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Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 810 Main Post-West Area

NJDEP UST Registration No. 81533-131

January 2000

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UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 810

MAIN POST-WEST AREA NJDEP UST REGISTRATION NO. 81533-131

JANUARY 2000

PREPARED FOR:

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

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PROJECT NO. 4435-018

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EXECUTIVE SUMMARY

UST Closure

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On April 21, 1998, a steel underground storage tank (UST) was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) closure procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-131 (Fort Monmouth ID No. 810), was located northeast of Building 810. UST No. 0081533-131 was a 1,000-gallon #2 fuel oil UST. The fill port was located directly above the tank.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes. Numerous holes were noted in the UST. Soils at the location of the holes were dark in color and appeared to be contaminated. On May 4,1998, potentially contaminated soil was removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 362.48 mg/kg. Groundwater was encountered at 4.5 feet below ground surface and no sheen was observed.

All post excavation soil samples collected from the UST excavation at Building 810 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition.

In response to the observation of potentially contaminated soil and the potential of groundwater contamination, two (2) groundwater samples were collected at Building 810. On November 6, 1999, and December 11, 1999, Building 810 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).

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No further action is proposed in regard to the closure and site assessment of UST No. 81533-131 at Building 810.

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1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

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ة. م One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-131, was closed at Building 810 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on April 21, 1998. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-131 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. 81533-131 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. 81533-131 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.

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1.2 SITE DESCRIPTION

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Building 810 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-131 was located northeast of Building 810 and appurtenant copper piping ran approximately nine (9) feet southwest from the excavation to Building 810. The fill port area was located directly above the tank. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 810. 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, mediumto-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

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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 810 is located approximately 1,200 feet south of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 810 is anticipated to be to the north.

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1.3 HEALTH AND SAFETY

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

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. Numerous holes were observed during the inspection by the Sub-Surface Evaluator. Soils at the location of the holes were dark in color and appeared to be contaminated. On May 4,1998, potentially contaminated soil was removed from the excavation area. In total, approximately 15 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area. Soil screening was also performed along the piping run associated with the UST closure. No contamination was noted anywhere along the piping length. Groundwater was encountered at 4.5 feet below ground surface and no sheen was observed. See Figure 3 for a cross-sectional view of the excavated area.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

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

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

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1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, approximately 15 cubic yards of potentially contaminated soil were removed from the UST excavation. All potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to the soil staging area. Soils that did not exhibit signs of contamination were used as backfill following the removal of the UST. Groundwater was encountered at 4.5 feet below ground surface and no sheen was observed.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

- Subsurface Evaluator: Charles Appleby Employer: U.S. Army, Fort Monmouth Phone Number: (908) 532-0989
 NJDEP Certification No.: 2056
- Analytical Laboratory: U.S.Army Fort Monmouth Environmental laboratory Contact Person: Daniel K. Wright Phone Number: (908) 532-4359 NJDEP Company Certification No.: 13461
- Hazardous Waste Hauler: Casie Protank Environmental Services Contact Person: Dan Scoleri Phone Number: (609) 696-4401 NJDEP Company Certification No.: 16931

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank exhibited evidence of potential contamination. OVA readings taken during the assessment were non-detect. Approximately 15 cubic yards of potentially petroleum contaminated soil were removed from the excavated area and transported to the Fort Monmouth petroleum contaminated soil holding area. Soils were removed from the excavation until no evidence of contamination remained. Groundwater was encountered at 4.5 feet below ground surface and no sheen was observed.

2.3 SOIL SAMPLING

On April 28, 1998, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, and DUP B were collected from a total of three (3) locations of the UST excavation. Test pit sample A was collected at a depth of 6.0 feet bgs. Samples B, C, and DUP B were collected along the excavation floor at a depth of 6.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

On May 6, 1998, following the removal of potentially contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, E, F, and DUP A were collected from a total of six (6) locations of the UST excavation. Samples A and DUP A were collected along the excavation floor at a depth of 7.0 feet bgs. Sidewall samples B, C, D, and E were collected at a depth of 4.0 feet bgs Sample F was collected along the former piping length of the excavation, which was approximately thirteen (13) feet in length. The piping sample was collected at a depth of 2.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

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

2.4 GROUNDWATER SAMPLING

On November 6, 1999, and December 11, 1999, Building 810 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.

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3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

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To evaluate soil conditions following removal of the UST and associated piping, postexcavation soil samples were collected on April 28, 1998, and May 6, 1998 from a total of nine (9) locations. All samples were analyzed for TPHC and total solids. The postexcavation 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 28, 1998, and May 6, 1998, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Soil samples, which were collected after the removal of the potentially contaminated soil, contained TPHC concentrations ranging from non-detect to 362.48 mg/kg.

3.2 GROUNDWATER SAMPLING RESULTS

No compounds were detected in the samples collected from Building 810 on November 6, 1999, and December 11, 1999.

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 November 6, 1999, and December 11, 1999, 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. 81533-131 at Building 810.

3.3 CONCLUSIONS AND RECOMMENDATIONS

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The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 810 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 810 on November 6, 1999, and December 11, 1999, groundwater quality at Building 810 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. 81533-131 at Building 810.

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SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING 810, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 1 of 3					<u></u>	
Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
**A	4/28/98	4/29/98	Soil	Post-Excavation	ТРНС	OQA-QAM-025
**B	4/28/98	4/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
**C	4/28/98	4/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
**DUP B	4/28/98	4/29/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

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TPHC Total Petroleum Hydrocarbons Sample was further remediated and resampled **

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SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING 810, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Sample ID Date of Date Analysis Matrix Sample Type Analytical Parameters* NJDEP Method Collection Started 5/6/98 5/7/98 Soil Post-Excavation TPHC OQA-QAM-025 Α В 5/6/98 5/7/98 Soil Post-Excavation TPHC OQA-QAM-025 С 5/6/98 5/7/98 Soil Post-Excavation TPHC OQA-QAM-025 D 5/6/98 5/7/98 Soil Post-Excavation TPHC OQA-QAM-025 Soil Post-Excavation TPHC OQA-QAM-025 Ε 5/6/98 5/7/98 F 5/6/98 5/7/98 Soil Post-Excavation TPHC OQA-QAM-025 TPHC DUP A 5/6/98 5/7/98 Soil Post-Excavation OQA-QAM-025

Note:

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* TPHC Total Petroleum Hydrocarbons

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#### SUMMARY OF SAMPLING ACTIVITIES BUILDING 810, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 3 of 3

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
4921.01	11/6/99	11/9/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
5007.01	12/11/99	12/13/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:

*VOCs: Volatile Organic Compounds plus 15 tentatively identified compounds

Semivolatile organic compounds plus 15 tentatively identified compounds Passively Placed Narrow Diameter Point *SVOCs:

**PPNDP:

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#### TABLE 2

#### POST-EXCAVATION SOIL SAMPLING RESULTS BUILDING 810, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

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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/6.0'=	3515.01	4/28/98	4/29/98	Total Solid			82.93 %		
webstra (C. 0.)	3515.02	4/28/08	4/20/08	TPHC Total Solid	185	yes	ND	10,000	No
***B/6.0'=	3513.02	4/28/98	4/29/98	Total Solid TPHC		 Yes	83.27 % 2851.46		 No
***C/6.0'=	3515.03	4/28/98	4/29/98	Total Solid			80.00 %		
		Har an		TPHC	189	Yes	12887.28	10,000	Yes
***DUPB/6.0'=	3515.04	4/28/98	4/29/98	Total Solid			83.15 %	-	
			12770	TPHC	185	yes	3459.59	10,000	No

Note:

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

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#### POST-EXCAVATION SOIL SAMPLING RESULTS BUILDING 810, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 2 of 2

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Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/7.0'=	3549.01	5/6/98	5/7/98	Total Solid			81.70 %		
				TPHC	190.	yes	ND	10,000	No
B/4.0'=	3549.02	5/6/98	5/7/98	Total Solid		·	82.93 %		
				TPHC	189	Yes	ND	10,000	No
C/4.0'=	3549.03	5/6/98	5/7/98	Total Solid			85.83 %		
				TPHC	182	Yes	ND	10,000	No
D/4.0'=	3549.04	5/6/98	5/7/98	Total Solid			80.90 %		
				TPHC	192	yes	ND	10,000	No
E/4.0'=	3549.05	5/6/98	5/7/98	Total Solid			81.68 %		
				TPHC	189	yes	ND	10,000	No
F/2.0'=	3549.06	5/6/98	5/7/98	Total Solid			86.02 %		
11210				TPHC	175	yes	ND	10,000	No
DUPA/7.0'=	3549.07	5/6/98	5/7/98	Total Solid			83.32 %		
				TPHC	180	Yes	362.48	10,000	No

Note:

*

Total Solid results are expressed as a percentage. NJDEP Residential Direct Contact soil cleanup criteria for total organics **

1.03

Not detected above stated method detection limit ND

TPHC Total Petroleum Hydrocarbons

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## Table 3VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name	: <u>FMETL</u>	NJDEP #	13461	Matrix	: (soil/water) WAT	TER
Date Samp	oled: <u>11/6/99</u>	Location	<u>810</u>	Lab Sa	ample ID: <u>4921.(</u>	)1(Bldg 810)
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	по
75-35-4	1, 1-Dichloroethene	0.24	Not Detected		2	no
67-64-1	Acetone	1.36	Not Detected		700	no
75-15-0	Carbon Disulfide	0.46	Not Detected		nle	по
75-09-2	Methylene Chloride	0.24	Not Detected		2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected		100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	no
108-05-4	Vinyl Acetate	0.78	Not Detected		nle	no
78-93-3	2-Butanone	0.62	Not Detected		300	по
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected		10	по
67-66-3	Chloroform	0.30	Not Detected		6	по
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	'	30	по
56-23-5	Carbon Tetrachloride	0.47	Not Detected	-	2	no
71-43-2	Benzeze	0.23	Not Detected		1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	no
79-01-6	Trichloroethene	0.23	Not Detected		1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected		1	no
75-27-4	Bromodichloromethane	0.55	Not Detected		1	по
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected		nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected		nle	no
			-			<u> </u>

	2 of 8			Table 3			
сщ		VOLATILE	ORGANIO	CS ANALYSI	S DATA SH	EET	
	Lab Name:	FMETL	NJDEP #	<u>13461</u>	Matrix	: (soil/water) <u>WA</u> T	<u>rer</u>
	Date Sampled	1: <u>11/6/99</u>	Location	<u>810</u>	Lab Sa	mple ID: <u>4921.0</u>	01(Bldg 810)
	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
kurren erald	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
l and a second and a	127-18-4	Tetrachloroethene	0.32	Not Detected		1	no
	591-78-6	2-Hexanone	0.71	Not Detected		nle	no
Ri - I II-	126-48-1	Dibromochloromethane	0.86	Not Detected		10	no
. B.	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
,r= aj	1330-20-7	o-Xylene	0.62	Not Detected		nle	по
n Barrentalill	100-42-5	Styrene	0.56	Not Detected		100	no
	75-25-2	Bromoform	0.70	Not Detected		4	no
- 1	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
i - 1 Puttu	106-46-7	1,4-Dichlorobenzene	0.57	Not Detected		75	no
ΕĴ	95-50-1	1,2-Dichlorobenzene	0.64	Not Detected		600	no

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Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	<u>13461</u>	Matrix: (soil/water) WATER
Date Sampled:	11/6/99	Location:	<u>810</u>	Lab Sample ID: <u>4921.01(Bldg 810)</u>

CAS NO. COMPOUND NAME

MDL (ug/L)

RESULTS QUALIFIER REGULATORY EXCEEDS LEVEL(ug/L) CRITERIA

		(ug/L)		 LEVEL(ug/L)	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	nö
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	Not Detected	 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

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 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	<u>13461</u>	Matrix: (soil/water) WATER		
Date Sampled: <u>11/6/99</u>		Location:	<u>810</u>	Lab Sample ID: <u>4921.01(Bldg 810</u>		
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	Not Detected		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	Not Detected		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	Not Detected		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	Not Detected		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	по
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	по
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

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#### Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	13461	Matrix	: (soil/water) WAT	ER
Date Samp	led: <u>12/11/99</u>	Location:	<u>810</u>	Lab Sa	ample ID: <u>5007.0</u>	1(Bldg 810)
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected		50	no
107131	Acrylonitrile	2.78	Not Detected		50	no
75650	tert-Butyl alcohol	8.52	Not Detected	·	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle	no
108203	Di-isopropyl ether	0.25	Not Detected	-	nle	no
	Dichlorodifluoromethane	1.68	Not Detected		nle	по
74-87-3	Chloromethane	1.16	Not Detected		30	по
75-01-4	Vinyl Chloride	1.06	Not Detected		5	no
74-83-9	Bromomethane	1.10	Not Detected		10	no
75-00-3	Chloroethane	1.01	Not Detected		nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected		nle	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

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## Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	13461	Matrix: (soil/water) WATER			
Date Sampled: <u>12/11/99</u>		Location:	<u>810</u>	Lab Sample ID: <u>5007.01(Bldg 810)</u>			
CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA	
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected		400	no	
108-88-3	Toluene	0.37	Not Detected	-	1000	no	
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected		nle	no	
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected		3	no	
127-18-4	Tetrachloroethene	0.32	Not Detected		1	no	
591-78-6	2-Hexanone	0.71	Not Detected		nle	no	
126-48-1	Dibromochloromethane	0.86	Not Detected		10	no	
108-90-7	Chlorobenzene	0.39	Not Detected		4	no	
100-41-4	Ethylbenzene	0.65	Not Detected		700	no	
1330-20-7	m+p-Xylenes	1.14	Not Detected		nle	no	
1330-20-7	o-Xylene	0.62	Not Detected		nle	no	
100-42-5	Styrene	0.56	Not Detected		100	no	
75-25-2	Bromoform	0.70	Not Detected		4	no	
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected		2	no	
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected		600	no	
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected		75	no	
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected		600	no	

## Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	<u>13461</u>	Matrix:	(soil/water) WAT	ER
Date Sample	ed: <u>12/11/99</u>	Location:	810	Lab Sa	mple ID: <u>5007.01</u>	l (Bldg 810)
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	по
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	по
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	по
91-57-6	2-Methylnaphthalene	1.08	Not Detected		nle	no
77-47-4	Hexachlorocyclopentadiene	1.32	Not Detected		. 50	по
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

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## Table 3 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:	FMETL	NJDEP #	<u>13461</u>	Matrix	k: (soil/water) <u>WA</u> T	TER
Date Sampled	l: <u>12/11/99</u>	Location:	<u>810</u>	Lab S	ample ID: <u>5007.0</u>	1(Bldg 810)
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	
99-09-2	3-Nitroaniline	0.79	Not Detected		nle	no
83-32-9	Acenaphthene	1.10	Not Detected		400	no
132-64-9	Dibenzofuran	1.00	Not Detected		nle	no
121-14-2	2,4-Dinitrotoluene	0.87	Not Detected		10	по
84-66-2	Diethylphthalate	1.62	Not Detected		5000	no
86-73-7	Fluorene	0.99	Not Detected		300	по
7005-72-3	4-Chlorophenyl-phenylether	1.10	Not Detected		nle	no
100-01-6	4-Nitroaniline	1.05	Not Detected		nie	
86-30-6	n-Nitrosodiphenylamine	1.01	Not Detected		20	no
103-33-3	Azobenzene	0.67	Not Detected		nle	nö
101-55-3	4-Bromophenyl-phenylether	0.76	Not Detected		nle	по
118-74-1	Hexachlorobenzene	0.94	Not Detected		10	no
85-01-8	Phenanthrene	1.23	Not Detected		nle	по
120-12-7	Anthracene	1.12	Not Detected		2000	no
84-74-2	Di-n-butylphthalate	1.70	Not Detected		900	nö
206-44-0	Fluoranthene	1.64	Not Detected		300	ΠÔ
92-87-5	Benzidine	4.18	Not Detected		50	nô
129-00-0	Pyrene	1.25	Not Detected		200	по
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	ло
205-99-2	Benzo[b]fluoranthene	1.25	Not Detected		10	no
207-08-9	Benzo[k]fluoranthene	1.29	Not Detected		2	по
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
		0.01				no
53-70-3	Dibenz[a,h]anthracene	0.64	Not Detected		20	

