13.36	320819	6.89 ug/L	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene	15.04	893591	29.79 ug/L	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene	17.75	124094	4.40 ug/L	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene	18.91	174046	5.28 ug/L	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine	19.19	101470	4.38 ug/L	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene	21.00	193491	4.03 ug/L	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	

**Semi-Volatile Analysis Report**  
**Page 2**

Data File Name **BNA03872.D**  
Operator **Bhaskar**  
Date Acquired **4-May-00**

Sample Name **5386.04**  
Misc Info **Field Dupe**  
Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benzidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene	23.96	81188	1.56 ug/L	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

**Qualifiers**

E= Value Exceeds Linear Range  
D= Value from dilution  
B= Compound in Related Blank  
PQL= Practical Quantitation Limit

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

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

Field Dup.

Lab Name: FMETL Lab Code 13461  
 Project 100004 Case No.: 5386 Location Bl.748 SDG No.: \_\_\_\_\_  
 Matrix: (soil/water) WATER Lab Sample ID: 5386.04  
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03872.D  
 Level: (low/med) LOW Date Received: 5/1/00  
 % Moisture: \_\_\_\_\_ decanted: (Y/N) N Date Extracted: 5/3/00  
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/4/00  
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 15 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 001120-21-4	Undecane	11.78	52	JN
2. 002039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	12.78	56	JN
3. 000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	12.98	39	JN
4. 000629-50-5	Tridecane	14.83	81	JN
5. 000629-59-4	Tetradecane	16.31	91	JN
6. 000581-40-8	Naphthalene, 2,3-dimethyl-	16.87	42	JN
7. 000544-76-3	Hexadecane	17.12	40	JN
8. 000629-62-9	Pentadecane	17.60	84	JN
9. 000544-76-3	Hexadecane	18.75	84	JN
10. 000629-78-7	Heptadecane	19.79	91	JN
11. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.85	53	JN
12. 000629-78-7	Heptadecane	20.75	74	JN
13. 000593-45-3	Octadecane	21.64	63	JN
14. 000112-95-8	Eicosane	22.48	52	JN
15. 000629-94-7	Heneicosane	23.28	45	JN

# Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03871.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **5386.03**  
 Misc Info **748-1**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91 ug/L	
62-53-3	Aniline			not detected	NLE	1.63 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80 ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97 ug/L	
78-59-1	Isophorone			not detected	100	1.01 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 ug/L	
91-20-3	Naphthalene	13.36	379781	8.11 ug/L	NLE	1.27 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71 ug/L	
91-57-6	2-Methylnaphthalene	15.05	1159615	38.43 ug/L	NLE	1.08 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79 ug/L	
83-32-9	Acenaphthene	17.75	132738	4.66 ug/L	400	1.10 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62 ug/L	
86-73-7	Fluorene	18.91	199714	6.00 ug/L	300	0.99 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05 ug/L	
86-30-6	n-Nitrosodiphenylamine	19.19	73804	3.16 ug/L	20	1.01 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94 ug/L	
85-01-8	Phenanthrene	21.00	191171	3.95 ug/L	NLE	1.23 ug/L	
120-12-7	Anthracene			not detected	2000	1.12 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70 ug/L	
206-44-0	Fluoranthene			not detected	300	1.64 ug/L	

**Semi-Volatile Analysis Report**  
**Page 2**

Data File Name **BNA03871.D**  
 Operator **Bhaskar**  
 Date Acquired **4-May-00**

Sample Name **5386.03**  
 Misc Info **748-1**  
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
92-87-5	Benzidine			not detected	50	4.18 ug/L	
129-00-0	Pyrene			not detected	200	1.25 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75 ug/L	
218-01-9	Chrysene			not detected	20	1.38 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84 ug/L	

\* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

**Qualifiers**

E= Value Exceeds Linear Range  
 D= Value from dilution  
 B= Compound in Related Blank  
 PQL= Practical Quantitation Limit

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

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

748-1

Lab Name: FMETL Lab Code 13461  
 Project 100004 Case No.: 5386 Location Bl.748 SDG No.: \_\_\_\_\_  
 Matrix: (soil/water) WATER Lab Sample ID: 5386.03  
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03871.D  
 Level: (low/med) LOW Date Received: 5/1/00  
 % Moisture: \_\_\_\_\_ decanted: (Y/N) N Date Extracted: 5/3/00  
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/4/00  
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: 7

