United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 173
Main Post-East Area

NJDEP UST Registration No. 90010-19
Dicar No. 96-05-22-1432-31

MARCH 2001

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 173

MAIN POST-EAST AREA
NJDEP UST REGISTRATION NO. 90010-19

MARCH 2001

PREPARED FOR:

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

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TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

UST Closure

On May 22, 1996, 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-East area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0090010-19 (Fort Monmouth ID No. 173), was located northeast of Building 173. UST No. 0090010-19 was a 1,000-gallon #2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual.* The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation.* Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes or punctures. Numerous holes were noted in the UST. Soils at the location of the holes were dark in color and appeared to be contaminated. Based on the inspection of the UST, Directorate of Public Works (DPW) concluded that a discharge was associated with this UST. The NJDEP hotline was notified and the case was assigned DICAR No. 96-05-22-1432-31. Approximately 59 cubic yards of potentially contaminated soil were removed from the excavated area and stored at the Fort Monmouth petroleum contaminated soil staging area.

Soil samples, which were collected after the removal of the potentially contaminated soil, contained non-detectable levels of TPHC, except for sample B1 and DUP B1 that had a TPHC concentration of 1,934.54 mg/kg and 1,202.17 mg/kg. A VOA analysis (EPA Method 8260) was completed on samples B1 and DUP B1 and all known compounds searched for in the analysis were detected below the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSC). Groundwater was encountered at a depth of 4.0 feet bgs and sheen was observed on groundwater.

All post excavation soil samples collected from the UST excavation at Building 173 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 near the shallow water table, two (2) groundwater samples were collected at Building 173. On December 4, 2000, and January 17, 2001, Building 173 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's).

All groundwater analytical results were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment of UST No. 90010-19 at Building 173.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 90010-19, was closed at Building 173 at the Main Post-East area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on May 22, 1996. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 90010-19 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. 90010-19 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. 90010-19 are included in Appendices A and B, respectively.

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

This UST Closure and Site Investigation Report has been prepared by Versar, to assist the U.S. Army DPW in complying with the NJDEP regulations. The applicable NJDEP regulations at the date of closure were the *Interim Closure Requirements for Underground Storage Tank Systems* (N.J.A.C. 7:14B-1 et seq. October 1990 and revisions dated November 1, 1991).

This report was prepared using information collected at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling and groundwater investigation, are presented in the final section of this report.

1.2 SITE DESCRIPTION

Building 173 is located in the Main Post-East area of the Fort Monmouth Army Base. UST No. 0090010-19 was located northeast of Building 173 and appurtenant copper piping ran approximately twenty three (23) feet southwest from the excavation to Building 173. 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 173. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area. A geological map is provided on Figure 1A.

Regional Geology

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

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

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

Local Geology

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

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

Hydrogeology

The water table aquifer in the Main Post area is identified as part of the "composite confining units," or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Homerstown 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 173 is located approximately 500 feet north of Oceanport Creek, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 173 is anticipated to be to the south.

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involved with, or were affected by, the decommissioning of the UST system were minimized. All areas, which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- The contractor performing the closure prior to excavation activities identified all underground obstructions (utilities, etc.).
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 175 gallons of liquid from the UST and its associated piping were pumped directly into a Lionetti Oil Recovery truck where it was then transported to Lionetti Oil Recovery Co., Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, NJ. Refer to Appendix C for a copy of the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. Numerous holes were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Soils were stained and appeared to be contaminated. Soil samples, which were collected after the removal of the potentially contaminated soil, contained non-detectable levels of TPHC, except for sample B1 and DUP B1 that had a TPHC concentration of 1,934.54 mg/kg and 1,202.17 mg/kg. A VOA analysis (EPA Method 8260) was completed on samples B1 and DUP B1 and all known compounds searched for in the analysis were detected below the NJDEP RDCSC. Groundwater was encountered at a depth of 4.0 feet bgs and sheen was observed on groundwater. 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 & Sons, Inc., Recycling Division. Please refer to Appendix D for the UST Disposal Certificate and Appendix G for photographs of the tank.

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

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

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, approximately 59 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 4.0 feet below ground surface and sheen was observed on groundwater.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

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

- Analytical Laboratory: U.S.Army Fort Monmouth Environmental laboratory
  Contact Person: Daniel K. Wright
  Phone Number: (908) 532-4359
  NJDEP Company Certification No.: 13461

- Hazardous Waste Hauler: Lorco Petroleum Services
  Contact Person: Guy Weck
  Phone Number: (908) 721-0900

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using visual observations to identify potentially contaminated material. Soil excavated from around the tank-exhibited evidence of potential contamination. Soils were removed from the excavation until no evidence of contamination remained. Groundwater was encountered at 4.0 feet below ground surface and sheen was observed on groundwater.

2.3 SOIL SAMPLING

On May 28, 1996, following the removal of the UST and approximately 45 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples 173-A through 173-M were collected from a total of thirteen (13) locations of the UST excavation. Sample 173-E was a duplicate. Sidewall samples 173-A through 173-F were collected at a depth of 3.0 feet bgs. Samples 173-G and 173-H were collected along the excavation floor at a depth of 7.5 feet bgs. Samples 173-I through 173-M were collected along the former piping length of the excavation, which was approximately twenty

three (23) feet in length. The piping samples were collected at a depth of 1.5 feet bgs.All samples were analyzed for TPHC and total solids.

On June 4, 1996, following the removal of 9 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, and E (DUP B) were collected from a total of four (4) locations of the UST excavation. Samples A, B, C, D, and E (DUP B) were collected along the excavation floor at a depth of 4.0 feet bgs. All samples were analyzed for TPHC and total solids.

On June 13, 1996, following the removal of 5 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, and DUP B were collected from a total of two (2) locations of the UST excavation. Samples A, B, and DUP B were collected along the excavation floor at a depth of 6.0 feet bgs. All samples were analyzed for TPHC and total solids.

On November 18, 2000, and December 4, 2000, three (3) geoprobe soil samples were collected from the excavated area to verify the effectiveness of the soil excavation activities. Samples B1, B2, and DUP B1 were collected along the former piping run at a depth of 2.0 feet bgs. All samples were analyzed for TPHC, VOC's, 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 December 4, 2000, and January 18, 2001, Building 173 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.* Refer to Appendix F for the field sampling documentation.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected between May 28, 1996, and December 4, 2000 from a total of twenty two (22) locations. All samples were analyzed for TPHC and total solids. In addition, sample B1 and B2 were analyzed for VOA. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling locations are shown on Figure 4. The VOA anaylsis for sample B1 and B2 was compared to the NJDEP residential direct contact soil cleanup criteria and is included as Table 3. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected between May 28, 1996, and December 4, 2000, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria.