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## FIGURES

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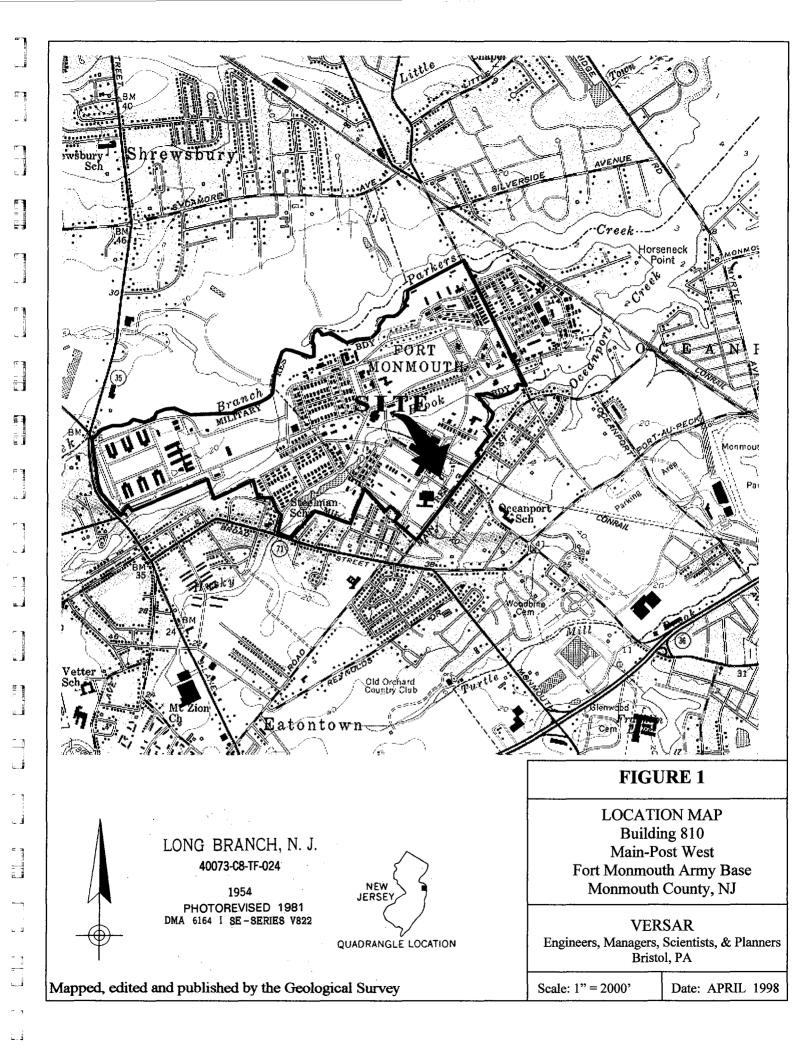
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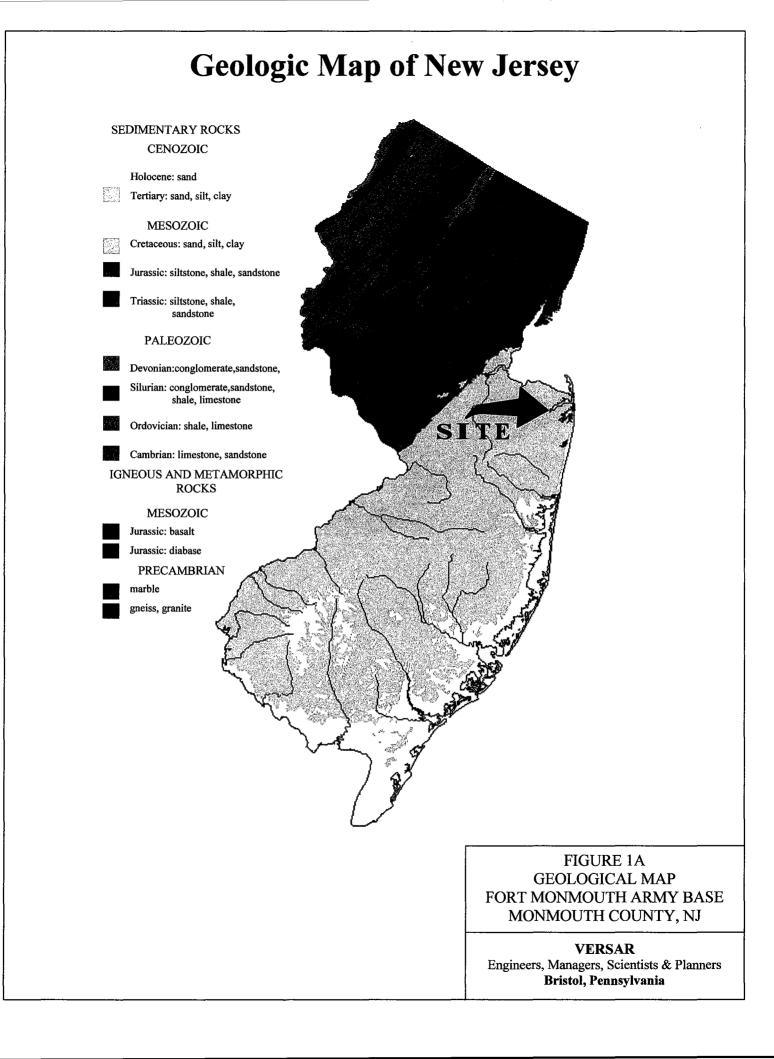
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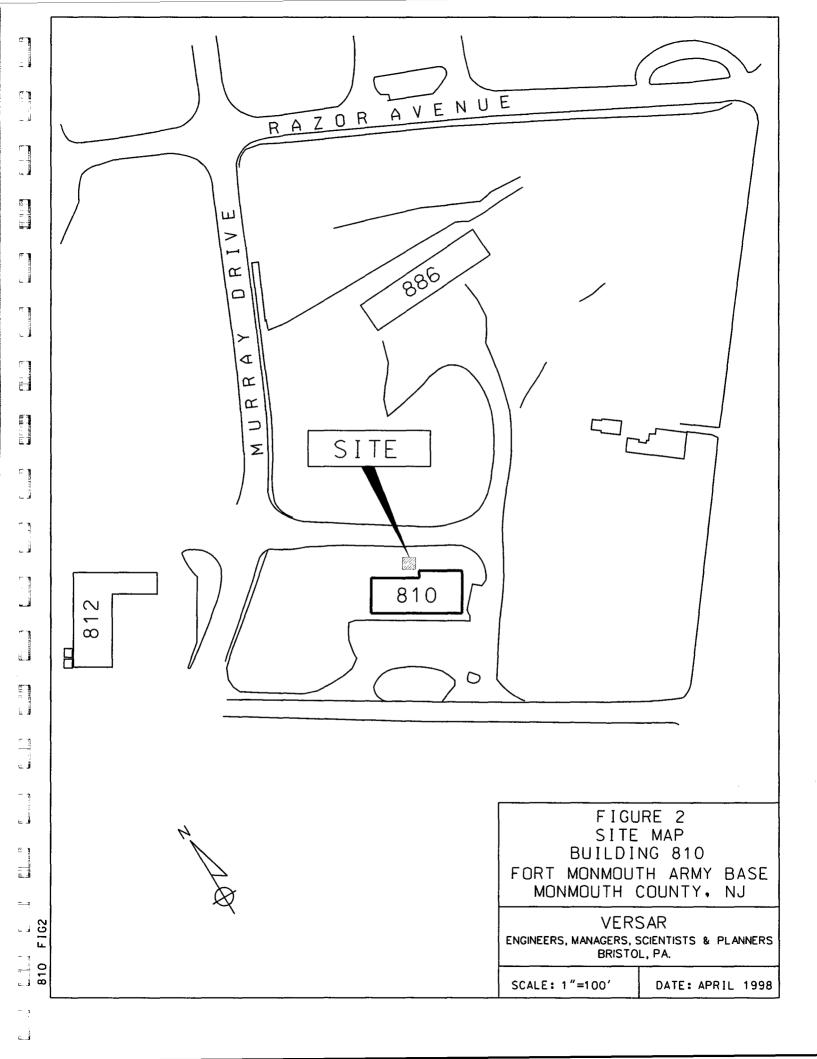
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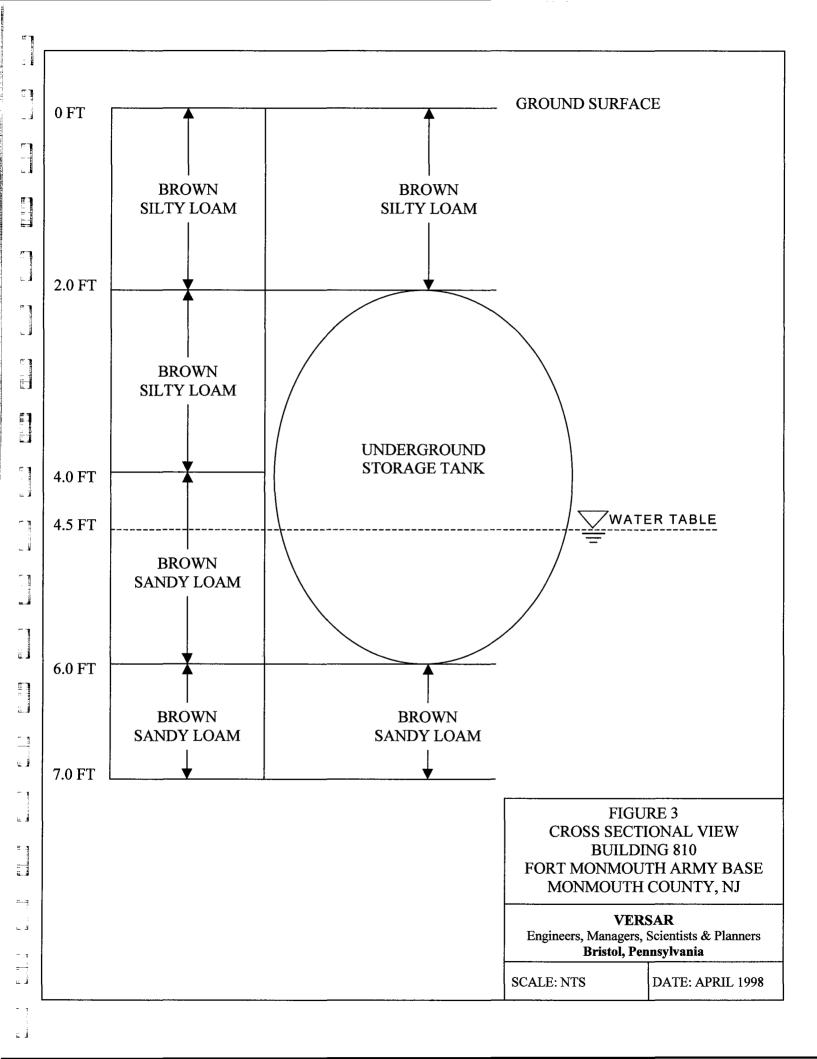
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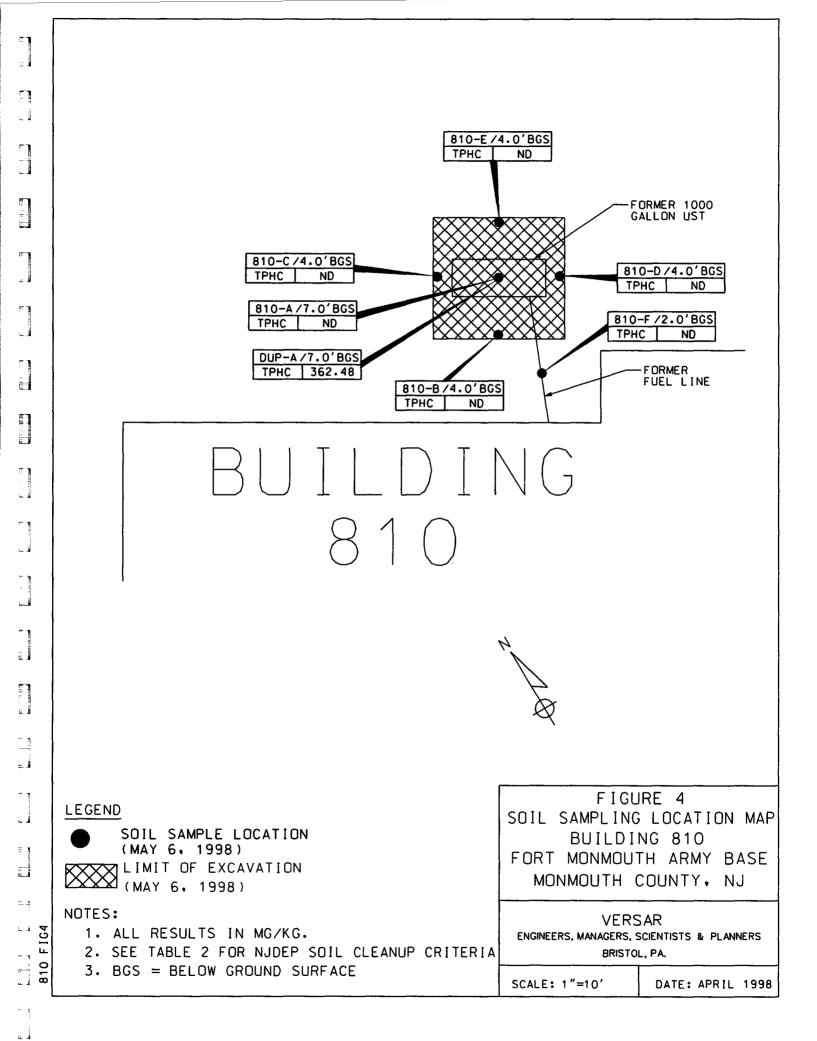
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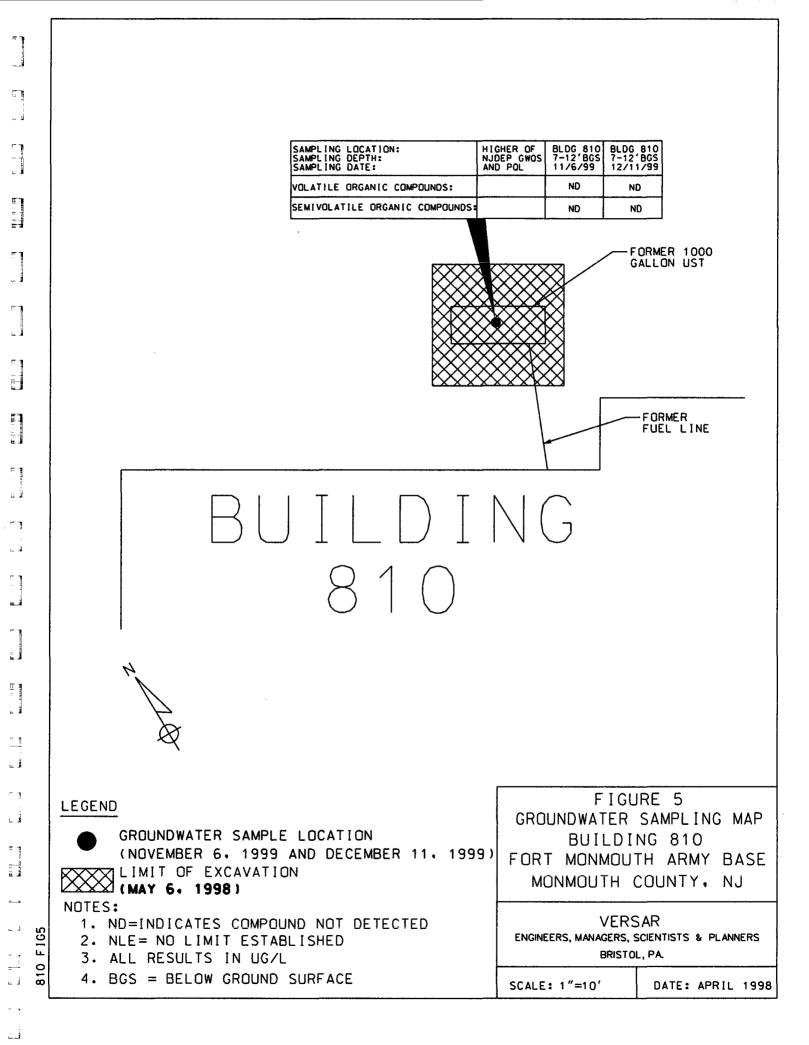
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## **APPENDIX A**

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## NJDEP-STANDARD REPORTING FORM

NEW JERSEY DEP/       WENT OF ENVIRONMENTAL PROTECT         DIVISION OF HESPONSIBLE PARTY SITE REMEDIATION         BUREAU OF APPLICABILITY AND COMPLIANCE         Registration and Billing Unit         CN 028, Trenton, N.J. 08625-0028         1-609-984-3156         UNDERGROUND STORAGE TANK         FACILITY UST #	
If "C" is checked above, please check the appropriate type of change(s) below         Facility Name and/or Address Change         Owner Name and/or Address Change         Facility Operator and/or Address Change         Owner Contact Person Change         Owner Contact Person Change              If "C" is checked above, please check the appropriate type of change(s) below           Facility Name and/or Address Change       Owner Contact Person Change       Owner Contact Person Change           X Closure (Complete Question #13)	
SECTION A - GENERAL FACILITY INFORMATION	
1. Facility Name Firm man north 111111111111111111111111111111111111	
2. Facility Location MAINPOST, West, West, Industrie	÷
3. Facility Operator	
	:
(if different than NUMBER AND STREET #2) #2)	
	•
4. Tank Owner 5. Tank Owner	
Address	
	1842 - 5863 - 604 -
Contact Person	
(Tank Owner) Tele. No.(Area Code) (Edension)	
<ul> <li>7. EPA ID #</li> <li>8. Total number of regulated underground storage tanks at facility (Complete Section B for each tank)</li> </ul>	