CONCENTRATION UNITS:

Number TICs found: 15 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000095-36-3	1,2,4-Trimethylbenzene	10.04	54	JN
2. 002039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	12.78	54	JN
3. 000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	12.98	40	JN
4. 000629-50-5	Tridecane	14.82	61	JN
5. 000264-09-5	Benzocycloheptatriene	15.33	48	JN
6. 000629-59-4	Tetradecane	16.30	81	JN
7. 000575-37-1	Naphthalene, 1,7-dimethyl-	16.65	41	JN
8. 000581-40-8	Naphthalene, 2,3-dimethyl-	16.87	51	JN
9. 000638-36-8	Hexadecane, 2,6,10,14-tetrameth	17.11	40	JN
10. 000629-59-4	Tetradecane	17.58	69	JN
11. 000544-76-3	Hexadecane	18.74	74	JN
12. 000629-78-7	Heptadecane	19.78	61	JN
13. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.83	38	JN
14. 000593-45-3	Octadecane	20.74	52	JN
15. 000593-45-3	Octadecane	21.64	44	JN



SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461  
 Project 100004 Case No.: 5386 Location BI.748 SDG No.: \_\_\_\_\_  
 Lab File ID: BNA03835.D DFTPP Injection Date: 4/24/00  
 Instrument ID: BNA#2 DFTPP Injection Time: 9:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	53.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 Relative abundance	47.4
70	Less than 2.0% of mass 69	0.3 ( 0.6)1
127	25.0 - 75.0% of mass 198	50.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	21.6
365	Greater than 0.75% of mass 198	2.5
441	Present, but less than mass 443	12.7
442	40.0 - 110.0% of mass 198	86.3
443	15.0 - 24.0% of mass 442	16.2 ( 18.8)2