3.2 GROUNDWATER SAMPLING RESULTS

The sample collected from Building 173 on December 4, 2000, contained acetone at a concentration of 6.74 ug/l, 2-butanone at 2.65 ug/l, naphthalene at 16.84 ug/l, 2-methylnaphthalene at 34.81 ug/l, acenaphthene at 1.06 ug/l, fluorene at 2.53 ug/l, phenanthrene at 4.96 ug/l, fluoranthene at 3.50 ug/l, pyrene at 8.63 ug/l, and chrysene at 3.23 ug/l. No other compounds were detected.

The sample collected from Building 173 on January 18, 2001, contained o-xylene at a concentration of 1.06 ug/l and butylbenzylphthalate at a concentration of 1.26 ug/l. No other compounds were detected.

A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 4 and the groundwater sampling locations are shown on Figure 5. The analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey.

Groundwater samples collected on December 4, 2000, and January 18, 2001, were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 173 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 173 on December 4, 2000, and January 18, 2001, groundwater quality at Building 173 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. 90010-19 at Building 173.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
B	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
F	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
H	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**I	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**J	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**K	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
L	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**M	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUP E	5/28/96	5/30/96	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons
** Sample location was further remediated and resampled

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
**A	6/4/96	6/4/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**B	6/4/96	6/4/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	6/4/96	6/4/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	6/4/96	6/4/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
**E(DUPB)	6/4/96	6/4/96	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons
** Sample location was further remediated and resampled

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	6/13/96	6/19/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
B	6/13/96	6/19/96	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUPB	6/13/96	6/19/96	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
B1	11/18/00	11/20/00	Soil	Post-Excavation	TPHC	OQA-QAM-025
B2	11/18/00	11/20/00	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUPB1	11/18/00	11/20/00	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
B1	11/18/00	11/20/00	Soil	Post-Excavation	VOCs	8260
B2	11/18/00	11/20/00	Soil	Post-Excavation	VOCs	8260
DUPB1	11/18/00	11/20/00	Soil	Post-Excavation	VOCs	8260

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
5890.01	12/4/00	12/5/00	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
269	1/18/01	1/19/01	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

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/3.0'=	2077.1	5/28/96	5/30/96	Total Solid	--	--	84.50 %	--	--
				TPHC	317	yes	ND	10,000	No
B/3.0'=	2077.2	5/28/96	5/30/96	Total Solid	--	--	80.30 %	--	--
				TPHC	317	Yes	ND	10,000	No
C/3.0'=	2077.3	5/28/96	5/30/96	Total Solid	--	--	92.70 %	--	--
				TPHC	317	Yes	ND	10,000	No
D/3.0'=	2077.4	5/28/96	5/30/96	Total Solid	--	--	84.80 %	--	--
				TPHC	317	yes	ND	10,000	No
E/3.0'=	2077.5	5/28/96	5/30/96	Total Solid	--	--	86.10 %	--	--
				TPHC	317	yes	ND	10,000	No
F/3.0'=	2077.6	5/28/96	5/30/96	Total Solid	--	--	85.90 %	--	--
				TPHC	317	yes	ND	10,000	No
G/7.5'=	2077.7	5/28/96	5/30/96	Total Solid	--	--	79.90 %	--	--
				TPHC	317	yes	ND	10,000	No
H/7.5'=	2077.8	5/28/96	5/30/96	Total Solid	--	--	82.60 %	--	--
				TPHC	317	yes	ND	10,000	No
***I/1.5'=	2077.9	5/28/96	5/30/96	Total Solid	--	--	81.10 %	--	--
				TPHC	317	yes	1,947.90	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 resampled
ND	Not detected above stated method detection limit
TPHC	Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

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
***J/1.5'=	2077.10	5/28/96	5/30/96	Total Solid	--	--	99.00 %	--	--
				TPHC	317	yes	3,467.50	10,000	No
***K/1.5'=	2077.11	5/28/96	5/30/96	Total Solid	--	--	109.60 %	--	--
				TPHC	317	Yes	1,034.40	10,000	No
L/1.5'=	2077.12	5/28/96	5/30/96	Total Solid	--	--	96.80 %	--	--
				TPHC	317	Yes	ND	10,000	No
***M/1.5'=	2077.13	5/28/96	5/30/96	Total Solid	--	--	93.30 %	--	--
				TPHC	317	yes	1,056.80	10,000	No
DUP E/3.0'=	2077.14	5/28/96	5/30/96	Total Solid	--	--	97.00 %	--	--
				TPHC	317	yes	ND	10,000	No

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
***A/4.0'=	2081.1	6/4/96	6/4/96	Total Solid	--	--	80.20 %	--	--
				TPHC	317	yes	3,909.00	10,000	No
***B/4.0'=	2081.2	6/4/96	6/4/96	Total Solid	--	--	84.70 %	--	--
				TPHC	317	Yes	3,526.00	10,000	No
C/4.0'=	2081.3	6/4/96	6/4/96	Total Solid	--	--	81.00 %	--	--
				TPHC	317	Yes	ND	10,000	No
D/4.0'=	2081.4	6/4/96	6/4/96	Total Solid	--	--	82.00 %	--	--
				TPHC	317	yes	ND	10,000	No
***EDUPB/4.0'=	2081.5	6/4/96	6/4/96	Total Solid	--	--	82.70 %	--	--
				TPHC	317	yes	14,297.00	10,000	Yes

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 resampled
ND Not detected above stated method detection limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

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'=	2092.1	6/12/96	6/19/96	Total Solid	--	--	80.00 %	--	--
				TPHC	200	yes	ND	10,000	No
B/6.0'=	2092.2	6/12/96	6/19/96	Total Solid	--	--	79.50 %	--	--
				TPHC	200	Yes	ND	10,000	No
DUP B/6.0'=	2092.3	6/12/96	6/19/96	Total Solid	--	--	80.20 %	--	--
				TPHC	200	Yes	ND	10,000	No

Note:

* Total Solid results are expressed as a percentage.

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

ND Not detected above stated method detection limit

TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 173, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

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
B1/2.0'=	5863.01	11/18/00	11/20/00	Total Solid	--	--	78.77 %	--	--
				TPHC	196	yes	1,934.54	10,000	No
B2/2.0'=	5863.02	11/18/00	11/20/00	Total Solid	--	--	87.35 %	--	--
				TPHC	176	Yes	ND	10,000	No
DUP B1/2.0'=	5863.03	11/18/00	11/20/00	Total Solid	--	--	81.60 %	--	--
				TPHC	191	Yes	1,202.17	10,000	No

Note:

* Total Solid results are expressed as a percentage.