THE REPORT OF A DESCRIPTION OF A DESCRIP

9. Total regulated underground storage ta	a. ``	paci	ity at faci	lity (ga	llon	s) [					•••	د ۲
10. Facility Type: A State B Commercial/ Industrial	ŝ	] Co Fe	ounty/Mu ederal	inicipa	F	Cha Res	ritable idence	/ Public Sch	xol G H	Farm (	as define 3.1 et seq	d in N.J.S.A.
11. Is a copy of the facility site plan submit	ted wi	ith th	is registr	ation p	ursi	uant to N.	.A.C. 7	':14B-2? [	YES			- 7
SECTION B - SPECIFIC TANK INFO	DRM/	ATIC										- 1
ALL underground tanks, including those tal 9/3/86) must be registered. Report all tank	ken ou /pipino	it of e g sta	operation tus chân	ı (UNL ges un	ESS less	S THE TAN previous	IK WAS y subm	S REMOVE[ iitted.	FROM	THE GROL	JND PRIC	OR TO
1. Tank Identification Number	7	ANK	NO.	T	ANK	CNO.	TA	NK NO.	TAN	K NO.		VK NO.
2. CAS Number (hazardous substances only)				],,								
3. Date Tank Installed (Month/Day/Year)	Mo.	Day	Year	Mo.	Day	Year	Mo. Di	ay Year	Mo. Day	Year	Mo. Day	Year
4. Tank Size (gallons)					7							
5. Tank Contents (Mark one "X" for each tank)	╢┈┸╴			$\mathcal{H}$	<u> </u>	┶┈┶┈┧		<u>t.                                    </u>	╉╡ _{──} ┤──┤── ┨	_┖_┖	<u>╉┸╼┵</u> ╶┴┈	┷╼┶╼┩┑
A. Leaded gasoline	ł		1	1		1		$\square$	[_ Г	7	I Г	ل ٦
B. Unleaded gasoline				1								
C. Alcohol endriched gasoline	1											
D. Light diesel fuel (No. 1-D)												-
E. Medium diesel fuel (No. 2-D)		Τ									· ·	j,
F. Waste Oil	1											
G. Kerosene (No. 1)	<u> </u>		ļ	<u> </u>				$\downarrow$				
H. Home heating oil (No. 2)			ļ	<u></u>				<u>   </u>				
J. Heating oil (No. 4)	<u> </u>			↓	1			+ +				I
K. Heavy heating oil (No. 6)	ļ		ļ	ļ				ŀ				
L. Aviation fuel	ļ		ļ	ļ				╄╌┝────	<b> </b>			
M. Motor oil	<b>_</b>	_	<u> </u>	<u>+</u>	_	_ <u> ·</u>		┝-┟			┠━━━━┼	
N. Lubricating oil	<b> </b>		ļ			+		<u>↓_</u> ↓	<b> </b>		┟──┼	^{F-}
P. Sewage	<u> </u>		ļ	- <b> </b>				┟.┦			┣───┼	
Q. Sewage sludge	<u> </u>		<u> </u>			<u> </u>		<u>}</u>	<b> </b> l			Ĩ
R. Other hazardous substances (specify)	┨────			+					<b> </b>		<b>}</b>	<b></b>
S. Hazardous waste (specify ID number)	<u> </u>			- <u> </u>					<b> </b>		<u> </u>	<b>~</b>
T. Mixtures (please specify)	ļ			+		····			<b> </b>		┢	
U. Emergency spill tank (specify substance)	∔								<u> </u>		<u> </u>	
V. Other petroleum products (please specify)	4								<u> </u>		╞╌╌╌	
W. Other (please specify)	<u> </u>			+				<u>*</u>			<u> </u>	ii
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tar	<b>וא</b> ר	Piping		1 <b>k</b> 7	Piping	Tank	Piping	Tank	Piping	Tank	Piping
A. Bare Steel	╁┼╌	+	-+	╉─┼─	+	-+	+++	<del>    -</del>	╋╍╂╼╂╌	-++	┟╌┼╌┼╌	── <del>┤─</del> ┼──┤
B. Cathodically protected steel	╂╧╂╼	+		++	+		┝┼┼		┠╌┾╍┾╴		╊╌┼╌┾╌	
C. Fiberglass-coated steel D. Fiberglass-reinforced plastic	++	+		+-+-	<del> </del>	╶╼┼╴┼╺╌╸	┠╌┼╾┼	┉┼╍┼╌╴	┠╌┼╌┼		╊╼┼╼┼	╼ <u></u> ╋╼╋╋
E. Internally lined	╂╌┼─	+	╌┼╌┼──	╋╌┼╸	<del> </del>		┟╌┼─┼		╋╌┼╌┼╌		╋╌┼╾┼╾	── <del>──</del> ┨──
F. Other (please specify)	╁─└─	J		+	J	<u>ll.</u>	┟╌┶╍┶		╊╌└──┖─	ĹL	╉╍┵╌└┈	- I - I - I - I - I - I - I - I - I - I
	+			+							+	
7. Tank & Piping Structure	Tar	ık	Piping	Tan	K	Piping	Tank	Piping	Tank	Piping	Tank	Piping
(Mark one each for both tank & piping) A. Single wall	1	7			]						-	
B. Double wall	<del>┃</del>	+			1-	-+-+					<b>╆</b> ╼┼╾┼╾	
C. Other (please specify)	+-'-	<u> </u>		+	<u> </u>	<u></u>	┟╌┶╌┶	·	† <u>`</u>	<u>/</u>	<u>†</u>	
8. Type of Monitoring/Detection System	Tar		Piping	Tai		Piping	7	, Dining	7	Dini		
(Mark all that apply for both tank & piping)		-	- ihiiið		- <b>IR</b>	- ihii ið	Tank	Piping	Tank	Piping	Tank	Piping 🗟
A. Statistical Inventory Reconciliation												
B. Manual Tank Gauging												
C. Inventory Control		1										
D. Interstitial												
E. Precision Test												
F. Ground water observation wells												
G. Vapor observation wells												
H. In-tank (automatic) monitoring gauge		<u>_</u>					└┼┼					
J. Periodic Tank Test					1							

1		<del> </del>	······	r		T		r		T	
1	Tank Identification Number		K NO.	TAN	K NO.		<b>0.</b>				K NO.
f Benerit i Level A	8. Type of Monitoring/Detection System	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
-	K. None L Other (please specify)			┠╼└╌┟┈				<u> </u>			
	Overfill Protection (tank only)				<u> </u>			<u> </u>			
	(Mark one X for each tank)	1_	_		_	1					
<b></b>	A. Yes	<u> </u>		<b> </b>				ļ			
	B. No 10. Spill Containment Around Fill Pipe				<u> </u>	<u> </u> l		<u>├</u> I		<u> </u>	
	(Mark one X for each tank)		_	_							
L .	A. Yes	<b>↓</b>	]	[		ļ[		<b> </b> [	7	[[	<u> </u>
L 1 Marina	B. No	Tomla			Pining	Tark	Dining	Tonk	<b>Diala</b>		
നി	11. Tank Status (Mark one X for each tank) A. In-use	Tank	Piping	Tank		Tank	Piping	Tank	Piping	Tank	Piping
f Benatus	B. Empty less than 12 months										
	C. Empty 12 months or more	<b></b>			╧╾┨╼╴┟	┟┼┼╴					
	D. Emergency spill tank (sump) E. Emergency backup generator tank	╏╎╎		╏╴┤╴┼╌	-+	┟┼┼╴	╧┼═┼──	╞╌┽╌┼╴		┞╌┼╾┼─	
	F. Abandoned in Place						<u> </u>	╏╴┼╌		╞╴┼╌┼╌	- <u>+-</u> +
í ¶i	G. Removed										
. 8	H. Other (please specify)		, 1								
i i	12. If box 11B, C, or D above has been	Mo. Day	Year	Mo. Day	Year	Mo. Day	Year	No. Day	Year	Mo. Day	Year
1	marked, indicate the estimated date last used (month/day/year)	HI									
	13. Closure Information - Tank ID No.	BID TAN	K NO.	BIJ TANI		TAN	K NO.	TAN	IK NO.	TANK	NO.
					33						
			Year	Mo. Day	Year	Mo. Day	Year	Mo. Da	y Year	Mo. Da	y Year
ا ٿ.	A. Date abandoned in place										
- <b>1</b>	B. Date taken temporarily out of service				111	╏╌┼╌└	+				
	C. Date removed	014211	1998	0421	11998						
	D. Date of Sale or Transfer								<u> </u>		
alu seed	E. TMS # (if applicable)	l	- 11 ⁻¹				······································		، ، ، ، ، ،		
	F. ISRA # (if applicable)	Į									
: 7	SECTION C - FINANCIAL RESPONS	SIBILITY		· · · .	•	· · ·	- Mohalani ang la		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	n in Ar Ar Ar Da	e ang tarih. Masakaran ka
	Does this facility have a Financial Responsit			chanism a	s required	in 40 CF	R 280?	YES	<b>NO</b>		
	Please list the appropriate financial informat	ion below	•					y y an in the state 			
						· ·				· · · ·	
	Туре				• •	Carrier /	Issuing Ag	ency		· · · ·	e e stration. Na stration
]	<u> </u>	_/							\$		
	Effective Date Expiration D	ate			Policy N	lumber			An	nount	
	SECTION D - MONITORING SYSTE	MS									
	oes this facility have a release detection m	onitorina :	system wh	ich is in c	ompliance	with N.J.	.A.C. 7:14E	3-6?		YES	
	"No", please be aware that the facility mus								• <b></b> _	ann 🥌 🥌 Chàin Chin	-
	SECTION E - RECORDKEEPING/CO		ICE							an a	
÷ L			المهجب وسي	A	tool ont	<b>n nom</b> -1!:			)"	مو قلم ا	
٣	Please answer all the questions in this sections 1. Does this facility have cathodic prote		-	-		-	ance requi	as a INC	answert	YES	
- 2	If "Yes", are the systems properly op	perated an	nd maintair	ned pursu	ant to N.J./	A.C. 7:14				YES	
ۋ.	2. Are the performance claims and doct pursuant to N.J.A.C. 7:14B-5?	umentatio	n of monit	oring syst	ems mainta	ained by	the owner	or opera	tor	YES	
-	3. Are the proper monitoring, testing, sa	ampling, re	epair and i	nventory	records kep	ot on-site	pursuant	to	 		
	N.J.A.C. 7:148-5 and 6?			-	•					YES	
	<ol> <li>Is the proper Release Response Plan</li> <li>Does the facility have spill and over f</li> </ol>						-4?			YES YES	
	6. Have all Fill Ports been permanently									YES [	
. <i>i</i>				~							

	IMPORTANT INFORMATION	
FEE:	Please make checks payble to: "Treasurer, State of New Jersey". Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in NJ.A.C. 7:14B.	
	All Initial Registration fees are \$100 per facility.	71
PENALTY:	Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in NJS.A. 58:10A-10.	_ <u>-</u>
EMERGENCY:	If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day.	~1
UPGRADE EXEMPTION:	Residential heating oil underground storage tanks are exempt from all upgrade requirements.	
	DATES TO KNOW (critical deadlines)	ال
December 22, 1988	- All new federally regulated tank systems must have cathodic protection and spill/overfill protection.	<b></b> ]
September 4, 1990 -	- All new State-only regulated tank systems must have cathodic protection and spill/overfill protection.	1
December 22, 1990 -	- All federally regulated piping must have begun leak detection.	<b>ل</b> _چ
February 19, 1993 –	- All federally regulated tank systems must maintain financial responsibility assurance.	£
December 22, 1993 -	- All federally regulated tank systems must have begun leak detection.	
December 22, 1998 –	- All regulated tanks shall install cathodic protection and spill/overfill protection.	لي . ا

#### CERTIFICATIONS

NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

#### **CERTIFICATION NO. 1:**

Must be signed by the highest ranking individual at the facility with overall responsibility

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal 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 MM the penalties "

MR. JANS OFT	Mais all
(Typed / Printed Name)	(Signature)
Dir. Public Works	1/03/98
(Title)	(Date)

#### **CERTIFICATION NO. 2:**

Must be signed as follows:

- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal 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."

(Signature)

(Date)

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(Title)

#### **CERTIFICATION NO. 3:**

If applicable, must be signed by the individual who is certified to perform services.

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal 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 tÌ

he penaities.	Appleby	ENV. Prot. Spec.	Ch S	4/20/98
(Typed / Printed Name)	(Title 5, ARMY	)	(Signature) 2056	(Date)
	rm, if applicable)	(N	J. Certification Number)	

UST-021 (9/94)

(N.J. Certification Number)

## **APPENDIX B**

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## SITE ASSESSMENT SUMMARY

UST Site/	New Jersey Department of Environmental Protection Site Remediation Program Remedial Investigation Report Certification Form
<b>A.</b> Facility Name : <u>U.S. Army</u>	y Fort Monmouth New Jersey
Facility Street Address :_I	Directorate of Public Works Building 173
Municipality: Oceanport	tCounty : Monmouth
Block:I	Lot(s):Telephone Number :732-532-6224
<b>B.</b> Owner (RP)'s Name:	
Street Address:	City :
State:	Zip: Telephone Number :
Site Investigation Report (SIR) \$500 Fee Remedial Investigation Report (RIR) \$1000 Fee NA – Federal Agreement	<ul> <li>Assigned Case Manager : Ian Curtis, Federal Case Manager</li> <li>UST Registration Number : 81533-131 (7 digits)</li> <li>Incident Report Number (10 or 12 digits)</li> <li>Tank Closure Number : Federal Case Manager</li> </ul>
Name: Charles Appleby	rms to the specific reporting requirements of N.J.A.C. 7:26E
The attached report confo Name: <u>Charles Appleby</u> Firm: <u>U.S. Army Fort Mor</u>	strms to the specific reporting requirements of N.J.A.C. 7:26E       Yes No         Signature:       See signed subsurface removal log       UST Cert. No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No.:       2056         strms to the specific reporting requirements of N.J.A.C. 7:26E       Signature:       No::       No::       No::         strms to the specific reporting requirements of N.J.A.C. 7:       Signature:       No::       No::       No::         strms to the specific reporting requirements of N.J.A.C. 7:       Signature:
The attached report confo Name: <u>Charles Appleby</u> Firm: <u>U.S. Army Fort Mor</u> Firm Address: <u>Directorate o</u>	rms to the specific reporting requirements of N.J.A.C. 7:26E
The attached report confo Name: <u>Charles Appleby</u> Firm: <u>U.S. Army Fort Mor</u> Firm Address: <u>Directorate o</u> State: <u>NJ</u> 2	orms to the specific reporting requirements of N.J.A.C. 7:26E       Yes Not         Signature:       See signed subsurface removal log       UST Cert. No.:       2056         of Public Works       Building 173       City:       Fort Monmouth
The attached report confo Name: <u>Charles Appleby</u> Firm: <u>U.S. Army Fort Mor</u> Firm Address: <u>Directorate of</u> State: <u>NJ</u> (NOTE: Certification numbers <b>F. Certification by the Resp</b> The following certification sl 1. For a Corporation by a per resolution, certified as a tr 2. For a partnership or sole p 3. For a municipality, State, for a municip	arms to the specific reporting requirements of N.J.A.C. 7:26E       Yes Not         Signature: See signed subsurface removal log       UST Cert. No.: 2056         armouth       Firm's UST Cert. Number: NA-U.S. Army         of Public Works       Building 173         Zip:       07703         Telephone Number :       732-532-6224
The attached report confo Name: <u>Charles Appleby</u> Firm: <u>U.S. Army Fort Mor</u> Firm Address: <u>Directorate of</u> State: <u>NJ</u> (NOTE: Certification numbers <b>F. Certification by the Resp</b> The following certification sl 1. For a Corporation by a per resolution, certified as a tr 2. For a partnership or sole p 3. For a municipality, State, f "I certify under application and information, I significant civic committing a cr aware that if I k	signature:       See signed subsurface removal log       UST Cert. No.:       2056         nmouth       Firm's UST Cert. Number:       NA-U.S. Army         of Public Works       Building 173       City:       Fort Monmouth         Zip:       07703       Telephone Number :       732-532-6224         as required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)       Nonsible Party(ies) of the Facility:         hall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)]as follows:       erson authorized by a resolution of the board of directors to sign the document. A copy of the ue copy by the secretary of the corporation, shall be submitted along with the certification; or roprietorship, by a general partner or the proprietor, respectively; or federal or other public agency by either a principal executive officer or ranking elected Official penalty of law that I have personally examined and am familiar with the information submitted in this all attached documents, and that based on my inquiry of those individuals responsible for obtaining the believe that the submitted information is true, accurate, and complete. I am aware that there are are 1 penalties for knowingly submitting false, inaccurate, or incomplete information and that I am mime of the fourth degree if I make a written false statement which I do not believe to be true. I am also mowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