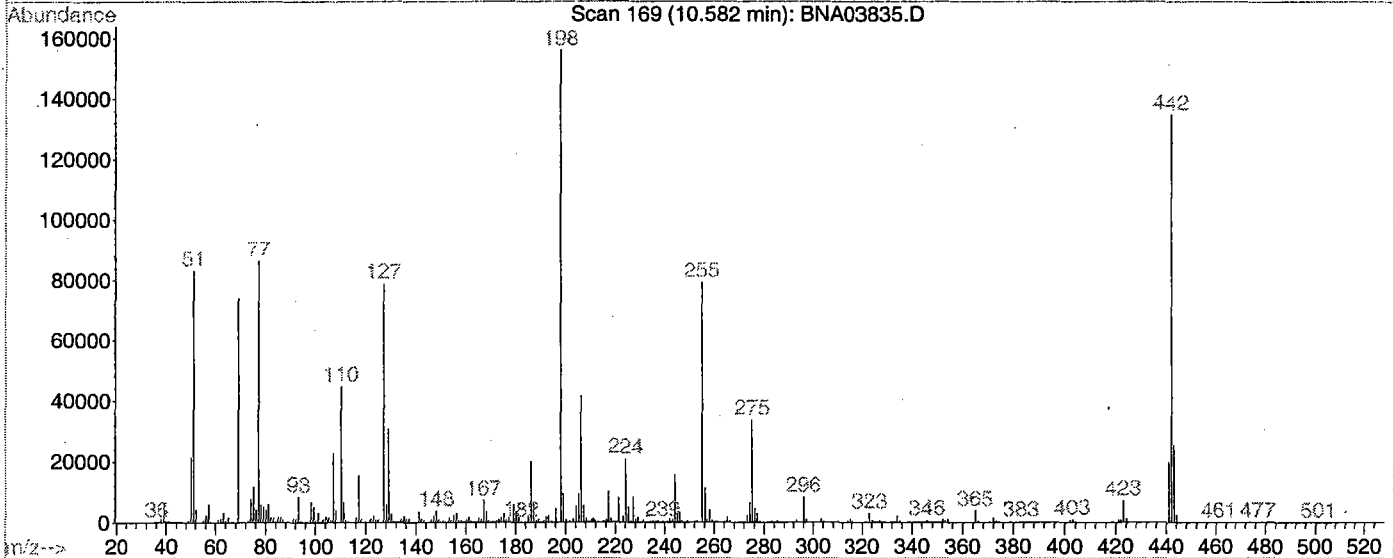
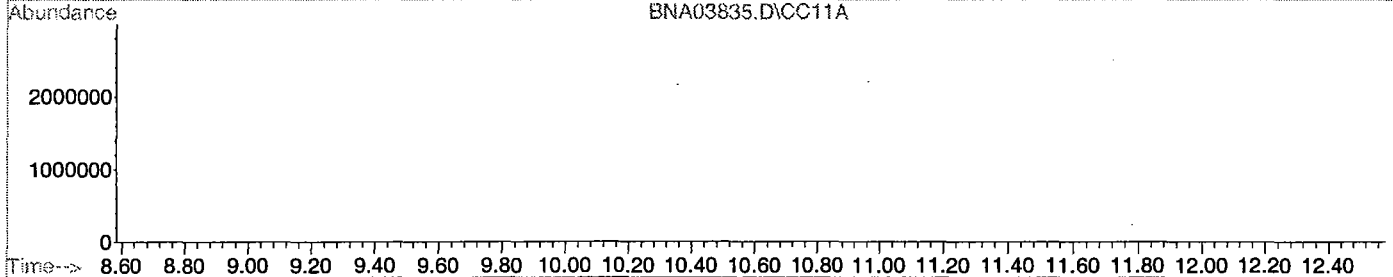
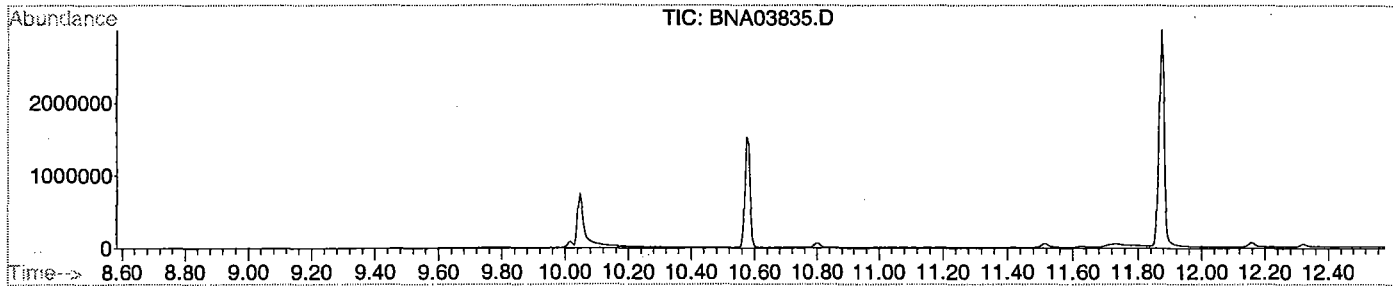
1-Value is % mass 69

2-Value is % mass 442

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	50 PPM STD	BNA03836.D	4/24/00	10:20
02	SSTD120	120 PPM STD	BNA03837.D	4/24/00	11:08
03	SSTD080	80 PPM STD	BNA03838.D	4/24/00	11:56
04	SSTD020	20 PPM STD	BNA03839.D	4/24/00	12:44
05	SSTD010	10 PPM STD	BNA03840.D	4/24/00	13:33

Data File : C:\HPCHEM\1\DATA\000424\BNA03835.D Vial: 99  
 Acq On : 24 Apr 2000 9:52 am Operator: Bhaskar  
 Sample : DFTEP.TUNE Inst : GC BNA 2  
 Misc : 50 NG/2UL Multiplr: 1.00  
 MS Integration Params: RTEINT.P GC Integration Params: rteint2.p  
 Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)  
 Title : BNA Calibration



Spectrum Information: Scan 169

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.3	83272	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.4	74024	PASS
70	69	0.00	2	0.6	429	PASS
127	198	40	60	50.5	78872	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	156096	PASS
199	198	5	9	6.1	9527	PASS
275	198	10	30	21.6	33680	PASS
365	198	1	100	2.5	3856	PASS
441	443	1	99	78.2	19768	PASS
442	198	40	100	86.3	134720	PASS
443	442	17	23	18.8	25288	PASS