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

ND Not detected above stated method detection limit

TPHC Total Petroleum Hydrocarbons

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.01(Sample B1)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
107028	Acrolein	1700	U	NA	NA
107131	Acrylonitrile	1700	U	1000	5000
75650	tert-Butyl alcohol	3100	U	NA	NA
1634044	Methyl-tert-Butyl ether	720	U	NA	NA
108203	Di-isopropyl ether	480	U	NA	NA
	Dichlorodifluoromethane	960	U	NA	NA
74-87-3	Chloromethane	240	U	520000	1000000(d)
75-01-4	Vinyl Chloride	720	U	2000	7000
74-83-9	Bromomethane	480	U	79000	1000000(d)
75-00-3	Chloroethane	720	U	NA	NA
75-69-4	Trichlorofluoromethane	480	U	NA	NA
75-35-4	1, 1-Dichloroethene	240	U	8000	150000
67-64-1	Acetone	1300		1000000(d)	1000000(d)
75-15-0	Carbon Disulfide	240	U	NA	NA
75-09-2	Methylene Chloride	480	U	49000	210000
156-60-5	trans-1,2-Dichloroethene	480	U	1000000(d)	1000000(d)
75-35-3	1,1-Dichloroethane	240	U	570000	1000000(d)
108-05-4	Vinyl Acetate	720	U	NA	NA
78-93-3	2-Butanone	2300		1000000(d)	1000000(d)
156-59-2	cis-1,2-Dichloroethene	240	U	79000	1000000(d)
67-66-3	Chloroform	240	U	19000(k)	28000(k)
75-55-6	1,1,1-Trichloroethane	240	U	NA	NA
56-23-5	Carbon Tetrachloride	480	U	2000(k)	4000(k)
71-43-2	Benzeze	240	U	3000	13000
107-06-2	1,2-Dichloroethane	480	U	6000	24000

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.01(Sample B1)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
79-01-6	Trichloroethene	240	U	23000	54000(k)
78-87-5	1, 2-Dichloropropane	240	U	10000	43000
75-27-4	Bromodichloromethane	240	U	11000(g)	46000(g)
110-75-8	2-Chloroethyl vinyl ether	480	U	NA	NA
10061-01-5	cis-1,3-Dichloropropene	240	U	NA	NA
108-10-1	4-Methyl-2-Pentanone	480	U	1000000(d)	1000000(d)
108-88-3	Toluene	240	U	1000000(d)	1000000(d)
10061-02-6	trans-1,3-Dichloropropene	480	U	NA	NA
79-00-5	1,1,2-Trichloroethane	480	U	22000	420000
127-18-4	Tetrachloroethene	240	U	4000(k)	6000(k)
591-78-6	2-Hexanone	480	U	NA	NA
126-48-1	Dibromochloromethane	480	U	NA	NA
108-90-7	Chlorobenzene	240	U	37000	680000
100-41-4	Ethylbenzene	480	U	1000000(d)	1000000(d)
1330-20-7	m+p-Xylenes	720	U	NA	NA
1330-20-7	o-Xylene	480	U	NA	NA
100-42-5	Styrene	480	U	23000	97000
75-25-2	Bromoform	480	U	86000	370000
79-34-5	1,1,2,2-Tetrachloroethane	480	U	34000	70000(k)
541-73-1	1,3-Dichlorobenzene	720	U	5100000	10000000(c)
106-46-7	1,4-Dichlorobenzene	720	U	570000	10000000(c)
95-50-1	1,2-Dichlorobenzene	720	U	5100000	10000000(c)

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.02(Sample B2)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
107028	Acrolein	1800	U	NA	NA
107131	Acrylonitrile	1800	U	1000	5000
75650	tert-Butyl alcohol	3400	U	NA	NA
1634044	Methyl-tert-Butyl ether	780	U	NA	NA
108203	Di-isopropyl ether	520	U	NA	NA
	Dichlorodifluoromethane	1000	U	NA	NA
74-87-3	Chloromethane	260	U	520000	1000000(d)
75-01-4	Vinyl Chloride	780	U	2000	7000
74-83-9	Bromomethane	520	U	79000	1000000(d)
75-00-3	Chloroethane	780	U	NA	NA
75-69-4	Trichlorofluoromethane	520	U	NA	NA
75-35-4	1, 1-Dichloroethene	260	U	8000	150000
67-64-1	Acetone	520	U	1000000(d)	1000000(d)
75-15-0	Carbon Disulfide	260	U	NA	NA
75-09-2	Methylene Chloride	520	U	49000	210000
156-60-5	trans-1,2-Dichloroethene	520	U	1000000(d)	1000000(d)
75-35-3	1,1-Dichloroethane	260	U	570000	1000000(d)
108-05-4	Vinyl Acetate	780	U	NA	NA
78-93-3	2-Butanone	1000		1000000(d)	1000000(d)
156-59-2	cis-1,2-Dichloroethene	260	U	79000	1000000(d)
67-66-3	Chloroform	260	U	19000(k)	28000(k)
75-55-6	1,1,1-Trichloroethane	260	U	NA	NA
56-23-5	Carbon Tetrachloride	520	U	2000(k)	4000(k)
71-43-2	Benzeze	260	U	3000	13000
107-06-2	1,2-Dichloroethane	520	U	6000	24000

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.02(Sample B2)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON-RESIDENTIAL
79-01-6	Trichloroethene	260	U	23000	54000(k)
78-87-5	1, 2-Dichloropropane	260	U	10000	43000
75-27-4	Bromodichloromethane	260	U	11000(g)	46000(g)
110-75-8	2-Chloroethyl vinyl ether	520	U	NA	NA
10061-01-5	cis-1,3-Dichloropropene	260	U	NA	NA
108-10-1	4-Methyl-2-Pentanone	520	U	1000000(d)	1000000(d)
108-88-3	Toluene	260	U	1000000(d)	1000000(d)
10061-02-6	trans-1,3-Dichloropropene	520	U	NA	NA
79-00-5	1,1,2-Trichloroethane	520	U	22000	420000
127-18-4	Tetrachloroethene	260	U	4000(k)	6000(k)
591-78-6	2-Hexanone	520	U	NA	NA
126-48-1	Dibromochloromethane	520	U	NA	NA
108-90-7	Chlorobenzene	260	U	37000	680000
100-41-4	Ethylbenzene	520	U	1000000(d)	1000000(d)
1330-20-7	m+p-Xylenes	780	U	NA	NA
1330-20-7	o-Xylene	520	U	NA	NA
100-42-5	Styrene	520	U	23000	97000
75-25-2	Bromoform	520	U	86000	370000
79-34-5	1,1,2,2-Tetrachloroethane	520	U	34000	70000(k)
541-73-1	1,3-Dichlorobenzene	780	U	5100000	10000000(c)
106-46-7	1,4-Dichlorobenzene	780	U	570000	10000000(c)
95-50-1	1,2-Dichlorobenzene	780	U	5100000	10000000(c)

SOIL CLEANUP CRITERIA (MG/KG)

(LAST REVISED-7/11/96)

(A) CRITERIA ARE HEALTH BASED USING AN INCIDENTAL INGESTION EXPOSURE PATHWAY EXCEPT WHERE NOTEI BELOW.