BLDG. #: 8/0 REG. #: 8/533 - /3/ CLOSURE #: DATE: 4/21/98 TOA: 1310 TOD: GOV. SSE: Chaples Heples NJDEP CERT. #: 2057 REMOVAL: CONTRACTOR: CLOSURE SUPERVISOR: Mary Demortion NJDEP CERT. #: WEATHER: Sum Carrow NJDEP CERT. #:	
ACTIVITY	Y E S N O
THE SUPERVISOR (CLOSURE CERT.) WAS ON SITE DURING ALL CLOSURE RELATED ACTIVITIES	1
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	~
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	V
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	40
A DISCHARGE WAS REPORTED TO THE NJDEP (609-292-7172), CASE#	WA
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	プム
GROUNDWATER WAS ENCOUNTERED AT $25$ FEET BG, A SHEEN (WAS NOT) OBSERVED ON GW	FRine
IF OVA/Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NB
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	ND
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	NB
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NB
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA.
THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	NA
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), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS(IN YDS ³ ), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	
CENECK ALL BOXES, LEAN Certify under penalty of law that tank decommissioning activities were per a compliance with N.J.A.C. 7:14B-9.2 (b)3 and 7:26 et seq I am aware that re significant penalties for submitting false, inaccurate, or inco- nformation, including fines and/or imprisonment.	forme

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## **APPENDIX C**

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## WASTE MANIFEST

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Ļ	MANIFEST N   J   3   2   1   0   0   3. Generator's Name and Mailing Address U.S. Army Com. E1	2 0 5 9 7 1 ^D	J3º 2 2	of			:			
	Hain Post Bldg 17				on-hazar Z020				ent Nu	mbe
	Fort Monmouth NJ				ate Gene	rator's IC	<del>, , ,</del>			,
4. Generator's Phone (732)       532-6223       c/o Issue Shirghio/         5. Transporter 1 Company Name       6. US EPA ID Number       , Joe FAllow										
	Casie Ecology Oil Salvage, Inc. N J D 0 7. Transporter 2 Company Name 8.	4 5 9 9 5 6 9 US EPA ID Numbe			ate Trans ensporter		1 6			1
	111				ansporter ste Trans,		1			
	9. Designated Facility Name and Site Address 10. Casie Ecology Oil Salvage, Inc. T/A	US EPA ID Numbe	r	E. Tra	nsporter'	s Phone				
	3209 N. MILL Rd / Casie Protank			G. St	ate Facili	y'sQ 61	4D1HI			
		D 0 4 5 9 9 5	6 9 3 12. Conti		cility's Ph		09) (	96-4	401	
	11. US DOT Description (Including Proper Shipping Name, Hazard Class,		No.	Туре	To Quai	tal	Unit Wt/Vol	Wa	L . aste No.	
	<ul> <li>Combustible liquid, n.o.s. (Fuel Oil NA1993, PGIII</li> </ul>	.)			122	370				
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	c.									
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Ì	J. Additional Descriptions for Materials Listed Above L,T %0il/sed. %wtr.			K. Ha	Indling Co	odes for	Wastes 	Listed A	bove .	<u>.</u> -
	а. с.		<u></u>	a	<u> </u>		c	1	<u> </u>	
	b. d.			b.	I	ł	d.	1	1	
	15. Special Handling Instructions and Additional Information									
				`	~~					
	a. 24 Hr. Emergency Response #609 696-4401 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of		NAER			l above ł				
	proper shipping name and are classified, packed, marked, and labeled, according to applicable international and national government regulati	, and are in all respects in	proper co	dition	for transp	ort by hi	ighway			
	I hereby certify that the above-named material is not hazardous waste as	defined by 40 CFR Part 26	51, 264 and	279 or a	iny applica	able state	aw.			
		10	<u> </u>		<b>)</b>			<u>\</u>		
	harts Appleby SELFM-PU-EV	Signature	, C	<u>/</u>	$\overline{}$			Month	Day N/I	<i>9</i> ?
	17. Transporter Acknowledgementol Receipt of Materials Pripted/Typed/Name		-/	2_	1	•			<u></u>	
	DOD. CORSIGLIA	Signature	Ins					Month OH	51/4	3
	18. Transporter 2 Acknowledgement of Receipt of Materials		$\sim$	5			· · ·			
	Printed/Typed Name	Signature					:	Month	Day	Yea
ſ	19. Discrepancy Indication Space						:			
							1			
					- 11		;			
	20. Facility Owner or Operator: Certification of receipt of non-hazardous mater Printed/Typed Name	rials covered by this manife Signature	est except a	s noted	n item 19	•	:	Month	Day	Yez
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lease type of	r print in block letters. (Form designed for us						
	MANIFEST AFIN	Generator's US EPA ID No.	ument Ne	2. Page of			
3. Ger	nerator's Name and Mailing Address	Army Com. Elec. Command		A. Non	-hazardous Ma		cument
	1911 POST C/0 J Hn: SELFM-RU-EV Fort				020 1 / Generator's ID	<u>382</u>	
1.1	nerator's Phone ( 732 ) 532-6223				AME	•	
	nsporter 1 Company Name	6. US EPA ID Numb		6. 61.14	Trans. ID		
7. Tra	e Ecology Uil Salvage, Ir nsporter 2 Company Name	nc NJD 0 4 5 9 9 5 6 9 8. US EPA ID Numb	er		sporter's Phone	<u>1 6 (7 (</u> (609)	
				E. State	Trans. ID	X	0151
1 <b>1</b>	ignated Facility Name and Site Address e Ecology Oil Salvage, Ir	10. US EPA ID Numbr	er	F. Trans	porter's Phone	( )	
	N. MIll Rd / Casie	Protank		G. State	Facility's	4D1HP0	
1	land NJ 08360	N J D 0 4 5 9 95	12. Conta		ity's Phone (6) 13.	093 69	
11. US	DOT Description (Including Proper Shipping	g Name, Hazard Class, and ID Number)	No.	Туре	Total	Unit Wt/Vol	Waste
G ^{a.} E	Combustible liquid, n.c	o.s.(Fuel Oil)			E.	1 1	
E N	NA1993, PGIII		01011	TIT	1990 1990	G	I D
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	ditional Descriptions for Materials Listed Abo	ve		K. Hand	lling Codes for	Wastes Lis	ted Aboy
190	%oil/sed.   0%wtr.	C.		a.	1	c.	I
a						<u>.</u>	k
b. 15. Spe	ecial Handling Instructions and Additional In	d.		b.		d.	l
					,		
				20			
16 GE	NERATOR'S CERTIFICATION:   hereby deci	#609 696-4401 K. Ambrosia lare that the contents of this consignment are f d, marked, and labeled, and are in all respects i	ully and acc	urately de	scribed above t	by	
acc	ording to applicable international and nation	al government regulations.					
	areby centry that the above-named material is r	not hazardous waste as defined by 40 CFR Part 2	261, 264 and	279 or any	applicable state	9 Iaw.	
lii Ihi							
		Signature	<b>.</b>		- 0.0		ath D
	Joseph M. Fallon	Signature	Dept	m	Talls	$\gamma$ $\vec{0}$	onth D.
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T 17. Tra R Prin S P O 18. Tra	JOSEPH M. Gllon Insporter 1 Acknowledgement of Receipt of N Inted Typed Name Den Scolery Insporter 2 Acknowledgement of Receipt of N	Materials Signature Materials	bept S	m	Falls	<u>р 10</u> С	1413
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## APPENDIX D

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## **UST DISPOSAL CERTIFICATE**

B. 810	<b>ZZA &amp; SONS, INC.</b> Metal Recyclers 3230 Shafto Rd. Tinton Falls, NJ (908) 922-9292	NO DATE. <u>23.7</u> ,17/
Customer's Name Address	Tecom VININI	<u> </u>
Weight Price		Weight Price
Cast Iron		Lt. Copper
Steel ZAN Lt. Iron	24060 LB	Brass Alum Clean
Copper #1	23180 LB	Lead
Copper #2	550	Stainless Battery
	$\left[\begin{array}{c} \hline \hline \\ $	TOTAL AMOUNT:
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## APPENDIX E

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## SOIL ANALYTICAL DATA PACKAGE

#### US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

#### **REPORT OF ANALYSIS**

Client:

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

Project:

Total Petroleum Hydrocarbons 98-0001 Bldg. 810

11/18 Date:

Daniel K. Wright Da Laboratory Director

#### Section Pages Cover Sheet 1 2 Table of Contents Method Summary 3 Conformance/Non-Conformance 4 Chain of Custody 5-6 **Results Summary** 7 Initial Calibration Summary 8 Continuing Calibration Summary 9-10 Surrogate Results Summary 11 MS/MSD Results Summary 12 Quality Control Spike Summary 13 Raw Sample Data 14-21 Laboratory Deliverable Checklist 22

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#### NJDEP Method OQA-QAM-025-10/97

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#### Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

#### PHC Conformance/Non-conformance Summary Report

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

#### Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

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) Sample Type bo	#	Source	ludser	5	arameter Vo A			Comments: #=SAMPLES KEPT BELOW 4 [°] c.
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#### Report of Analysis U.S. Army, Fort Monmouth Environmental Laboratory NJDEP Certification # 13461

Client :	U.S. Army			Lab. ID # :		3515
	DPW. SELFM-	PW-EV		Date Rec'd:		28-Apr-98
	Bldg. 173			Analysis Sta	29-Apr-98	
	Ft. Monmouth,	NJ 07703		Analysis Con		30-Apr-98
	rt. Monmouth,	110 07703		Analysis Col	mpiete.	30-Apr-90
Analysis:	OQA-QAM-025			UST Reg. #:		
Matrix:	Soil			Closure #:		
Analyst:	D.DEINHARD'	Г		DICAR #:		
Ext. Meth:	Shake			Location #:		B. 810
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3515.01	810-A	1.00	15.35	82.93	185	ND
3515.02	810-B	1.00	15.83	83.27	178	2851.46
3515.03	810-C	1.00	15.57	80.00	189	12887.28
3515.04	810-DUP	1.00	15.25	83.15	185	3459.59
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MDL = Method Detection Limit

Daniel K. Wright

Laboratory Director

#### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

- 1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted
- 2. Table of Contents submitted

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- 3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted
- 4. Document paginated and legible
- 5. Chain of Custody submitted
- 6. Samples submitted to lab within 48 hours of sample collection
- 7. Methodology Summary submitted
- 8. Laboratory Chronicle and Holding Time Check submitted
- 9. Results submitted on a dry weight basis
- 10. Method Detection Limits submitted
- 11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP

Laboratory Manager or Environmental Consultant's Signature Date <u>4/14</u>(14)

Laboratory Certification #13461

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

#### US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

#### **REPORT OF ANALYSIS**

Client:

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

Project:

Total Petroleum Hydrocarbons 98-0001 Bldg. 810

 Project #
 3549

 Date Rec.
 05/06/98

 Date Compl.
 05/12/98

 Released by:
 12/28

Daniel K. Wright Laboratory Director

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Section	Pages
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Conformance/Non-Conformance	4
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#### NJDEP Method OQA-QAM-025-10/97

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

#### PHC Conformance/Non-conformance Summary Report

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

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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

	HERRICH CH	Fort M Bldg. 173, SELFM- Tel (732)532-4359 NJDEP Certificat	PW-E Fax (7	V, Fort /32)532	Monmouth	, NJ 07	703	i					est		•			ory ody Rec	ord
	pokby	- DPW	Proje	ect No:	98-00	01					Ana	lysis	Paran	neters			Commen		
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Relifier ned by Sign	K	Date/Time: 5-6-98 /350	Receiv	ved by (	signature): JUUM		Rel	linqui	ished	by (sig	gnature)	):	Date	/Time:	Recei	ved by (	(signature):		
Relinguished by (signa	ture):	Date/Time:	Receiv	ved by	signature):		Rel	linqui	ished	by (sig	mature)	):	Date	/Time:	Recei	ved by (	(signature):		
Report Type: (_)Full, Q Turnaround time: (_)Sta				n-certifie SAP Ve		rs.		R	Remar	ks: D	EDIC	14TEV	0 51	9mpl	ING	700	nls use	Ъ.	

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

Client :	U.S. Army			Lab. ID # :		3549
	DPW. SELFM-	PW-EV		Date Rec'd:		06-May-98
	Bldg. 173			Analysis Sta	07-May-98	
	Ft. Monmouth,	NJ 07703		Analysis Cor	12-May-98	
Analysis:	OQA-QAM-025	;		UST Reg. #:		
Matrix:	Soil			Closure #:		
Analyst:	D.DEINHARD	T		DICAR #:		
Ext. Meth:	Shake			Location #:		B.810
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3549.01	810-A	1.00	15.10	81.70	190	ND
3549.02	810-B	1.00	15.00	82.93	189	ND
3549.03	810-C	1.00	15.08	85.83	182	ND
3549.04	810-D	1.00	15.09	80.90	192	ND
3549.05	810-E	1.00	15.19	81.68	189	ND
3549.06	810-F	1.00	15.60	86.02	175	ND
3549.07	810-DUP	1.00	15.65	83.32	180	362.48
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	MDI IZ OC		15.00	100.00	- 167	
METHOD BLANK	TBLK 96	1.00	15.00	100.00	157	ND

ND = Not Detected

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MDL = Method Detection Limit

Daniel K Wright

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Laboratory Director

#### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Managér or Environmental Consultant's Signature, Date  $\frac{5/19}{9}$ 

nature

Laboratory Certification #13461

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

## **APPENDIX F**

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## **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

Bl	dg.	81	0
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Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
810-1	4921.01	Aqueous	06-Nov-99 12:00	11/08/99

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

ENCLOSURE: CHAIN OF CUSTODY RESULTS

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4-8-00

Daniel Wright/Date Laboratory Director

Section	Pages
Chain of Custody	1-2
Methodology Summary	3-4
Conformance/Non-Conformance Summary	5-7
Laboratory Chronicle	8-9
Volatile Organics	10-11
Analytical Results Summary	12-15
Tune Results Summary	17-18
Method Blank Results Summary	16
Calibration Summary	19
Surrogate Recovery Summary	20
MS/MSD Results Summary	21-22
Internal Standard Area & RT Summary	23
Chromatograms	24-27
Base Neutrals	28
Analytical Results Summary	29-34
Tune Results Summary	36-39
Method Blank Results Summary	35
Calibration Summary	41-43
Surrogate Recovery Summary	44
MS/MSD Results Summary	45-48
Internal Standard Area & RT Summary	49-52
Chromatograms	53-56

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Laboratory Deliverables Checklist	57
Laboratory Authentication Statement	58

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# CHAIN OF CUSTODY

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## Fort Monmouth Environmental Testing Laboratory

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

Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@mail1.monmouth.army.mil NJDEP Certification #13461

**Chain of Custody Record** 

Customer: DIMKER DESAL	Project No:	<u></u>	]	Analysis	Parameters		Comments:
Phone #: X21475	Location: UST 810						
( )DERA ( )OMA ( )Other:		1st Rnd	VO + IS BN + IS	Xy leve			HEL / BNA
Samplers Name / Company: Cores Mc	Cormuch , TUS	Sample #	2 2	13			FICL / ISINI
Lab Sample I.D. Sample Location	Date Time	Type bottle		×			Remarks / Preservation Method
40D1 01 810 -1	11/6/99 1200	Aa 3	11	1			× · · · · · · · · · · · · · · · · · · ·
							# Ful odor.
							CPM
Relinquished by (signature): Date/Time: any Melenal 11/0/99 720	Received by (signature):	Relin	quished by (sig	nature):	Date/Time:	Received by	(signature):
Relinquished by (signature): Date/Time:	Received by (signature):		quished by (sig			Received by	-
Report Type: ()Full, (Reduced, ()Standard, ()Scree Turnaround time: (AStandard 3 wks ()Rush Days			Remarks:	Shis Ti	rip/FB/P	ye from	549 (548 A)

# METHODOLOGY SUMMARY

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## Methodology Summary

#### EPA Method 624 Gas Chromatographic Determination of Volatiles in Water

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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

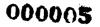
Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified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

## CONFORMANCE/ NON-CONFORMANCE SUMMARY

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

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			Indicate Yes, No, N/A
1.	Chromatograms la	beled/Compounds identified	
1.	(Field samples	s and method blanks)	Yes
2.	Retention times for	r chromatograms provided	yes_
3.	GC/MS Tune Spec	ifications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	Yes yes
4.	GC/MS Tuning Fra series and 12 hours	equency – Performed every 24 hours for 600 s for 8000 series	40
5.	analysis and contin	n – Initial Calibration performed before sample using calibration performed within 24 hours of 600 series and 12 hours for 8000 series	yes
6.	GC/MS Calibration	a requirements	
	<b>a. b.</b>	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	yes yes
7.	Blank Contamination	on - If yes, List compounds and concentrations in each blank:	<u>()O</u>
	a.	VOA Fraction	
	b.	B/N Fraction	
	C.	Acid Fraction	
8.	Surrogate Recoveri	es Meet Criteria	yes
	If not met, list outside the acc	those compounds and their recoveries, which fall reptable range:	
	a.	VOA Fraction	
	b.	B/N Fraction	
	C.	Acid Fraction	
	If not met, wer as "estimated"	e the calculations checked and the results qualified ?	
9.		x Spike Duplicate Recoveries Meet Criteria se compounds and their recoveries, which fall ble range)	ye
	а.	VOA Fraction	
	b.	B/N Fraction	
	с.	Acid Fraction	

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

Indicate Yes, No, N/A

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

а.	VOA Fraction
b.	B/N Fraction
C.	Acid Fraction

11. Extraction Holding Time Met

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

12. Analysis Holding Time Met

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

Additional Comments:

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4-8-00 Date: Laboratory Manager:

# LABORATORY CHRONICLE

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### Laboratory Chronicle

Lab ID: 4921

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Site: Bldg. 810

	Date	Hold Time
Date Sampled	11/06/99	NA
Receipt/Refrigeration	11/06/99	NA
Extractions		
1. Base Neutral	11/09/99	14 days
Analyses		
<ol> <li>Volatile Organics</li> <li>Base Neutral</li> </ol>	11/10,11/99 11/12/99	14 days 40 Day

*Samples collected and refrigerated on 11/06/99, Laboratory received the samples Monday 11/08/99.