000059

# LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

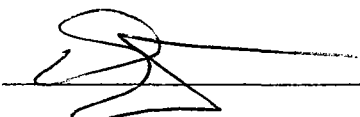
The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements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

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

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

Laboratory Manager or Environmental Consultant's Signature

Date 5/18/00



Laboratory Certification #13461

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

## Laboratory Authentication Statement

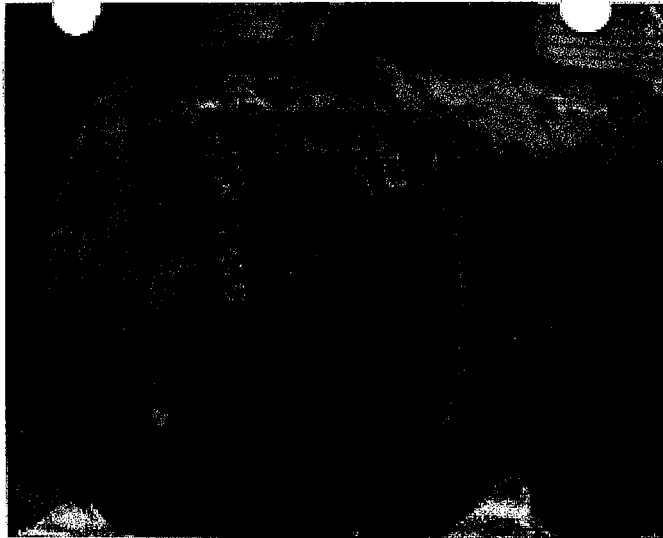
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information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