(B) CRITERIA ARE SUBJECT TO CHANGE BASED ON SITE SPECIFIC FACTORS (E.G., AQUIFER CLASSIFICATION, SOIL TYPE, NATURAL BACKGROUND, ENVIRONMENTAL IMPACTS, ETC.)

(C) HEALTH BASED CRITERION EXCEEDS THE 10,000 MG/KG MAXIMUM FOR TOTAL ORGANIC CONTAMINANTS.

(D) HEALTH BASED CRITERION EXCEEDS THE 1000 MG/KG MAXIMUM FOR TOTAL VOLATILE ORGANIC CONTAMINANTS

(E) CLEANUP STANDARD PROPOSAL WAS BASED ON NATURAL BACKGROUND.

(F) HEALTH BASED CRITERION IS LOWER THAN ANALYTICAL LIMITS; CLEANUP CRITERION BASED ON PRACTICAL QUANTITATION LEVEL.

(G) CRITERION HAS BEEN RECALCULATED BASED ON NEW TOXICOLOGICAL DATA.

(H) THE IMPACT TO GROUND WATER VALUES FOR INORGANIC CONSTITUENTS WILL BE DEVELOPED BASED UPON SITE SPECIFIC CHEMICAL AND PHYSICAL PARAMETERS.

(I) ORIGINAL CRITERION WAS INCORRECTLY CALCULATED AND HAS BEEN RECALCULATED.

(J) TYPOGRAPHICAL ERROR.

(K) CRITERIA BASED ON INHALATION EXPOSURE PATHWAY, WHICH YIELDED A MORE STRINGENT CRITERION THAN THE INCIDENTAL INGESTION EXPOSURE PATHWAY.

(L) NEW CRITERION DERIVED USING METHODOLOGY IN THE BASIS AND BACKGROUND DOCUMENT.

(M) CRITERION BASED ON ECOLOGICAL (PHYTOTOXICITY) EFFECTS.

(N) LEVEL OF THE HUMAN HEALTH BASED CRITERION IS SUCH THAT EVALUATION FOR POTENTIAL ENVIRONMENTA IMPACTS ON A SITE BY SITE BASIS IS RECOMMENDED.

(O) LEVEL OF THE CRITERION IS SUCH THAT EVALUATION FOR POTENTIAL ACUTE EXPOSURE HAZARD IS RECOMMENDED.

(P) CRITERION BASED ON THE USEPA INTEGRATED EXPOSURE UPTAKE BIOKINETIC (IEUBK) MODEL UTILIZIN THE DEFAULT PARAMETERS. THE CONCENTRATION IS CONSIDERED TO PROTECT 95% OF TARGET POPULATION (CHILDREN) AT A BLOOD LEVEL OF 10 UG/DL.

(Q) CRITERIA WAS DERIVED FROM A MODEL DEVELOPED BY THE SOCIETY FOR ENVIRONMENTAL GEOCHEMISTR AND HEALTH (SEGH) AND WAS DESIGNED TO BE PROTECTIVE FOR ADULTS IN THE WORKPLACE.

(R) INSUFFICIENT INFORMATION AVAILABLE TO CALCULATE IMPACT TO GROUND WATER CRITERIA.

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.03(Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	6.74 ug/L	--	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	2.65 ug/L	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.03(Bldg 173)

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

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.03(Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	1.54	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.69	Not Detected	--	20	no
62-53-3	Aniline	1.85	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.63	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.62	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.58	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.62	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.65	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.57	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.64	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.34	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.51	Not Detected	--	10	no
78-59-1	Isophorone	0.45	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.48	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.54	Not Detected	--	9	no
91-20-3	Naphthalene	0.72	16.84 ug/L	--	nle	no
106-47-8	4-Chloroaniline	1.78	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.43	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.55	34.81 ug/L	--	nle	no
77-47-4	Hexachlorocyclopentadiene	0.76	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.53	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.79	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	1.04	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.70	Not Detected	--	nle	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 12/4/00 Location: 173 Lab Sample ID: 5888.03(Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.92	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.93	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.62	1.06 ug/L	--	400	no
132-64-9	Dibenzofuran	0.73	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.41	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.54	Not Detected	--	5000	no
86-73-7	Fluorene	0.98	2.53 ug/L	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.86	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.96	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.44	Not Detected	--	20	no
103-33-3	Azobenzene	1.00	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.28	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.08	Not Detected	--	10	no
85-01-8	Phenanthrene	1.73	4.96 ug/L	--	nle	no
120-12-7	Anthracene	1.85	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	2.49	Not Detected	--	900	no
206-44-0	Fluoranthene	1.48	3.50 ug/L	--	300	no
92-87-5	Benzidine	2.15	Not Detected	--	50	no
129-00-0	Pyrene	1.53	8.63 ug/L	--	200	no
85-68-7	Butylbenzylphthalate	1.24	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	2.68	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	1.60	Not Detected	--	60	no
218-01-9	Chrysene	1.14	3.23 ug/L	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.34	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.44	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.32	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.15	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	2.43	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	2.24	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	1.94	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	2.04	Not Detected	--	nle	no

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 1/18/01 Location: 173 Lab Sample ID: 269(Bldg 173)

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

Table 4
VOLATILE ORGANICS ANALYSIS DATA SHEET

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

Date Sampled: 1/18/01 Location: 173 Lab Sample ID: 269 (Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	1.06 ug/L	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 1/18/01 Location: 173 Lab Sample ID: 269(Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	1.54	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.69	Not Detected	--	20	no
62-53-3	Aniline	1.85	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.63	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.62	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.58	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.62	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.65	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.57	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.64	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.34	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.51	Not Detected	--	10	no
78-59-1	Isophorone	0.45	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.48	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.54	Not Detected	--	9	no
91-20-3	Naphthalene	0.72	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	1.78	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.43	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.55	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	0.76	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.53	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.79	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	1.04	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.70	Not Detected	--	nle	no