# VOLATILE ORGANICS

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#### US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

#### **Definition of Qualifiers**

MDL : Method Detection Limit

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**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

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

Data FileVC001257.DOperatorSkeltonDate Acquired10 Nov 19992:43 pm

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Sample NameVblk37Field IDVblk37Sample Multiplier1

CAS#	Compound Name	<u>R.T.</u>	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	
	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- <u>83</u> -9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride		l	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		ļ	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	nie	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

Page 1 of 1

11/15/99 4:53 PM

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### VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID:

TENTATIVELY ID	ENTIFIED COMPOUNDS
Lab Name: FMETL	NJDEP#: 13461
Project: 100004 Case No.: 4	1921 Location: 810 SDG No.:
Matrix: (soil/water) WATER	Lab Sample ID: Vblk37
Sample wt/vol: <u>5.0</u> (g/ml)	ML Lab File ID: VC001257.D
Level: (low/med) LOW	Date Received: 11/8/99
% Moisture: not dec.	Date Analyzed: 11/10/99
GC Column: <u>RTX502.</u> ID: <u>0.25</u> (mi	m) 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

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CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

4921.01

810-1

VC001276.D Data File Sample Name Skelton Operator Field ID 11 Nov 1999 3:45 am Sample Multiplier 1 Date Acquired