Daniel K. Wright  
Laboratory Manager

000087

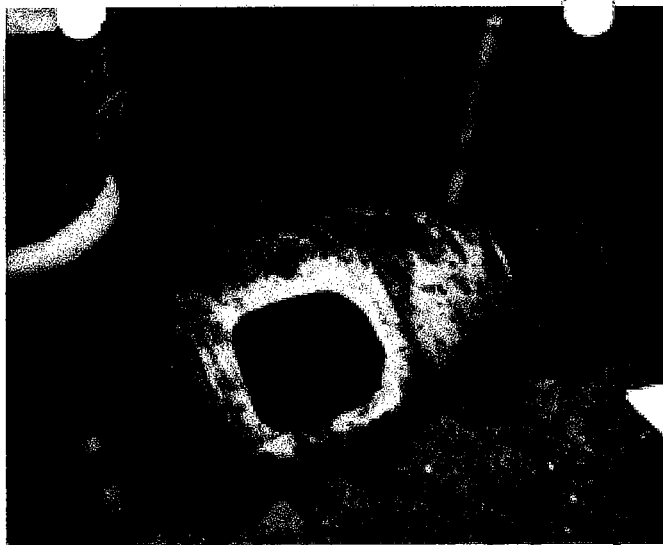
**APPENDIX G**  
**PHOTOGRAPHS**



B. 748

4-8-96

1340



BLOG. 748

4-8-96

1155

APRIL 8, 1996

# PHOTOGRAPHIC LOG

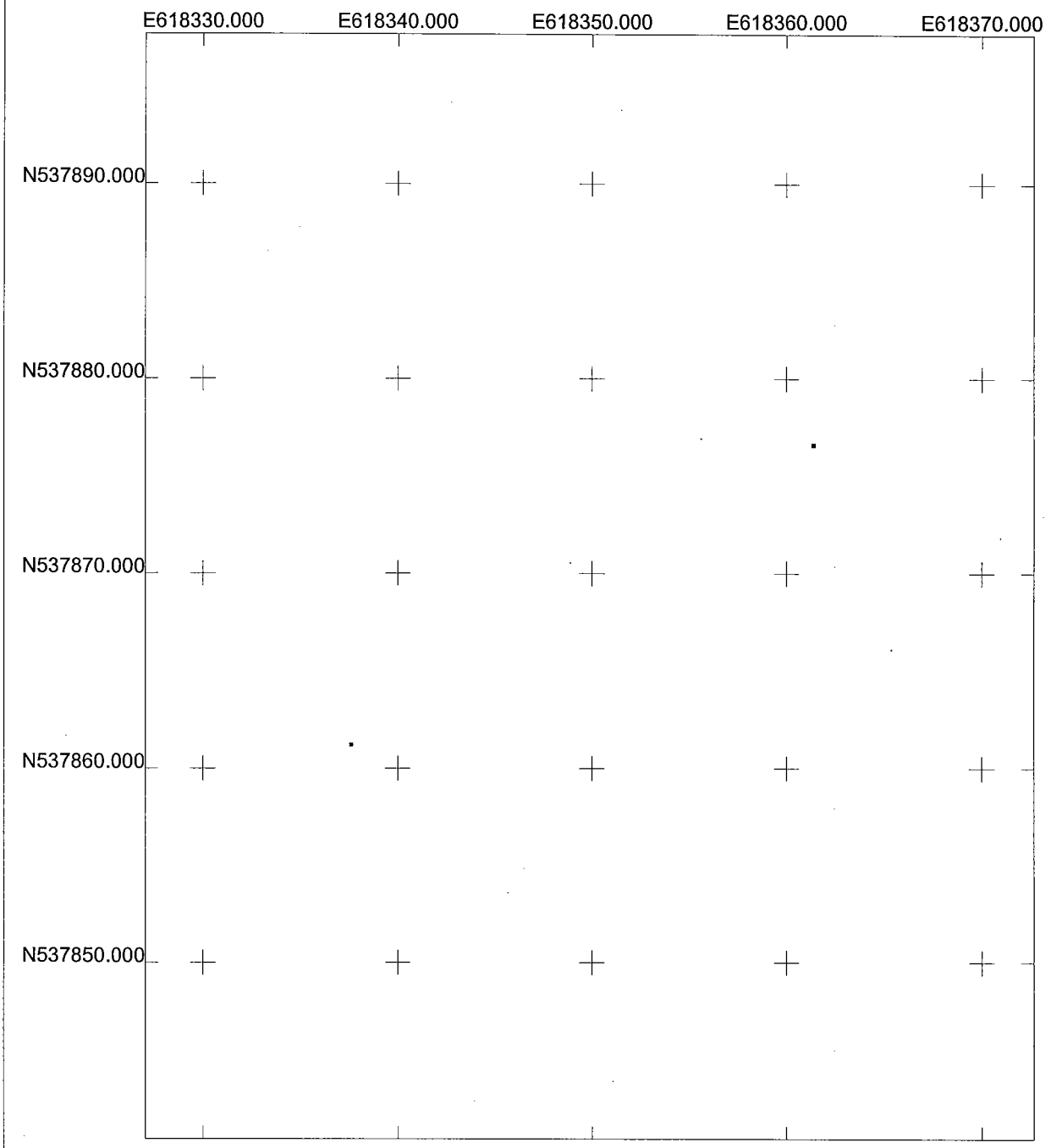
UST NO. 81533-122

Building 748  
Main Post-West  
Fort Monmouth

VERSAR  
Engineers, Managers, Scientists & Planners  
Bristol, PA

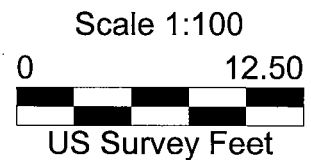
**APPENDIX H**

**ELECTRONIC DATA DELIVERABLES**



## .Bldg. 748 UST Ground Water Sample GPS Map

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



r070714e.cor  
7/10/2000  
Pathfinder Office  
 **Trimble**



**BLDG. 748 UST GROUND WATER SAMPLE GPS POSITION & OORDINATES**

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

( IN US SURVEY FEET )

**SAMPLE POINT**

<b><u>POSITION / DESC.</u></b>	<b><u>Y COORD. ( NORTHING )</u></b>	<b><u>X COORD. ( EASTING )</u></b>
748 GW ( GW denote <u>G</u> round <u>W</u> ater )	537876.627	618361.347

**REFERENCE POINTS**

<b><u>POSITION / DESC.</u></b>	<b><u>Y COORD. ( NORTHING )</u></b>	<b><u>X COORD. ( EASTING )</u></b>
FIRE HYDRANT	537861.247	618337.571