Table 4
SEMI-VOLATILE ANALYSIS DATA SHEET

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

Date Sampled: 1/18/01 Location: 173 Lab Sample ID: 269(Bldg 173)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.92	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.93	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.62	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.73	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.41	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.54	Not Detected	--	5000	no
86-73-7	Fluorene	0.98	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.86	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.96	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.44	Not Detected	--	20	no
103-33-3	Azobenzene	1.00	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.28	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.08	Not Detected	--	10	no
85-01-8	Phenanthrene	1.73	Not Detected	--	nle	no
120-12-7	Anthracene	1.85	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	2.49	Not Detected	--	900	no
206-44-0	Fluoranthene	1.48	Not Detected	--	300	no
92-87-5	Benzidine	2.15	Not Detected	--	50	no
129-00-0	Pyrene	1.53	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.24	1.26 ug/L	--	100	no
56-55-3	Benzo[a]anthracene	2.68	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	1.60	Not Detected	--	60	no
218-01-9	Chrysene	1.14	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.34	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.44	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.32	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.15	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	2.43	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	2.24	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	1.94	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	2.04	Not Detected	--	nle	no

FIGURES

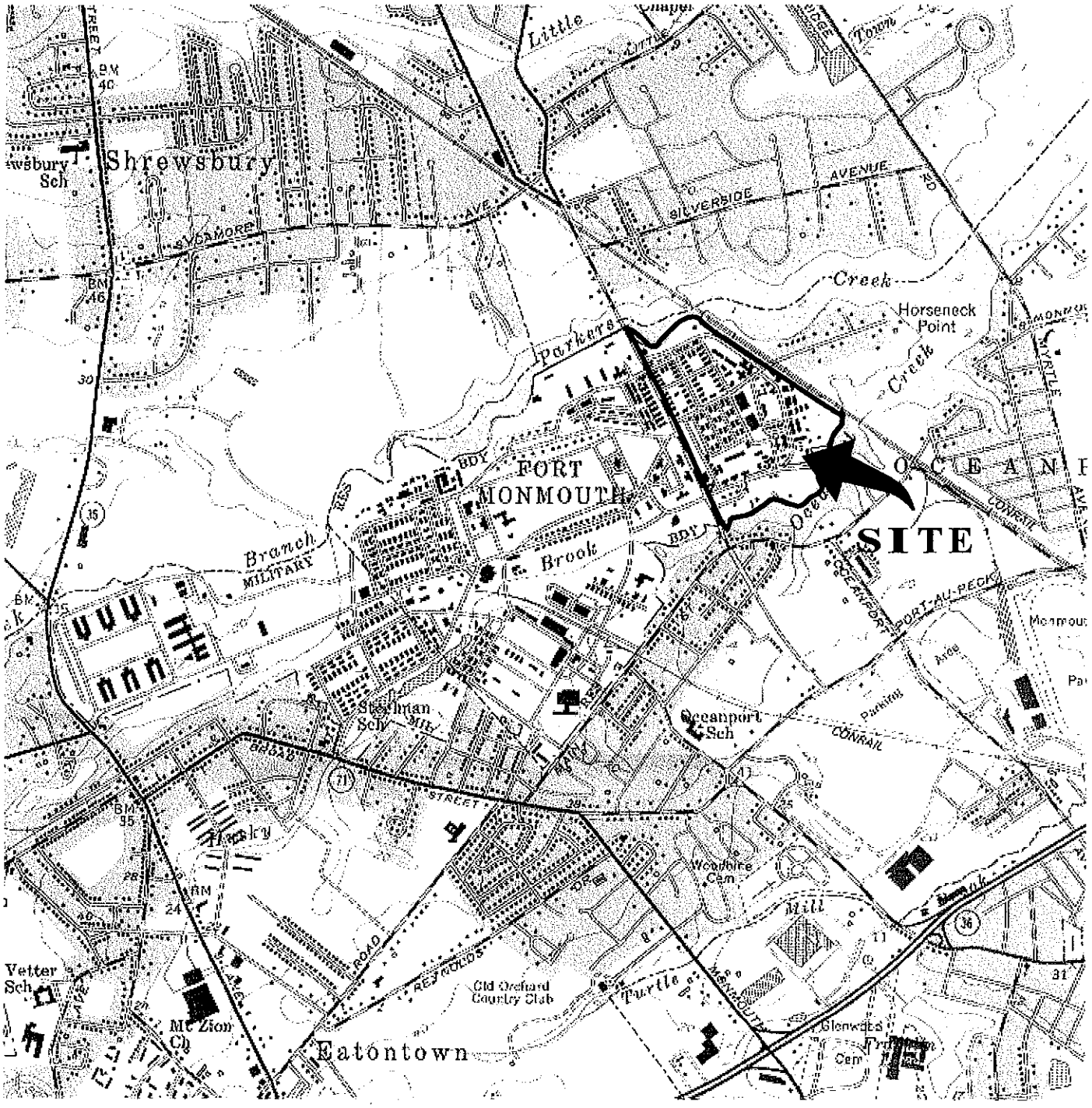


FIGURE 1

LOCATION MAP
Building 173
Main-Post East
Fort Monmouth Army Base
Monmouth County, NJ

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

Scale: 1" = 2000'