107028         Acrolinin         ond detected         550         1.85 ug/L           107131         Acrylonizile         not detected         sile         8.52 ug/L           1064044         Methyl-ter-Butyl ether         not detected         sile         8.52 ug/L           1064044         Methyl-ter-Butyl ether         not detected         sile         8.52 ug/L           1064064         Dishtorodiflucromethane         not detected         sile         0.25 ug/L           74-873-3         Coloromethane         not detected         sile         1.06 ug/L           75-01-4         Vinyl Chloride         not detected         sile         1.01 ug/L           75-04-3         Coloromethane         not detected         sile         1.01 ug/L           75-04-4         Trichloroflucromethane         not detected         sile         0.01 ug/L           75-54-4         1.bichloroethene         not detected         sile         0.01 ug/L           75-15-5         Carbon Disulfide         not detected         sile         0.01 ug/L           75-69-4         Trichloroethene         not detected         sile         0.04 ug/L           75-15-5         Carbon Disulfide         not detected         sile         0.04 ug/L	CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
75650ter-Buryl alcoholnot detectedale $8.52 \ ug/L$ 1034044Methyl-ter-Buryl effernot detectednot detected $nel0.25 \ ug/L$ 108203Di-koprogrit effernot detectednel1.68 \ ug/L108203Di-koprogrit effernot detected $30 \ 1.16 \ ug/L$ 74-87-3Chloromethanenot detected $30 \ 1.16 \ ug/L$ 75-01-4Vinyl Chloridenot detected $30 \ 1.16 \ ug/L$ 75-03Chloromethanenot detected $10 \ 1.00 \ ug/L$ 75-04Trichloromethanenot detected $2 \ 0.24 \ ug/L$ 75-05-05Chlorothanenot detected $2 \ 0.24 \ ug/L$ 75-05-16Carbon Disulfidenot detected $20 \ 0.24 \ ug/L$ 75-05-17-07Wehlynes Chloridenot detected $20 \ 0.24 \ ug/L$ 75-05-16Carbon Disulfidenot detected $70 \ 0.12 \ ug/L$ 156-05-1trans.12-Dichloroethenenot detected $70 \ 0.12 \ ug/L$ 108-05-4Vinyl Acctatenot detected $100 \ 0.16 \ ug/L$ 108-05-4Vinyl Acctatenot detected $10 \ 0.17 \ ug/L$ 75-55-61,1-Trichloroethanenot detected $30 \ 0.23 \ ug/L$ 175-55-61,1-Trichloroethanenot detected $2 \ 0.24 \ ug/L$ 174-32Benzenenot detected $2 \ 0.47 \ ug/L$ 174-32Benzenenot detected $10 \ 0.23 \ ug/L$ 175-55-61,1-Trichloroethanenot detected $2 \ 0.47 \ ug/L$ 175-74-71,2-Dichloroethane	107028	Acrolein			not detected	50	1.85 ug/L	
I634044         Methyletar-Buryl ether         not detected         not detected         net         0.25 ug/L           108203         Di-isopropi ether         not detected         net         0.25 ug/L           Di-isopropi ether         not detected         net         0.25 ug/L           74-87.3         Chloronethane         not detected         5         1.06 ug/L           75-01-4         Vinyl Chloride         not detected         5         1.06 ug/L           75-03         Chloronethane         not detected         net         1.00 ug/L           75-04-4         Trichlorofluvormethane         not detected         net         0.02 ug/L           75-59-4         Trichlorofluvormethane         not detected         net         0.02 ug/L           75-59-4         Trichlorofluvormethane         not detected         1.00 ug/L         1.05 ug/L           75-09-2         Methylene Chloride         not detected         1.00 ug/L         1.05 ug/L           108-05-4         Vinyl Acetate         not detected         100         0.15 ug/L           108-05-4         Vinyl Acetate         not detected         6         0.30 ug/L           108-05-4         trin-12-Dichloroethane         not detected         10         0.17 ug/L </td <td>107131</td> <td>Acrylonitrile</td> <td></td> <td></td> <td>not detected</td> <td>50</td> <td>2.78 ug/L</td> <td></td>	107131	Acrylonitrile			not detected	50	2.78 ug/L	
108203         Disisopropyl etter         not detected         net         0.25 ug/L           74-87-3         Chloromethane         not detected         net         1.66 ug/L           74-87-3         Chloromethane         not detected         30         1.16 ug/L           75-01-4         Vinyl Chloride         not detected         30         1.16 ug/L           75-00-3         Chloromethane         not detected         10         1.00 ug/L           75-00-3         Chloromethane         not detected         net         0.25 ug/L           75-00-3         Chloromethane         not detected         net         0.24 ug/L           75-30-4         Trichlorofluoromethane         not detected         2         0.24 ug/L           75-35-4         1.1 Dichlorocethene         not detected         2         0.24 ug/L           75-09-2         Methylene Chloride         not detected         0         0.16 ug/L           15-6-60-5         trans-1.2-Dichlorocethane         not detected         100         0.12 ug/L           108-05-4         Vinyl Acetate         not detected         100         0.12 ug/L           108-05-4         Vinyl Acetate         not detected         10         0.12 ug/L           108	75650	tert-Butyl alcohol			not detected	nie	8.52 ug/L	
Dicklorodifluoromethanenot detectedne1.68 ug/L74-87-3Chloromethanenot detected301.16 ug/L75-01-4Vinyl Chloridenot detected101.10 ug/L74-83-9Bromomethanenot detected101.10 ug/L75-00-4Chloromethanenot detected1e0.50 ug/L75-69-4Trichlorofluoromethanenot detected1e0.50 ug/L75-69-4Trichlorofluoromethanenot detected20.24 ug/L67-64-1Acetonenot detected701.36 ug/L75-15-0Carbon Disulfidenot detected20.24 ug/L75-69-2Methylene Chloridenot detected20.44 ug/L156-60-5trans-L2.2bichloroethanenot detected20.04 ug/L108-05-4Vinvl Acetatenot detected300.12 ug/L108-05-4Vinvl Acetatenot detected300.62 ug/Lcis-12.2bichloroethanenot detected300.23 ug/L75-55-61,1.1-Trichloroethanenot detected300.23 ug/L75-55-61,2.Dichloroethanenot detected10.23 ug/L75-75-71.2-Dichloroethanenot detected10.23 ug/L77-901-6Trichloroethanenot detected10.23 ug/L77-97-71.2-Dichloroethanenot detected10.23 ug/L79-01-6Trichloroethanenot detected10.23 ug/L79-01-6Trichloroethanenot detected10.23 ug/L	1634044	Methyl-tert-Butyl ether			not detected	70	0.16 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       1.00 ug/L         75-00-3       Chloroethane       not detected       ale       0.50 ug/L         75-54-4       11-Dichloroethene       not detected       2       0.24 ug/L         67-64-1       Acetone       not detected       2       0.24 ug/L         75-15-0       Carbon Disulfide       not detected       100       0.16 ug/L         75-09-2       Methylene Chloride       not detected       100       0.16 ug/L         75-55-4       1.1-Dichloroethane       not detected       100       0.16 ug/L         166-05-5       trans.1_2-Dichloroethane       not detected       100       0.16 ug/L         108-05-4       Vinyl Acetae       not detected       300       0.62 ug/L         108-05-4       Vinyl Acetae       not detected       100       0.17 ug/L         67-66-3       Chloroform       not detected       10       0.73 ug/L         67-56-3       Li,1_1-Trickloroethane       not detected       10       0.23 ug/L	108203	Di-isopropyl ether			not detected	nie		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-83-9         Bromomethane         not detected         10         1.10         ug/L           75-694         Trichlorofluoromethane         not detected         ale         0.50         ug/L           75-53-4         1.1-Dichloroethene         not detected         2         0.24         ug/L           67-64-1         Acetone         not detected         2         0.24         ug/L           67-64-1         Acetone         not detected         2         0.24         ug/L           67-65-1         Carbon Disulfide         not detected         2         0.24         ug/L           156-60-5         trans-1,2-Dichloroethane         not detected         2         0.24         ug/L           108-05-4         Vinyl Acetat         not detected         not detected         0         0.12         ug/L           108-05-4         Vinyl Acetat         not detected         10         0.17         ug/L           63-12-Dichloroethane         not detected         6         0.30         ug/L           75-55-5         Li,1-Tichloroethane         not detected         3         0.23         ug/L           107-65-2         Chloroform         not detected         1         0.23         ug/L	74-87-3	Chloromethane			not detected	30	1.16 ug/L	
74-83-9         Bromomethane         not detected         10         1.10         ug/L           75-694         Trichlorofluoromethane         not detected         ale         0.50         ug/L           75-53-4         1.1-Dichloroethene         not detected         2         0.24         ug/L           67-64-1         Acetone         not detected         2         0.24         ug/L           67-64-1         Acetone         not detected         2         0.24         ug/L           67-65-1         Carbon Disulfide         not detected         2         0.24         ug/L           156-60-5         trans-1,2-Dichloroethane         not detected         2         0.24         ug/L           108-05-4         Vinyl Acetat         not detected         not detected         0         0.12         ug/L           108-05-4         Vinyl Acetat         not detected         10         0.17         ug/L           63-12-Dichloroethane         not detected         6         0.30         ug/L           75-55-5         Li,1-Tichloroethane         not detected         3         0.23         ug/L           107-65-2         Chloroform         not detected         1         0.23         ug/L	75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
75:69-4         Trichlorofluoromethane         not detected         not detected         2         0.24 ug/L           75:35-4         1,1-Dickloroethene         not detected         2         0.24 ug/L           75:15-0         Carbon Disulfide         not detected         not detected         ne         0.46 ug/L           75:15-0         Carbon Disulfide         not detected         ne         0.46 ug/L           75:07         Methylene Chloride         not detected         2         0.24 ug/L           156:60-5         trans: 1,2-Dickloroethene         not detected         100         0.16 ug/L           78:93-3         1,1-Dickloroethane         not detected         300         0.62 ug/L           78:93-3         2-Butanone         not detected         100         0.17 ug/L           67:66-3         Chloroform         not detected         300         0.62 ug/L           75:55-6         1,1.1-Trichloroethane         not detected         30         0.23 ug/L           74:3-2         Benzene         not detected         1         0.23 ug/L           71:43-2         Benzene         not detected         1         0.23 ug/L           79:01-6         Trichloroethane         not detected         1         0.2	74-83-9	Bromomethane			not detected	10		
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       ne       0.46 ug/L         75-09-2       Methylene Chloride       not detected       2       0.24 ug/L         156-60-5       trans.1,2-Dichloroethene       not detected       100       0.16 ug/L         75-35.3       1,1-Dichloroethane       not detected       100       0.12 ug/L         108-05-4       Vinvl Acetate       not detected       300       0.62 ug/L         cis:12-Dichloroethane       not detected       6       0.30 ug/L         cis:12-Dichloroethane       not detected       30       0.23 ug/L         67-66-3       Chloroform       not detected       1       0.23 ug/L         75-55-6       1,1-Trichloroethane       not detected       1       0.23 ug/L         71-43-2       Benzene       not detected       1       0.23 ug/L         71-43-2       Ibenzene       not detected       1       0.23 ug/L         71-79-01-6       Trichloroethane       not detected       1       0.23 ug/L         71-75-7       Ly-Dichloroetha	75-00-3	Chloroethane			not detected	nle	1.01 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       ne       0.46 ug/L         75-09-2       Methylene Chloride       not detected       2       0.24 ug/L         156-60-5       trans.1,2-Dichloroethene       not detected       100       0.16 ug/L         75-35-3       1,1-Dichloroethane       not detected       10       0.12 ug/L         108-05-4       Vinvl Acetate       not detected       0       0.62 ug/L         cis:1_2-Dichloroethane       not detected       0       0.03 ug/L         67-66-3       Chloroform       not detected       3       0.23 ug/L         67-65-3       1,1-Trichloroethane       not detected       1       0.23 ug/L         67-55-6       1,1-Trichloroethane       not detected       1       0.23 ug/L         107-05-2       1,2-Dichloroethane       not detected       1       0.23 ug/L         107-05-2       1,2-Dichloroethane       not detected       1       0.23 ug/L         107-05-2       1,2-Dichloroethane       not detected       1       0.23 ug/L         <	75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-15-0       Carbon Disulfide       not detected       net       0.46 ug/L         75-09-2       Methylene Chloride       not detected       2       0.24 ug/L         156-00-5       trans 1,2-Dichloroethene       not detected       100       0.16 ug/L         75-35.3       1,1-Dichloroethane       not detected       net       0.78 ug/L         108-05-4       Vinyl Acetate       not detected       100       0.12 ug/L         r8-93-3       2-Butanone       not detected       300       0.62 ug/L         cis-1,2-Dichloroethane       not detected       0       0.17 ug/L         67-66-3       Chioroform       not detected       6       0.30 ug/L         75-55-6       1,1,1-Trichloroethane       not detected       2       0.47 ug/L         71-43-2       Bezzne       not detected       1       0.23 ug/L         107-06-2       1,2-Dichloroethane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloroptpane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloroptpane       not detected       1       0.49 ug/L         100-75-8       2-Chloroethane       not detected       1       0.55 ug/L         10061-		1,1-Dichloroethene			not detected			
75-15-0       Carbon Disulfide       not detected       net       0.46 ug/L         75-09-2       Methylene Chloride       not detected       2       0.24 ug/L         156-00-5       trans 1,2-Dichloroethene       not detected       100       0.16 ug/L         75-35.3       1,1-Dichloroethane       not detected       net       0.78 ug/L         108-05-4       Vinyl Acetate       not detected       100       0.12 ug/L         r8-93-3       2-Butanone       not detected       300       0.62 ug/L         cis-1,2-Dichloroethane       not detected       0       0.17 ug/L         67-66-3       Chioroform       not detected       6       0.30 ug/L         75-55-6       1,1,1-Trichloroethane       not detected       2       0.47 ug/L         71-43-2       Bezzne       not detected       1       0.23 ug/L         107-06-2       1,2-Dichloroethane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloroptpane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloroptpane       not detected       1       0.49 ug/L         100-75-8       2-Chloroethane       not detected       1       0.55 ug/L         10061-	67-64-1				not detected	700	1.36 ug/L	
75-09-2         Methylene Chloride         not detected         2         0.24 ug/L           156-60-5         trans-1,2-Dickloroethene         not detected         100         0.16 ug/L           75-35-3         1,1-Dickloroethane         not detected         100         0.12 ug/L           108-05-4         Vinvl Acctate         not detected         100         0.78 ug/L           108-05-4         Vinvl Acctate         not detected         100         0.77 ug/L           cis-1,2-Dichloroethene         not detected         100         0.17 ug/L           cis-1,2-Dichloroethane         not detected         30         0.23 ug/L           75-55-6         1,1,1-Trickloroethane         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         1         0.23 ug/L           75-74         Bromodichloromethane         not detected         1         0.40 ug/L           75-74         Bromodichloromethane         not detected         1         0.40 ug/L           100-75-8         2-Chloroethyl vinyl ether         not detected         1         0.40 ug/L           1008-10-1 <td< td=""><td>75-15-0</td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td></td<>	75-15-0					1		
156-60-5         trans-1,2-Dichloroethane         not detected         100         0.16 ug/L           75-35.3         1,1-Dichloroethane         not detected         ale         0.78 ug/L           108-05-4         Vinyl Acetate         not detected         ale         0.78 ug/L           78-93-3         2-Butanone         not detected         30         0.62 ug/L           cis-1,2-Dichloroethane         not detected         10         0.17 ug/L           67-66-3         Chloroform         not detected         6         0.30 ug/L           75-55-6         1,1-Trichloroethane         not detected         2         0.47 ug/L           71-43-2         Benzene         not detected         1         0.23 ug/L           70-06-2         1,2-Dichloroethane         not detected         1         0.23 ug/L           78-87-5         1,2-Dichloroethane         not detected         1         0.23 ug/L           78-87-5         1,2-Dichloroptopane         not detected         1         0.23 ug/L           70-01-5         Cis-1,3-Dichloroptopane         not detected         1         0.23 ug/L           70-01-5         1/2-Dichloroptopane         not detected         1         0.25 ug/L           10061-01-5			1		· · · · · ·	1 1		
75:35:3       1,1-Dichloroethane       not detected       70       0.12 ug/L         108:05:4       Vinyl Acctate       not detected       not detected       300       0.62 ug/L         78:93:3       2-Butanone       not detected       300       0.62 ug/L         cis:1,2-Dichloroethene       not detected       10       0.17 ug/L         67:66:3       Chloroform       not detected       6       0.30 ug/L         75:55:6       1,1-Trichloroethane       not detected       2       0.47 ug/L         71:43:2       Benzene       not detected       1       0.23 ug/L         79:01:6       Trichloroethane       not detected       1       0.23 ug/L         78:87:5       1,2-Dichloroppopane       not detected       1       0.23 ug/L         75:27:4       Bromodichloromethane       not detected       1       0.23 ug/L         75:27:4       Bromodichloromethane       not detected       1       0.42 ug/L         100:61-01:5       cis:1,3-Dichloroppopane       not detected       10       0.55 ug/L         100:61-01:6       cis:1,3-Dichloroppopene       not detected       10       0.59 ug/L         108:10:1       tass.1,3-Dichloroppopene       not detected       400 <t< td=""><td>and a literature descent</td><td>**************************************</td><td></td><td></td><td>not detected</td><td>1</td><td></td><td></td></t<>	and a literature descent	**************************************			not detected	1		
108-05-4       Vinyl Acetate       not detected       ule $0.78 ug/L$ $78-93-3$ 2-Butanone       not detected $300$ $0.62 ug/L$ cis-1,2-Dichloroethene       not detected $10$ $0.17 ug/L$ $67-66-3$ Chloroform       not detected $6$ $0.30 ug/L$ $75-55-6$ $1,1,1$ -Trichloroethane       not detected $2$ $0.47 ug/L$ $71-43-2$ Benzene       not detected $1$ $0.23 ug/L$ $107-06-2$ $1,2.Dichloroethane$ not detected $1$ $0.23 ug/L$ $107-06-2$ $1,2.Dichloroethane$ not detected $1$ $0.23 ug/L$ $79-01-6$ Trichloroethane       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 $1$ $0.45 ug/L$ $10061-01-5$ $cis-1,3-Dichloropropene       not detected       1e 0.69 ug/L 10061-02-6       trans-1,3-Dichloropropene       not detected       1e 0.79 ug/L 10061-02-6       trans-1,3-Dichloropropene$						1		
78-93-3       2-Butanone       not detected       300 $0.62 \ ug/L$ cis-1,2-Dichloroethene       not detected       10 $0.17 \ ug/L$ 67-66-3       Chloroform       not detected       6 $0.30 \ ug/L$ 75-55-6       Li,1-Trichloroethane       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       1 $0.23 \ ug/L$ 79-01-6       Trichloroethane       not detected       1 $0.23 \ ug/L$ 75-57-4       Bromodichloromethane       not detected       1 $0.42 \ ug/L$ 75-27-4       Bromodichloromethane       not detected       1 $0.40 \ ug/L$ 100-10-5       cis-1,3-Dichloropropane       not detected       ne $0.65 \ ug/L$ 10061-01-5       cis-1,3-Dichloropropene       not detected       ne $0.99 \ ug/L$ 108-10-1       4-Methyl-2-Pentanone       not detected       ne $0.99 \ ug/L$ 108-10-2       trans-1,3-Dichloropropene       not detected $10.00 \ 0.37 \ ug/L$ 10951-02-6       trans-1,3-Dichloropropene       not detected					· · · · · · · · · · · · · · · · · · ·	1 1	<b>6</b> ./	1
cis-1,2-Dichloroethenenot detected10 $0.17$ ug/L67-66-3Chloroformnot detected6 $0.30$ ug/L75-55-61,1,1-Trichloroethanenot detected30 $0.23$ ug/L71-43-2Benzenenot detected1 $0.23$ ug/L107-06-21,2-Dichloroethanenot detected2 $0.47$ ug/L79-01-6Trichloroethanenot detected1 $0.23$ ug/L78-87-51,2-Dichloroethanenot detected1 $0.23$ ug/L78-87-51,2-Dichloropropanenot detected1 $0.40$ ug/L75-27-4Bromodichloromethanenot detected1 $0.40$ ug/L107-15-82-Chloroethanenot detected1 $0.55$ ug/L110-75-82-Chloroethanenot detected $1$ $0.59$ ug/L10061-01-5cis-1,3-Dichloropropenenot detected $100$ $0.59$ ug/L10061-02-6trans-1,3-Dichloropropenenot detected $400$ $0.59$ ug/L10061-02-6trans-1,3-Dichloropropenenot detected $3$ $0.48$ ug/L79-00-51,1,2-Trichloroethanenot detected $3$ $0.48$ ug/L127-18-4Tetrachloroethanenot detected $1$ $0.32$ ug/L10061-02-6trans-1,3-Dichloropthanenot detected $1$ $0.32$ ug/L10061-02-6trans-1,3-Dichloropthanenot detected $3$ $0.48$ ug/L127-18-4Tetrachloroethanenot detected $1$ $0.32$ ug/L127-18-4Tetrachloroetha						1		<u> </u>
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         1         0.23 ug/L           79-01-6         Trichloroethene         not detected         1         0.23 ug/L           78-87-5         1,2-Dichlorooppane         not detected         1         0.49 ug/L           75-52-4         Bromodichloromethane         not detected         1         0.49 ug/L           107-75-8         2-Chloroethyl vinyl ether         not detected         1         0.55 ug/L           10061-01-5         cis-1,3-Dichloropropene         not detected         ne         0.65 ug/L           10061-02-6         trans-1,3-Dichloropropene         not detected         ale         0.87 ug/L           108-10-2         trans-1,3-Dichloropropene         not detected         ale         0.87 ug/L           10061-02-6         trans-1,3-Dichloropropene         not detected         3         0.48								
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       Trichloroethane       not detected       1       0.23 ug/L         78:87:5       1,2-Dichloropropane       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       not detected       nle       0.59 ug/L         108:88-3       Toluene       not detected       ale       0.87 ug/L         10061:02-6       trans-1,3-Dichloropropene       not detected       ale       0.87 ug/L         10061:02-6       trans-1,3-Dichloropropene       not detected       ale       0.87 ug/L         1100-14       tettylyl-2-Pentanone	67-66-3							
56-23-5Carbon Tetrachloridenot detected2 $0.47$ $ug/L$ $71-43-2$ Benzenenot detected1 $0.23$ $ug/L$ $107-06-2$ $1.2$ -Dichloroethanenot detected2 $0.18$ $ug/L$ $79-01-6$ Trichloroothanenot detected1 $0.23$ $ug/L$ $78-87-5$ $1.2$ -Dichloropropanenot detected1 $0.25$ $ug/L$ $75-27-4$ Bromodichloromethanenot detected1 $0.40$ $ug/L$ $110-75-8$ 2-Chloroethyl vinyl ethennot detectednle $0.65$ $ug/L$ $10061-01-5$ cis- $1.3$ -Dichloropropenenot detectednle $0.69$ $ug/L$ $10061-01-5$ cis- $1.3$ -Dichloropropenenot detectednle $0.69$ $ug/L$ $10061-02-6$ trans- $1.3$ -Dichloropropenenot detectednle $0.87$ $ug/L$ $10061-02-6$ trans- $1.3$ -Dichloropropenenot detected $10$ $0.37$ $ug/L$ $10061-02-6$ trans- $1.3$ -Dichloropropenenot detected $1$ $0.32$ $ug/L$ $10061-02-6$ trans- $1.3$ -Dichloropropenenot								
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       Trichloroethane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloropopane       not detected       1       0.23 ug/L         78-87-5       1,2-Dichloropopane       not detected       1       0.40 ug/L         75-74       Bromodichloromethane       not detected       1       0.55 ug/L         110-75-8       2-Chloroethyl vinyl ether       not detected       ne       0.69 ug/L         10061-01-5       cis-1,3-Dichloropropene       not detected       ne       0.69 ug/L         108-10-1       4-Methyl-2-Pentanone       not detected       1000       0.37 ug/L         108-88-3       Toluene       not detected       1000       0.37 ug/L         10061-02-6       trans-1,3-Dichloropropene       not detected       1       0.32 ug/L         10061-02-6       trans-1,3-Dichloroptropene       not detected       1       0.32 ug/L         10061-02-6       trans-1,3-Dichloroptropene       not detected       1       0.32 ug/L         126-48-1       Dibromochloromethane       not detected			-					
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         0.69 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         nle         0.69 ug/L           108-10-2-6         trans-1,3-Dichloropropene         not detected         nle         0.87 ug/L           10061-02-6         trans-1,3-Dichloropropene         not detected         nle         0.87 ug/L           127-18-4         Tetrachloroethane         not detected         nle         0.71 ug/L           126-48-1         Dibromochloromethane         not detected         nle         0.71 ug/L           126-48-1         Dibromochloromethane         not detected         nle         0.71 ug/L           1330-20-7         m-y-Xylenes         not detected         nl					not detected			
79-01-6Trichloroethenenot detected10.23 ug/L78-87-51,2-Dichloropropanenot detected10.40 ug/L75-27-4Bromodichloromethanenot detected10.55 ug/L110-75-82-Chloroethyl vinyl ethernot detectednle0.65 ug/L10061-01-5cis-1,3-Dichloropropenenot detectednle0.69 ug/L108-10-14-Methyl-2-Pentanonenot detected10000.37 ug/L108-88-3Toluenenot detectednle0.87 ug/L10061-02-6trans-1,3-Dichloropropenenot detectednle0.87 ug/L10061-02-6trans-1,3-Dichloropropenenot detectednle0.87 ug/L127-18-4Tetrachloroethanenot detected10.32 ug/L127-18-4Tetrachloroethanenot detected100.86 ug/L126-48-1Dibromochloromethanenot detected100.86 ug/L108-90-7Chlorobenzenenot detected100.86 ug/L130-20-7m+p-Xylenesnot detectednle0.65 ug/L1330-20-7n-y-Xylenenot detectednle0.62 ug/L100-42-5Styrenenot detectednle0.65 ug/L100-42-5Styrenenot detected100.56 ug/L1330-20-7n+p-Xylenesnot detected100.56 ug/L1330-20-7n-y2lenenot detected100.56 ug/L1330-20-7n-y2lenenot detected1le0.62 ug/L1330-20								
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       nle       0.69 ug/L $108-10-1$ 4-Methyl-2-Pentanone       not detected       1000       0.37 ug/L $108-88-3$ Toluene       not detected       nle       0.87 ug/L $10061-02-6$ trans-1,3-Dichloropropene       not detected       1       0.32 ug/L $127-18-4$ Tetrachloroethane       not detected       1       0.32 ug/L $126-48-1$ Dibromochloromethane       not detected       nle       0.71 ug/L $126-48-1$ Dibrobenzene						1		
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         10061-02-6       trans-1,3-Dichloropropene       not detected       3       0.48 ug/L         79-00-5       1,1,2-Trichloroethane       not detected       1       0.32 ug/L         127-18-4       Tetrachloroethane       not detected       nle       0.71 ug/L         126-48-1       Dibromochloromethane       not detected       nle       0.71 ug/L         108-90-7       Chlorobenzene       not detected       10       0.86 ug/L         1330-20-7       m+p-Xylenes       not detected       nle       0.62 ug/L         1330-20-7       n-Xylene       not detected       nle       0.62 ug/L         1330-20-7       -Xylene       not detected       n			1					1
110-75-82-Chloroethyl vinyl ethennot detectednle $0.65 \text{ ug/L}$ 10061-01-5cis-1,3-Dichloropropenenot detectednle $0.69 \text{ ug/L}$ 108-10-14-Methyl-2-Pentanonenot detected400 $0.59 \text{ ug/L}$ 108-88-3Toluenenot detected1000 $0.37 \text{ ug/L}$ 10061-02-6trans-1,3-Dichloropropenenot detectednle $0.87 \text{ ug/L}$ 79-00-51,1,2-Trichloroethanenot detected3 $0.48 \text{ ug/L}$ 127-18-4Tetrachloroethenenot detected1 $0.32 \text{ ug/L}$ 591-78-62-Hexanonenot detectednle $0.71 \text{ ug/L}$ 126-48-1Dibromochloromethanenot detected10 $0.86 \text{ ug/L}$ 100-41-4Ethylbenzenenot detected4 $0.39 \text{ ug/L}$ 1330-20-7n+p-Xylenesnot detectednle $1.14 \text{ ug/L}$ 1330-20-7o-Xylenenot detected100 $0.56 \text{ ug/L}$ 75-25-2Bromoformnot detected2 $0.47 \text{ ug/L}$ 79-34-51,1,2,2-Tetrachloroethanenot detected2 $0.47 \text{ ug/L}$ 79-34-51,1,2,2-Tetrachloroethanenot detected2 $0.47 \text{ ug/L}$ 79-34-51,4-Dichlorobenzenenot detected2 $0.47 \text{ ug/L}$ 106-46-71,4-Dichlorobenzenenot detected75 $0.57 \text{ ug/L}$								
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         10         0.86 ug/L           1330-20-7         m+p-Xylenes         not detected         nle         0.42 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           100-42-5         Styrene         not detected         4         0.70 ug/L           100								
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         10         0.86 ug/L           1330-20-7         m+p-Xylenes         not detected         nle         0.65 ug/L           1330-20-7         m+p-Xylenes         not detected         nle         0.62 ug/L           100-42-5         Styrene         not detected         nle         0.62 ug/L           100-42-5         Styrene         not detected         nle         0.62 ug/L           100-42-5         Bromoform         not detected         100         0.56 ug/L           75-25-2								
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         not detected         not detected           1330-20-7         m+p-Xylenes         not detected         nle         0.65 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         2         0.47 ug/L           79-34-5         1,1,2,2-Tetrachloroethane         not detected         2         0.47 ug/L           79								
10061-02-6trans-1,3-Dichloropropenenot detected $nle$ $0.87$ ug/L79-00-51,1,2-Trichloroethanenot detected3 $0.48$ ug/L127-18-4Tetrachloroethenenot detected1 $0.32$ ug/L591-78-62-Hexanonenot detected $nle$ $0.71$ ug/L126-48-1Dibromochloromethanenot detected10 $0.86$ ug/L108-90-7Chlorobenzenenot detected4 $0.39$ ug/L1330-20-7m+p-Xylenesnot detected $nle$ $1.14$ ug/L1330-20-7o-Xylenenot detected $nle$ $0.65$ ug/L100-42-5Styrenenot detected $4$ $0.70$ ug/L75-25-2Bromoformnot detected $4$ $0.70$ ug/L79-34-51,1,2,2-Tetrachloroethanenot detected $2$ $0.47$ ug/L541-73-11,3-Dichlorobenzenenot detected $75$ $0.57$ 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       0.65 ug/L         100-42-5       Styrene       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 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
127-18-4Tetrachloroethenenot detected1 $0.32$ ug/L591-78-62-Hexanonenot detectednle $0.71$ ug/L126-48-1Dibromochloromethanenot detected10 $0.86$ ug/L108-90-7Chlorobenzenenot detected4 $0.39$ ug/L100-41-4Ethylbenzenenot detected700 $0.65$ ug/L1330-20-7m+p-Xylenesnot detectednle $1.14$ ug/L1330-20-7o-Xylenenot detectednle $0.62$ ug/L100-42-5Styrenenot detected100 $0.56$ ug/L75-25-2Bromoformnot detected4 $0.70$ ug/L79-34-51,1,2,2-Tetrachloroethanenot detected2 $0.47$ ug/L541-73-11,3-Dichlorobenzenenot detected600 $0.55$ ug/L106-46-71,4-Dichlorobenzenenot detected75 $0.57$ 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           100-42-5         Styrene         not detected         2         0.47 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		1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-						
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           1330-20-7         o-Xylene         not detected         nle         0.62 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           100-42-5         Bromoform         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			1					· · · · · · · · · · · · · · · · · · ·
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           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								
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           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								
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				··				<u>                                      </u>
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								
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								
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			<u> </u>					t
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						1		+
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			1					1
106-46-7 1,4-Dichlorobenzene not detected 75 0.57 ug/L			<u>├</u>					
			<u> </u>					
95-50-1 1,2-Dichlorobenzene not detected 600 0.64 ug/L	95-50-1	1,2-Dichlorobenzene		· · · · · · · · · · · · · · · · · · ·	not detected		0.57 ug/L 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

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CAS NO.

#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

EST. CONC.

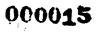
Q

RT

		TENTATI	VELY IDE	NIFIEL	D COMPO	UNDS			
Lab Name:	FMETL				NJDEP#:	13461		810-1	
Project:	100004	Cas	se No.: <u>49</u>	921	Locatio	n: <u>810</u>	SD	G No.:	
Matrix: (soil/\	water)	WATER	_		. La	b Sample I	D: 4	921.01	
Sample wt/vo	oi:	5.0	(g/ml) <u>N</u>	/L	La	b File ID:	V	C001276.D	. <u> </u>
Level: (low/r	ned)	LOW	-		Da	te Receive	d: <u>1</u>	1/8/99	
% Moisture:	not dec.				Da	ite Analyze	d: <u>1</u>	1/11/99	
GC Column:	RTX5	<u>02.</u> ID: <u>0.2</u>	25(mm	i)	Dil	ution Facto	or: <u>1</u>	.0	
Soil Extract \	/olume:		_ (uL)		So	il Aliquot V	olum	e:	(uL)
Number TIC:	s found:	0		(uy/i	L or ug/Kg)	) <u>UG/L</u>		· ····	

COMPOUND NAME

6/99



		4A		FIELD ID:
	N	VOLATILE METHOD BL	ANK SUMMARY	Vblk37
Lab Name:	FMETL	•	NJDEP#: 13461	VDIK37
Project:	100004	Case No.: 4921	Location: 810	SDG No.:
Lab File ID:	VC00128	57.D	Lab Sample II	D: Vblk37
Date Analyze	ed: <u>11/10/99</u>		Time Analyze	d: 14:43
GC Column:	RTX502.	ID: <u>0.25</u> (mm)	Heated Purge	e: (Y/N) <u>N</u>
Instrument I	D: Voalnst#3	3		

#### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

ſ	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	4896.04MS	4896.04MS	VC001269.D	23:07
02	4896.04MSD	4896.04MSD	VC001270.D	23:46
03	810-1	4921.01	VC001276.D	3:45

COMMENTS:

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References and and

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FORM IV VOA

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#### Semi-Volatile Analysis Report

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

#### NJDEP Certification #13461

Data File Name	BNA03358.D	Sample Name	Sblk318
Operator	Bhaskar	Misc Info	Sblk318 A 991109
Date Acquired	12-Nov-99	Sample Multiplier	1

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C 1 5#	Nome	<b>R</b> .T,	Desponse	Result	Regulatory Level (ug/L)*	MDL		QuellG
CAS#	Name Pyridine		Response	· · · · · · · · · · · · · · · · · · ·	NUE		naЛ	Qualifier
110-86-1				not detected	NLE 20		ug/L ug/L	
<u>62-75-9</u> 62-53-3	N-nitroso-dimethylamine Aniline	-	· · · · ·	not detected not detected	NLE NLE		ug/L	
					10		ug/L ug/L	
<u>111-44-4</u>	bis(2-Chloroethyl)ether 1,3-Dichlorobenzene	-		not detected	600			
541-73-1	1.4-Dichlorobenzene			not detected	75		ug/L ug/L	
106-46-7	Benzyl alcohol			not detected			ug/L	
100-51-6	1.2-Dichlorobenzene			not detected	NLE		ug/L ug/L	
95-50-1				not_detected	600			<b> </b>
108-60-1	bis(2-chloroisopropyl)ether			not detected	300		ug/L	<u> </u>
621-64-7	n-Nitroso-di-n-propylamine			not detected	20		ug/L	
67-72-1	Hexachloroethane	+		not detected	10		ug/L	
98-95-3	Nitrobenzene			not detected	10		ug/L	<b> </b>
78-59-1	Isophorone			not detected	100		ug/L	<b> </b>
<u>111-91-1</u>	bis(2-Chloroethoxy)methane		<b>_</b> _	not detected	NLE		ug/L	<u> </u>
120-82-1	1,2,4-Trichlorobenzene			not detected	9		ug/L	<b> </b>
91-20-3	Naphthalene			not detected	NLE		ug/L	
106-47-8	4-Chloroaniline			not detected	NLE		ug/L	<u> </u>
87-68-3	Hexachlorobutadiene			not detected	1		ug/L	<b> </b>
91-57-6	2-Methylnaphthalene			not detected	NLE		ug/L	<u> </u>
77-47-4	Hexachlorocyclopentadiene			not detected	50		ug/L	<b> </b>
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	<u> </u>
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	ļ
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	<u> </u>
208-96-8	Acenaphthylene	-		not detected	NLE	0.96	ug/L	· ·
606-20-2	2,6-Dinitrotoluene	_		not detected	NLE	0.81	ug/L	I
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	<u> </u>
121-14-2	2,4-Dinitrotoluene	<u> </u>		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	L
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	<u> </u>
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine	_		not detected	20	1.01	ug/L	
<u>103-33-3</u>	Azobenzene			not detected	NLE	0.67	ug/L	
<u>1</u> 01-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10		ug/L	
85-01-8	Phenanthrene			not detected	NLE		ug/L	
120-12-7	Anthracene			not detected	2000		ug/L	
84-74-2	Di-n-butylphthalate			not detected	900		ug/L	
206-44-0	Fluoranthene			not detected	300		ug/L	l

Page 1 of 2

#### Semi-Volatile Analysis Report Page 2

Data File Name	BNA03358.D	Sample Name	Sblk318
Operator	Bhaskar	Misc Info	Sblk318 A 991109
Date Acquired	12-Nov-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Oualifiers
92-87-5	Benzidine			not detected	50		ug/L	
129-00-0	Pyrene			not detected	200		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		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

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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

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### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

						0, 1, 0, 4, 0
Lab Name:	FMETL		, 	L	ab Code <u>13461</u>	Sbik318
Project	UST	Ca	ase No.: <u>4921</u>	. <u> </u>	Location 810 S	DG No.:
Matrix: (soil/	water)	WATER			Lab Sample ID:	Sblk318
Sample wt/v	ol:	1000	(g/ml) ML		Lab File ID:	BNA03358.D
Level: (low/r	med)	LOW			Date Received:	11/8/99
% Moisture:		de	canted: (Y/N)	Ν	Date Extracted:	11/9/99
Concentrate	d Extract	Volume:	1000 (uL)		Date Analyzed:	11/12/99
Injection Vol	ume: <u>1.</u>	0 (uL)			Dilution Factor:	1.0
GPC Cleanu	ID: (Y/N)	Ν	pH: 7			

#### CONCENTRATION UNITS:

FIELD ID

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Number TICs found:	0	(ug/L or	ug/Kg)	UG/L	·
CAS NUMBER	COMPOUND NAME		RT	EST. CONC.	Q

#### Semi-Volatile Analysis Report

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

#### NJDEP Certification #13461

Data File Name	BNA03363.D	Sample Name	4921.01
Operator	Bhaskar	Misc Info	810-1
Date Acquired	12-Nov-99	Sample Multiplier	1

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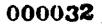
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CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Ouclifiance
110-86-1	Pyridine		Kesponse	not detected	NLE	1.83	<u></u>	<u>Qualifiers</u>
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91		·
62-53-3	Aniline			not detected	NLE	1.63		
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.05		
541-73-1	1,3-Dichlorobenzene			not detected	600		ug/L	
106-46-7	1.4-Dichlorobenzene			not detected	75	1.19		
100-51-6	Benzyl alcohol	1		not detected	NLE	1.02		<u> </u>
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13		· · · · ·
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39		
<u>621-64-7</u>	n-Nitroso-di-n-propylamine			not detected	20	0.80		<u> </u>
67-72-1	Hexachloroethane	1		not detected	10	1.50		<u> </u>
98-95-3	Nitrobenzene			not detected	10	0.97		
78-59-1	Isophorone			not detected	100		ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21		<u> </u>
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22		
91-20-3	Naphthalene			not detected	NLE	1.27		<u> </u>
106-47-8	4-Chloroaniline			not detected	NLE	1.09		
87-68-3	Hexachlorobutadiene			not detected	1	0.71		<u> </u>
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08		
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	_	
91-58-7	2-Chloronaphthalene	1		not detected	NLE	1.01	<u> </u>	
<u>91-36-7</u> 88-74-4	2-Nitroaniline	1		not detected	NLE	0.96		
131-11-3	Dimethylphthalate			not detected	7000	1.52		
208-96-8	Acenaphthylene		· · · · · · · · · · · · · · · · · · ·	not detected	NLE	0.96		
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81		<u> </u>
99-09-2	3-Nitroaniline	-		not detected	NLE	0.79		<u> </u>
83-32-9	Acenaphthene			not detected	400	1.10		
132-64-9	Dibenzofuran			not detected	NLE	1.00		<u> </u>
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87		
84-66-2	Diethylphthalate			not detected	5000	1.62		
86-73-7	Fluorene			not detected	300	0.99		
7005-72-3	4-Chlorophenyl-phenylether	-		not detected	NLE	1.10		
<u>100-01-</u> 6	4-Nitroaniline			not detected	NLE	1.05		<u> </u>
86-30-6	n-Nitrosodiphenylamine	1		not detected	20	1.01		<u> </u>
103-33-3	Azobenzene			not detected	NLE	0.67	-	
101-55-3	4-Bromophenyl-phenylether	1		not detected	NLE	0.76		
118-74-1	Hexachlorobenzene			not detected	10	0.94		
<u>85-01-8</u>	Phenanthrene			not detected	NLE	1.23		<u>                                     </u>
<u>120-12-7</u>	Anthracene			not detected	2000	1.12		<u> </u>
<u>84-74-2</u>	Di-n-butylphthalate	1		not detected	900	1.70		<u> </u>
206-44-0	Fluoranthene	+		not detected	300	1.64		<u> </u>

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#### Semi-Volatile Analysis Report Page 2

Data File Name	BNA03363.D	Sample Name	4921.01
Operator	Bhaskar	Misc Info	810-1
Date Acquired	12-Nov-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiana
			Kesponse	··· · · · · · · · · · · · · · · ·			· · · ·	<u>Qualifiers</u>
92-87-5	Benzidine			not_detected	50	4.18	ug/L	<b> </b> _
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
<u>56-55-3</u>	Benzo[a]anthracene			not detected	10	1.19	ug/L	
<u>91-94-1</u>	3,3'-Dichlorobenzidine			not detected	_60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
<u>117-81-7</u>	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	
<u>50-32-8</u>	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 <u>-</u> 3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
1 <u>91-24</u> -2	Benzo[g,h,i]perylene			not detected	NLE		ug/L	

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

**<u>Qualifiers</u>** 

E= Value Exceeds Linear Range

D= Value from dilution

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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

### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET FIELD ID

				COMI CONEC	
Lab Name:	FMETL		L	ab Code 13461	810-1
Project	UST	Case No.: 492	21	Location 810 S	DG No.:
Matrix: (soil/	water)	WATER		Lab Sample ID:	4921.01
Sample wt/ve	ol:	<u>1000 (g/ml) Ml</u>	-	Lab File ID:	BNA03363.D
Level: (low/r	ned)	LOW		Date Received:	11/8/99
% Moisture:		decanted: (Y/N)	) <u>N</u>	Date Extracted:	11/9/99
Concentrated	d Extract	Volume: <u>1000</u> (uL	)	Date Analyzed:	11/12/99
Injection Volu	ume: 1.0	0 (uL)		Dilution Factor:	1.0
GPC Cleanu	p: (Y/N)	N pH: 7			

#### CONCENTRATION UNITS:

UG/L

(ug/L or ug/Kg)

Number TICs found:

1

CAS NUMBERCOMPOUND NAMERTEST. CONC.Q1. 001921-70-6Pentadecane, 2,6,10,14-tetramet20.066JN

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4B FIELD ID SEMIVOLATILE METHOD BLANK SUMMARY Sblk318 1 Lab Name: FMETL Lab Code 13461 UST SDG No.: Project Case No.: 4921 Location 810 BNA03358.D Lab File ID: Lab Sample ID: Sblk318 Instrument ID: Date Extracted: 11/9/99 GC BNA 2 Matrix: (soil/water) WATER Date Analyzed: 11/12/99 Level: (low/med) LOW Time Analyzed: 15:46

#### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	LAB	LAB	DATE
FIELD ID	SAMPLE ID	FILE ID	ANALYZED
01 810-1	4921.01	BNA03363.D	11/12/99

COMMENTS:

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#### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted 2. Table of Contents submitted 3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted Document paginated and legible Chain of Custody submitted 5. 6. Samples submitted to lab within 48 hours of sample collection 7. Methodology Summary submitted Laboratory Chronicle and Holding Time Check submitted 8. 9. Results submitted on a dry weight basis 10. Method Detection Limits submitted  $\checkmark$ 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 418100

Laboratory Certification #13461

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

#### Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

### FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS PHONE: (732) 532-6224 FAX: (732) 532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

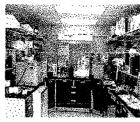
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#### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: UST Program

Bldg. 810					
Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received	
810-1 7-12'	5007.01	Aqueous	11-Dec-99 11:00	12/13/99	

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

ENCLOSURE: CHAIN OF CUSTODY RESULTS

5-4-00

Daniel Wright/Date Laboratory Director

Table	of	Cont	ents
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Section	Pages
Chain of Custody	1-2
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Conformance/Non-Conformance Summary	5-7
Laboratory Chronicle	8-9
Volatile Organics	10-11
Analytical Results Summary	12-15
Tune Results Summary	16-19
Method Blank Results Summary	20
Calibration Summary	21-22
Surrogate Recovery Summary	23
MS/MSD Results Summary	24-25
Internal Standard Area & RT Summary	26
Chromatograms	27-30
Base Neutrals	31
Analytical Results Summary	32-37
Tune Results Summary	38-41
Method Blank Results Summary	42
Calibration Summary	43-46
MS/MSD Results Summary	47-51
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Chromatograms	56-59

Laboratory Deliverables Checklist	60
Laboratory Authentication Statement	61

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## CHAIN OF CUSTODY

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## Fort Monmouth Environmental Testing Laboratory

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

Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@mail1.monmouth.army.mil NJDEP Certification #13461

**Chain of Custody Record** 

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Customer: D. DESA: **Analysis Parameters** Project No: **Comments:** Phone #: XQIM7 Location: BLOG. 810  $\mathcal{B}$ 8A+ YLENE N )DERA (WOMA ()Other: Ŧ Samplers Name / Company: Mr. MICA # Sample 15 Remarks / Preservation Method Lab Sample I.D. Sample Location Date Time Type bottles 5007. AQ. 3 7-12 12-11-99 1100 HCL, 2400 810-1  ${}^{\times}$ Relinquished by (signature): Received by (signature): Received by (signature): Date/Time: Relinquished by (signature): Date/Time: Masson 64399 730 'IRD. Received by (signature): Relinquished by (signature); Date/Time: Relinquished by (signature): Date/Time: Received by (signature): Remarks: SHARED T.B. + F.B. w/ BLDG. 800 Feport Type: ()Full, ()Reduced, ()Standard, ()Screen / non-certified Turnaround time: 🖉 Standard 3 wks, ()Rush____ Days, ()ASAP Verbal Hrs.