Date: May 1996

Geologic Map of New Jersey

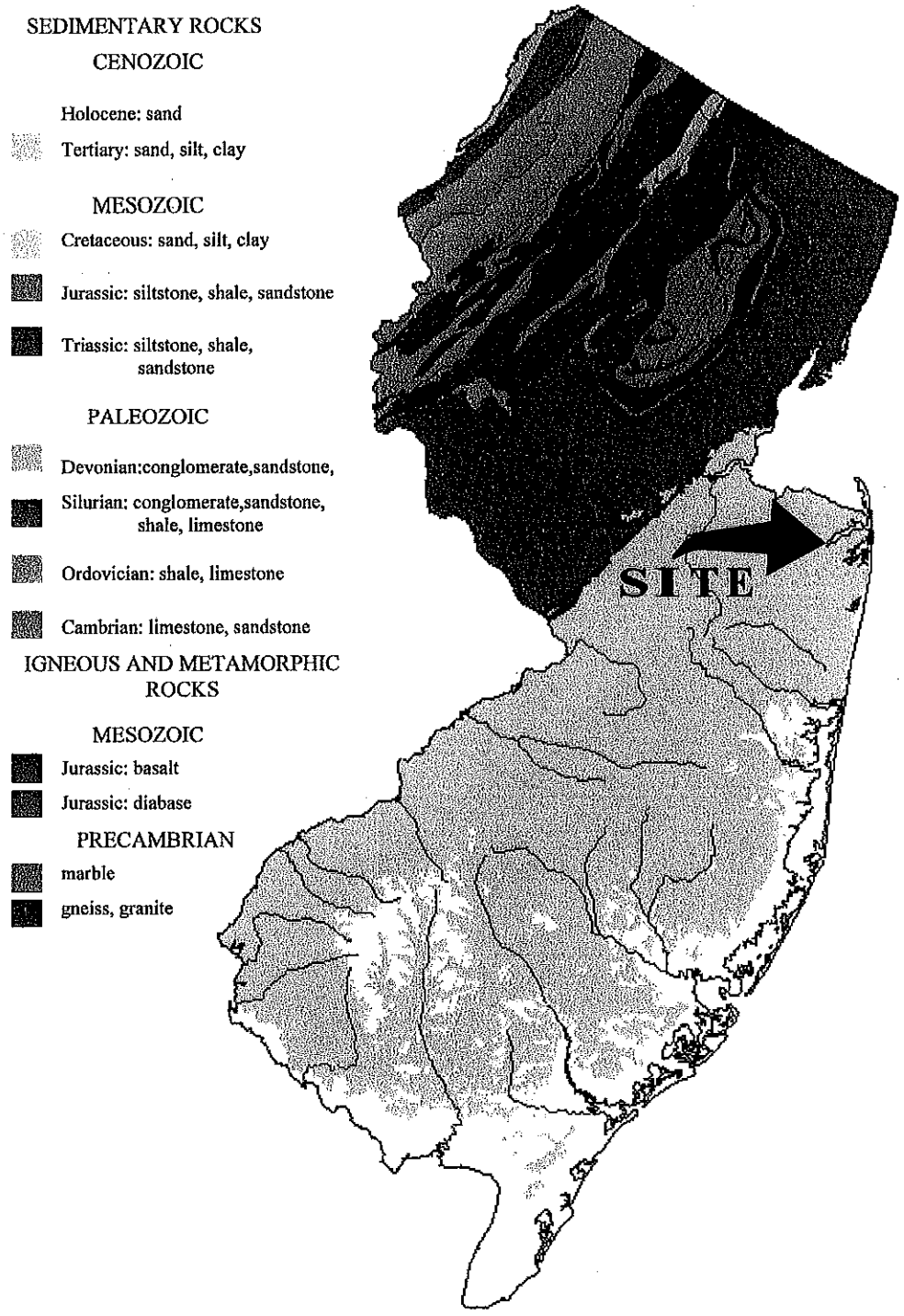


FIGURE 1A
GEOLOGICAL MAP
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, Pennsylvania

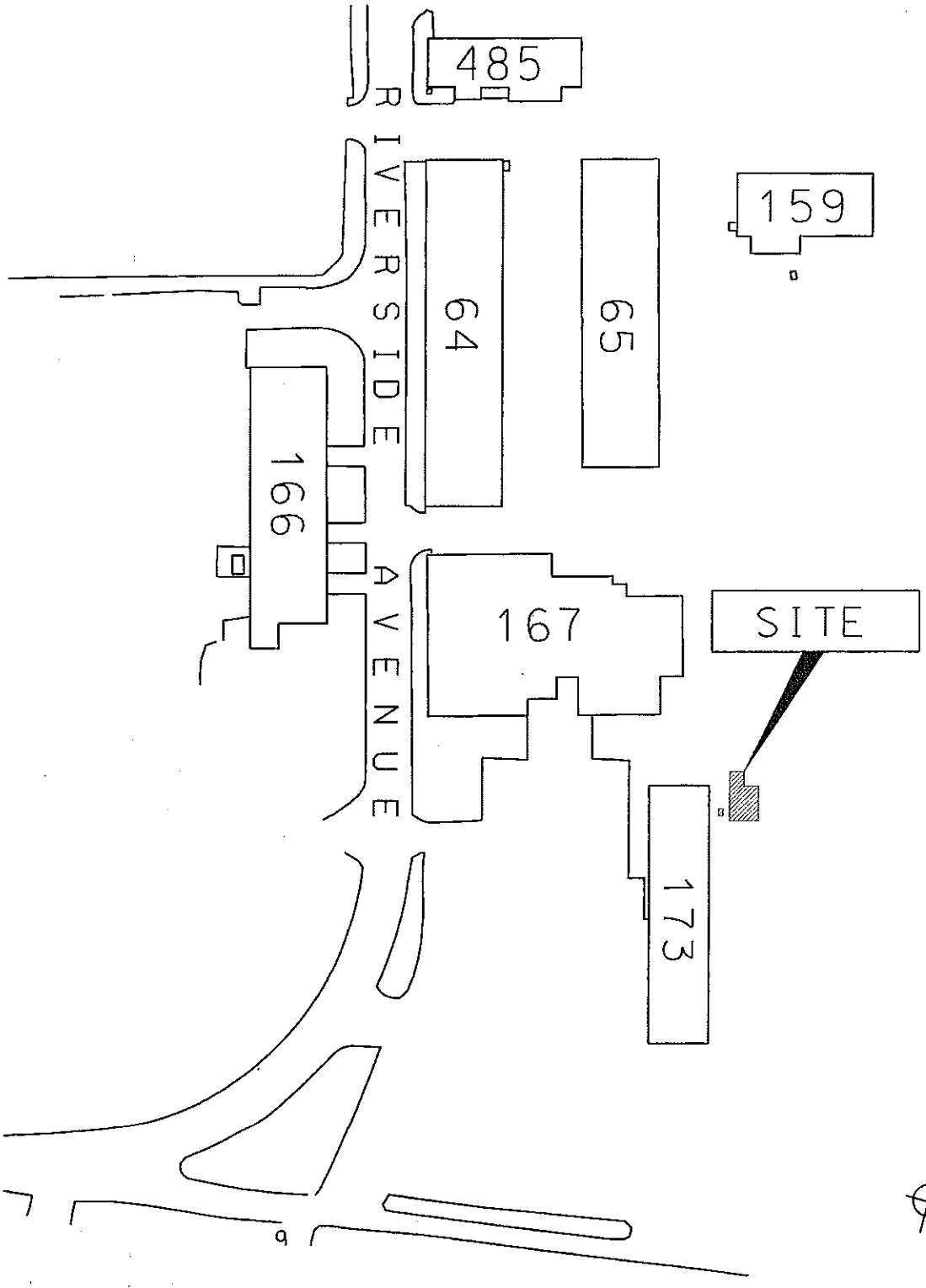


FIGURE 2
SITE MAP
BUILDING 173
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=100'