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METHODOLOGY SUMMARY

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#### EPA Method 624

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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.

## CONFORMANCE NON-CONFORMANC SUMMARY

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

			Indicate Yes, No, N/
1.		eled/Compounds identified and method blanks)	Ves
	(rield samples	and method blanks)	
2.	Retention times for	chromatograms provided	Yes
3.	GC/MS Tune Speci	fications	
	а.	BFB Meet Criteria	Ves
	b.	DFTPP Meet Criteria	Yes
4.	GC/MS Tuning Free	quency – Performed every 24 hours for 600	
	series and 12 hours	for 8000 series	yes
5.		- Initial Calibration performed before sample	
		ing calibration performed within 24 hours of	1
	sample analysis for	600 series and 12 hours for 8000 series	<u> </u>
6.	GC/MS Calibration	requirements	
	a.	Calibration Check Compounds Meet Criteria	Yes
	b.	System Performance Check Compounds Meet Criteria	yes
7.	Blank Contaminatio	n – If yes, List compounds and concentrations in each blank:	NO
	a.	VOA Fraction	
	b.	B/N Fraction	
	с.	Acid Fraction NA	
8.	Surrogate Recoverie	es Meet Criteria	Yes
	If not met, list t outside the acce	hose compounds and their recoveries, which fall eptable range:	
	a.	VOA Fraction	
	b.	B/N Fraction	
	с.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
9.		x Spike Duplicate Recoveries Meet Criteria e compounds and their recoveries, which fall le range)	yes
	a.	VOA Fraction	
	b.	B/N Fraction	
	с.	Acid Fraction <b>NA</b>	

N/A

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

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Indicate Yes, No, N/A Ves 10. Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range) VOA Fraction a. B/N Fraction_____ b. Acid Fraction NA c. yes 11. Extraction Holding Time Met If not met, list the number of days exceeded for each sample:_____ _____ yes_ 12. Analysis Holding Time Met If not met, list the number of days exceeded for each sample: Additional Comments: Laboratory Manager:_ Date: 5-4-00

## LABORATORY CHRONICLE

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## Laboratory Chronicle

Lab ID: 5007

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Site: Bldg. 810

	Date	Hold Time
Date Sampled	12/11/99	NA
Receipt/Refrigeration	12/11/99	NA
Extractions		
1. Base Neutral	12/13/99	14 days
Analyses		
<ol> <li>Volatile Organics</li> <li>Base Neutral</li> </ol>	12/13,14/99 12/14/99	14 days 40 days

* Samples collected and refrigerated 12/11/99, Laboratory received the samples on Monday 12/13/99.

# VOLATILE ORGANICS

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#### US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

#### **Definition of Qualifiers**

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

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

Data File	VC001540.D	Sample Name	Vblk41
Operator	Skelton	Field ID	Vblk41
Date Acquired	13 Dec 1999 5:42 pm	Sample Multiplier	1

	•				Regulatory Level (ug/l)*		
<u>CAS#</u>	Compound Name	<u>R.T.</u>	Response	Result		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		0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethane			not detected		1.68 ug/L	
74-87-3	Chloromethane		[	not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78 <b>-9</b> 3-3	2-Butanone			not detected	300	0.62 ug/L	
	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	· ·
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-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	Tetrachioroethene			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	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	1
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	<u> </u>
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	<u> </u>
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	F
95-50-1	1,2-Dichlorobenzene	<u>├</u>		not detected	600	0.64 ug/L	
1-06-6	11,2-Dicitiorobenzene	L	L				A

*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

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

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Lab Name:	FMETL			NJDEP#	: 13461		Vblk4	n
Project:	100004	Cas	e No.: <u>5007</u>	Locati	on: Bldg8		G No.:	
Matrix: (soil/v	vater)	WATER		L	ab Sample	ID:	Vblk41	
Sample wt/vc	ol:	5.0	(g/ml) <u>ML</u>	L	ab File ID:	-	VC001540.D	
Level: (low/n	ned)	LOW		C	ate Receiv	ved:	12/13/99	
% Moisture: r	not dec.	· · ·		Ē	ate Analyz	ed:	12/13/99	<u> </u>
GC Column:	RTX50	<u>)2.</u> ID: <u>0.2</u>	5 (mm)	C	ilution Fac	tor:	1.0	
Soil Extract V	/olume:		_ (uL)	S	oil Aliquot	Volun	ne:	(uL)
Number TICs	s found:	0		CONCENTRA (ug/L or ug/K				
CAS NO.		COMPOU	ND NAME		RT	ES		Q

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

 Data File
 VC001562.D
 Sample Name
 5007.01

 Operator
 Skelton
 Field ID
 810-1

 Date Acquired
 14 Dec 1999
 8:18 am
 Sample Multiplier
 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
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	nie	0.25 ug/L	
	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
_75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	<b> </b>
	cis-1.2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	r
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		0.23 ug/L	<u>├</u> ───
107-06-2	1,2-Dichloroethane		·	not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	<u> </u>
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	<u> </u>
75-27-4	Bromodichloromethane		······	not detected		0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	t
10061-01-5	cis-1.3-Dichloropropene			not detected	nle	0.69 ug/L	<u> </u>
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	t
108-88-3	Toluene		ł-	not detected	1000	0.37 ug/L	<u> </u>
10061-02-6	trans-1,3-Dichloropropene			not detected	nie	0.87 ug/L	[
79-00-5	1,1,2-Trichloroethane		<del> </del> _	not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected		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	<u> </u> -
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene		┝────╂╸	not detected	700	0.65 ug/L	<u> </u>
1330-20-7	m+p-Xylenes			not detected	1	1.14 ug/L	<u>├</u>
1330-20-7			<u> </u>	not detected	nle	0.62 ug/L	<u>├</u>
100-42-5	o-Xylene		<del> </del> -			0.56 ug/L	<u> </u>
	Styrene			not detected			
75-25-2	Bromoform		<u></u>	not detected	4	0.70 ug/L	<u> </u>
<u>79-34-5</u>	1,1,2,2-Tetrachloroethane		┝╼╴──╼┛┨╌	not detected	2	0.47 ug/L	<b>├</b> ───
<u>541-73-1</u>	1,3-Dichlorobenzene		└─── <del>─</del>	not detected	600	0.55 ug/L	<u> </u>
106-46-7	1,4-Dichlorobenzene		<b> </b>	not detected	75	0.57 ug/L	
<u>95-50-1</u>	1,2-Dichlorobenzene	L!	<u>_</u>	not detected	600	0.64 ug/L	1

*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

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	,			NALYSIS DATA	SHEET		FIELD ID:	
Lab Name:	FMETL	TENTATI		FIED COMPOL	INDS		810-	1
Project:	100004		e No.: 5007		: Bldg81	S	G No.:	J
Matrix: (soil/		WATER			Sample		·	
Sample wt/v	ol:	5.0	(g/ml) <u>ML</u>	Lat	File ID:		VC001562.D	
Level: (low/r	med)	LOW		Dat	e Receiv	red:	12/13/99	
% Moisture:	not dec.			Dat	e Analyz	ed:	12/14/99	
GC Column:	RTX5	02. ID: 0.2	.5 (mm)	Dilu	ition Fac	tor:	1.0	
Soil Extract	Volume:		_ (uL)	Soi	Aliquot	Volur	ne:	(uL)
				CONCENTRAT (ug/L or ug/Kg)				
Number TIC:	s found:	0	_		 			
CAS NO.		COMPOU	ND NAME		RT	ES	T. CONC.	Q

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# Semi-Volatile Analysis Report

# U.S. Army, Fort Monmouth Environmental Laboratory

# NJDEP Certification #13461

Data File Name	BNA03456.D	Sample Name	Sblk327
Operator	Bhaskar	Misc Info	Sblk327 A 991213
Date Acquired	14-Dec-99	Sample Multiplier	1

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					Regulatory Level (ug/L)*		
CAS#	<u>Name</u>	<u></u>	Response	Result	r1	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	<u>1.83 u</u>	
62-75-9	N-nitroso-dimethylamine	╉──┥		not detected	20	<u>0.91 u</u>	<u> </u>
62-53-3	Aniline			not detected	NLE	<u>1.63 u</u>	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	<u>1.28 u</u>	
541-73-1	1,3-Dichlorobenzene			not detected	600	<u>1.21 u</u>	
106-46-7	1,4-Dichlorobenzene			not detected	75	<u>1,19 u</u>	
100-51-6	Benzyl alcohol			not detected	NLE	<u>1.02 u</u> g	2/L
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13 u	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	<u>1.39 u</u>	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	<u> </u>	
67-72-1	Hexachloroethane			not detected	10	<u> </u>	z/L
98-95-3	Nitrobenzene			not detected	10	<u> </u>	₂/L
78-59-1	Isophorone		· · · ·	not detected	100	<u>1.01 u</u>	2/L
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21 u	z/L
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22 u	2/L
91-20-3	Naphthalene			not detected	NLE	1.27 u	z/L
106-47-8	4-Chloroaniline			not detected	NLE	1.09 u	2/L
<u>87-68-3</u>	Hexachlorobutadiene			not detected	1	0.71 u	z/L
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08 u	g/L
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32 u	2/L
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01 u	2/L
88-74-4	2-Nitroaniline			not detected	NLE	0.96 u	2/L
131-11-3	Dimethylphthalate			not detected	7000	1.52 u	2/L
208-96-8	Acenaphthylene			not detected	NLE	0.96 u	2/L
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81 u	
99-09-2	3-Nitroaniline	· -		not detected	NLE	0.79 u	₂/L
83-32-9	Acenaphthene			not detected	400	1.10 u	
132-64-9	Dibenzofuran			not detected	NLE	1.00 u	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87 u	<u> </u>
84-66-2	Diethylphthalate		⁻	not detected	5000	1.62 u	· · · · · · · · · · · · · · · · · · ·
86-73-7	Fluorene			not detected	300	0.99 u	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10 u	· ···
100-01-6	4-Nitroaniline		······	not detected	NLE	1.05 u	
86-30-6	n-Nitrosodiphenylamine	11		not detected	20	1.05 uj	
103-33-3	Azobenzene	1-1		not detected	NLE	0.67 u	
103-33-3	4-Bromophenyl-phenylether	╉──┨			NLE NLE	0.76 us	
101-55-5 118-74-1		╉━━┫		not detected			
	Hexachlorobenzene			not detected	10 NU F	<u>0.94 u</u>	
85-01-8	Phenanthrene	+		not detected	NLE	<u> </u>	
120-12-7	Anthracene	╉╼╍╍┥		not detected	2000	<u> </u>	
84-74-2	Di-n-butylphthalate	<u> </u>		not detected	900	1.70 u	
206-44-0	Fluoranthene			not detected	300	1.64 u	z/L

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000032

# Semi-Volatile Analysis Report Page 2

Data File Name	BNA03456.D	Sample Name	Sbik327
Operator	Bhaskar	Misc Info	Sblk327 A 991213
Date Acquired	14-Dec-99	Sample Multiplier	1

CAS#	Name	<b>R.</b> T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87 <b>-</b> 5	Benzidine			not detected	50	4.18	ug/L	
<u>129-00-0</u>	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	
<u>218-01-9</u>	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	
<u>53</u> -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

<u>Qualifiers</u>

E= Value Exceeds Linear Range

D= Value from dilution

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B= Compound in Related Blank

PQL= Practical Quantitation Limit

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

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### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID

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			054007
Lab Name: FMET	L ·	Lab Code 13461	Sblk327
Project 10000	04 Case No.: 5007	Location Bld.810 SD	G No.:
Matrix: (soil/water)	WATER	Lab Sample ID:	Sblk327
Sample wt/vol:	1000 (g/ml) <u>ML</u>	Lab File ID:	BNA03456.D
Level: (low/med)	LOW	Date Received:	12/13/99
% Moisture:	decanted: (Y/N)	N Date Extracted:	12/13/99
Concentrated Extra	ct Volume: 1000 (uL)	Date Analyzed:	12/14/99
Injection Volume:	1.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N	) <u>N</u> pH: <u>7</u>		

# CONCENTRATION UNITS:

Number TICs found:	2	(ug/L or ug/Kg)	UG/L	
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.18	_5	J
2	unknown	10.16	51	J

^{7/97}000034

# Semi-Volatile Analysis Report

# U.S. Army, Fort Monmouth Environmental Laboratory

# NJDEP Certification #13461

Data File Name	BNA03463.D	Sample Name	5007.01
Operator	Bhaskar	Misc Info	810-1
Date Acquired	14-Dec-99	Sample Multiplier	1

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CAS#	Name	R.T.	Response	Result	Level (ug/L)*	MDL		Oualifiers
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		
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28		
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 <u>-6</u>	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13		
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	
<u>111-91-1</u>	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 <u>-3</u>	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96 <u>-8</u>	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	NĻE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	<u> </u>
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	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	1
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		
120-12-7	Anthracene			not detected	2000	1.12		
84-74-2	Di-n-butylphthalate			not detected	<u>900</u>	1.70		
206-44-0	Fluoranthene			not detected	300	_ 1.64		

Page 1 of 2

# 000035

# Semi-Volatile Analysis Report Page 2

Data File Name	BNA03463.D	Sample Name	5007.01
Operator	Bhaskar	Misc Info	810-1
Date Acquired	14-Dec-99	Sample Multiplier	1

016#	Nome	R.T.	Bamanaa	Result	Regulatory Level (ug/L)*	MDL		0
CAS#	<u>Name</u>	<u> </u>	Response		-		_	Qualifiers
<u>92-87-5</u>	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
<u>85-68-7</u>	Butylbenzylphthalate			not_detected	100	1.05	ug/L	L
<u>56-55-3</u>	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	<u>30</u>	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

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PQL= Practical Quantitation Limit

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

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### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:	FMETL				810-1	
Project	100004				Location Bld.810 SD	G No.:
Matrix: (soil/v	vater)	WATER			Lab Sample ID:	5007.01
Sample wt/vo	ol:	1000	(g/ml) ML		Lab File ID:	BNA03463.D
Level: (low/n	ned)	LOW			Date Received:	12/13/99
% Moisture:		de	canted: (Y/N)	Ν	Date Extracted:	12/13/99
Concentrated	d Extract	Volume:	1000 (uL)		Date Analyzed:	12/14/99
Injection Volu	ume: <u>1.(</u>	) (uL)			Dilution Factor:	1.0
GPC Cleanu	p: (Y/N)	N	pH: <u>7</u>			

### CONCENTRATION UNITS:

1

FIELD ID

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Number TICs found:	0	(ug/L or ug/K	g)	UG/L		
CAS NUMBER	COMPOUND NAME		RT	EST. CONC.	Q	

^{7/97} 000037

### 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

- 1

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- 3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted
- 4. Document paginated and legible
- 5. Chain of Custody submitted
- 6. Samples submitted to lab within 48 hours of sample collection
- 7. Methodology Summary submitted
- 8. Laboratory Chronicle and Holding Time Check submitted
- 9. Results submitted on a dry weight basis
- 10. Method Detection Limits submitted
- 11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP

Laboratory Manager or Environmental Consultant's Signature_ Date 5/4/00

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

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

Daniel K. Wright Laboratory Manager

# APPENDIX G

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# ELECTRONIC DATA DELIVERABLES

### BLDG. 810 UST GROUND WATER SAMPLE GPS POSITION & COORDINATES

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

(IN US SURVEY FEET)

### SAMPLE POINT

### **POSITION / DESC.**

810 GW

# Y COORD. ( NORTHING )

537986.993

X COORD. ( EASTING )

621054.88

(GW denotes Ground Water)

**REFERENCE POINTS** 

### **POSITION / DESC.**

### Y COORD. (NORTHING)

X COORD. ( EASTING )

810 CORNER 810 CORNER 538002.054 537947.475 621010.963 621092.383

91533-131 SRPID 94-05-150-54

### **BLDG. 810 UST SAMPLES GPS POSITIONS & COORDINATES**

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

### (IN US SURVEY FEET)

### SAMPLE POINTS

### POSITION / DESC.

### Y COORD (NORTHING)

#### X COORD. (EASTING)

A (4/28/98) B (4/28/98) B (5/6/98) C (4/28/98) C (5/6/98) D (5/6/98) E (5/6/98) F (5/6/98) 537993.088 537984.598 537982.768 537988.266 537992.192 537982.118 537990.567 537979.519

621045.024 621051.02 621048.056 621057.389 621050.656 621059.105 621060.73 621051.306

### **REFERENCE POINTS**

#### **POSITION / DESC.**

### Y COORD (NORTHING)

### X COORD. ( EASTING )

810 CORNER 810 CORNER 538002.054 537947.475 621010.963 621092.383