DATE: MAY 1996

173 FIG2

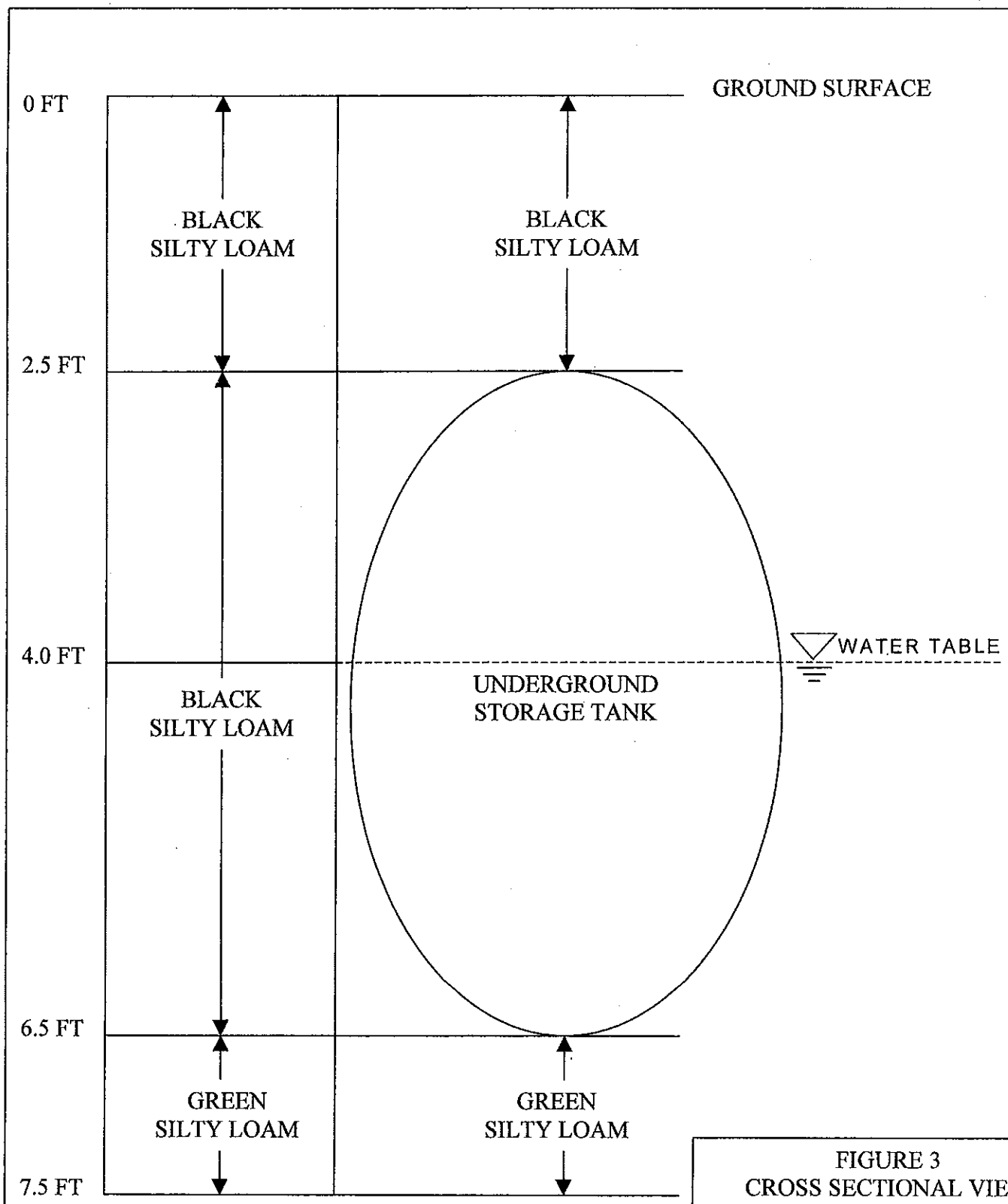
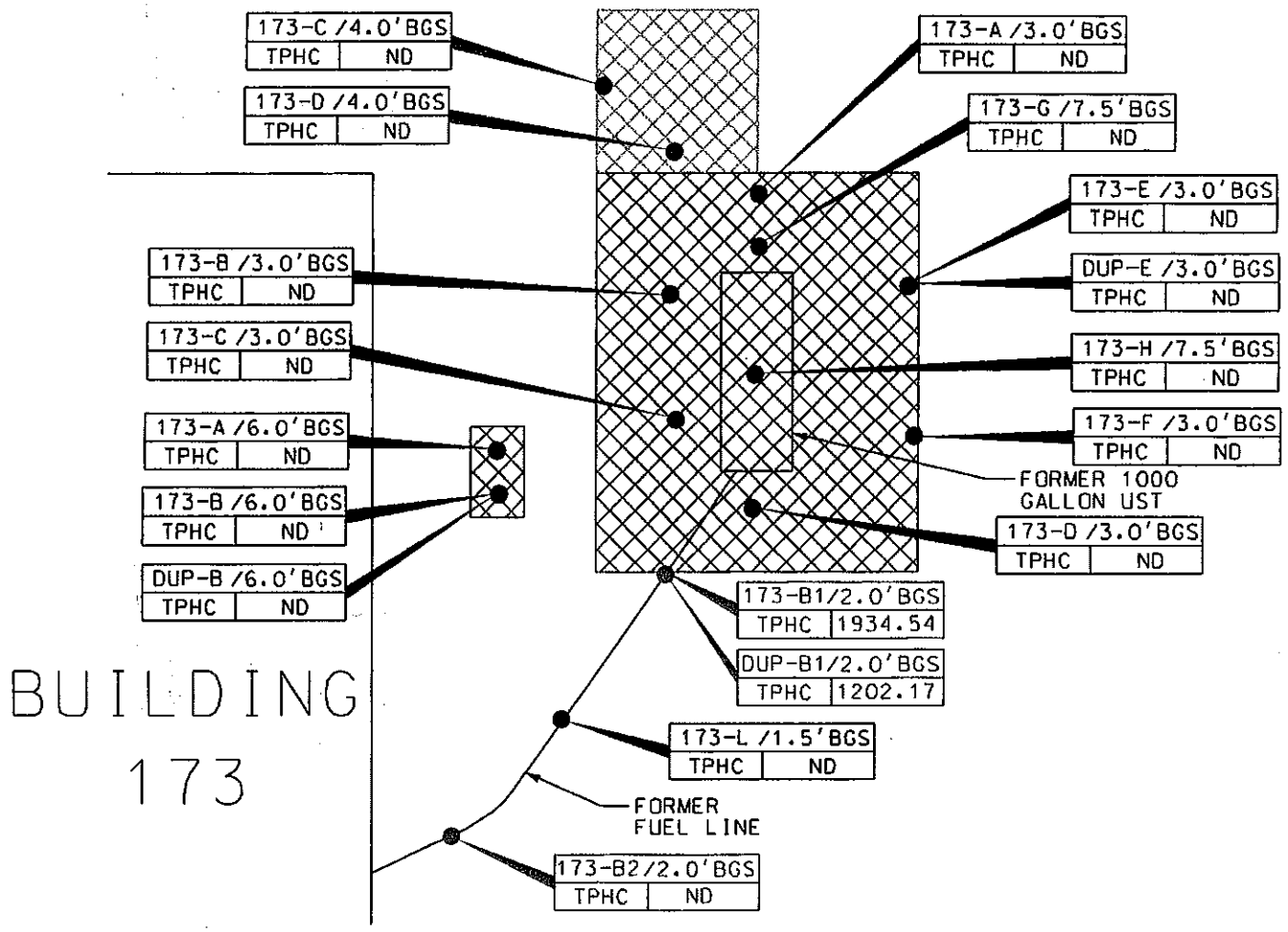


FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 173
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, Pennsylvania

SCALE: NTS | DATE: May 1996



LEGEND

- SOIL SAMPLE LOCATION (MAY 28, 1996)
- SOIL SAMPLE LOCATION (JUNE 4, 1996)
- SOIL SAMPLE LOCATION (JUNE 12, 1996)
- SOIL SAMPLE LOCATION (NOVEMBER 18, 2000)
- LIMIT OF EXCAVATION (MAY 28, 1996)
- LIMIT OF EXCAVATION (JUNE 4, 1996)
- LIMIT OF EXCAVATION (JUNE 12, 1996)

N

NOTES:

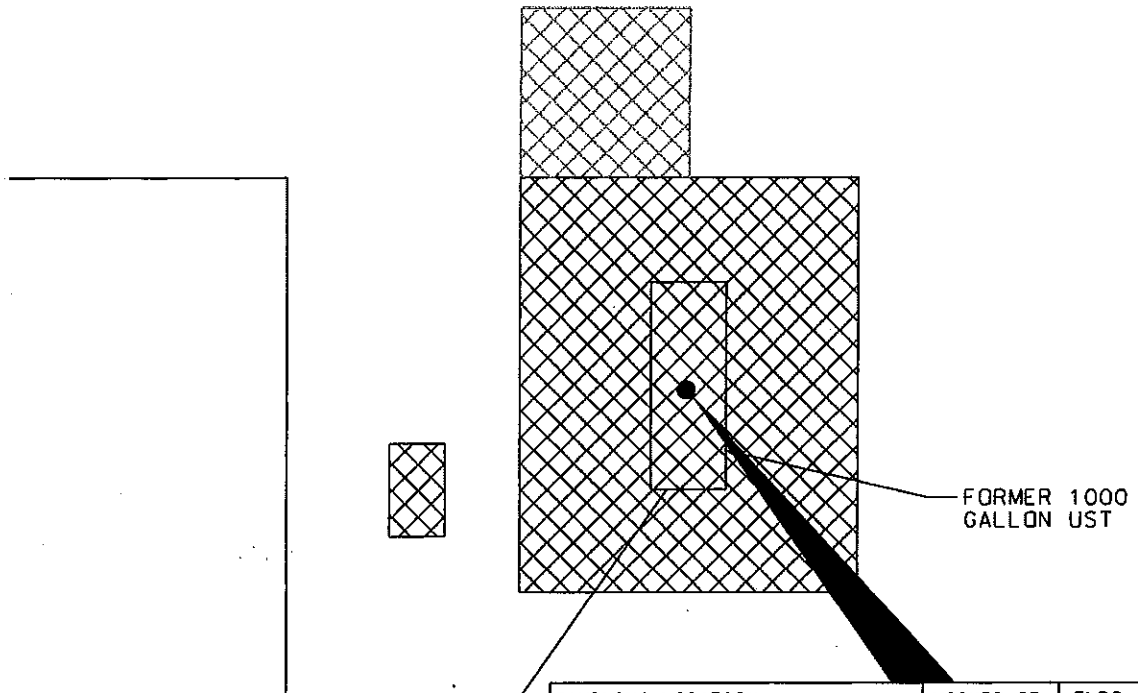
1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

FIGURE 4
SOIL SAMPLING LOCATION MAP
BUILDING 173
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10' | DATE: MAY 1996

173 FIG4



BUILDING
173

SAMPLING LOCATION: SAMPLING DEPTH: SAMPLING DATE:	HIGHER OF NJDEP GWQS AND PQL	BLDG 173 4.0'BGS 12/4/00	BLDG 173 4.0'BGS 1/18/01
VOLATILE ORGANIC COMPOUNDS:			
ACETONE:	700	6.74	ND
2-BUTANONE:	300	2.65	ND
O-XYLENE:	NLE	ND	1.06
SEMIVOLATILE ORGANIC COMPOUNDS:			
NAPHTHALENE:	NLE	16.84	ND
2-METHYLNAPHTHALENE:	NLE	34.81	ND
ACENAPHTHENE:	400	1.06	ND
FLUORENE:	300	2.53	ND
PHENANTHRENE:	NLE	4.96	ND
FLUORANTHENE:	300	3.50	ND
PYRENE:	200	8.63	ND
BUTYLBENZYLPHTHALATE:	100	ND	1.26
CHRYSENE:	20	3.23	ND

N

LEGEND

● GROUNDWATER SAMPLE LOCATION
(DECEMBER 4, 2000 AND JANUARY 18, 2001)

LIMIT OF EXCAVATION
(MAY 28, 1996)

LIMIT OF EXCAVATION
(JUNE 4, 1996)

LIMIT OF EXCAVATION
(JUNE 12, 1996)

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

FIGURE 5
GROUNDWATER SAMPLING MAP
BUILDING 173
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10' | DATE: MAY 1996

173 FIGS

APPENDIX A

NJDEP-STANDARD REPORTING FORM

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

ATTN: UST Program
(609) 984-3156

For State Use Only

Date Rec'd. _____
Auth. _____
Routing _____
UST NO. _____

STANDARD REPORTING FORM
for reporting activities at an UST facility:

___ General Facility Information Changes
_X_ Closure (Abandonment or Removal)
___ Temporary Closure
___ Change in Service
___ Sale or Transfer
___ Substantial Modification
___ Financial Responsibility
___ Address Change Only

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

(More than one tank can be listed per activity)

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

Answer questions 1 through 5 and others as applicable.

1. Company name and address (as it appears on registration questionnaire): U.S. ARMY – FORT MONMOUTH
DPW – BUILDING 173
FORT MONMOUTH NJ 07703
ATTN: EUGENE W. LESINSKI

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

3. Contact person for this activity: GENE LESINSKI
Telephone Number: (908) 532-0989

4. The identification number of the affected tank as it appears in Question Number 12 on the Registration Questionnaire: BLDG 173 19

5. Registration Number (if known): UST - 0090010

6. For GENERAL FACILITY INFORMATION changes (address, telephone, contact person, etc. – supply NEW information only):

a. Facility name: _____
b. Facility location: _____
c. Owner's mailing address: _____
_____
_____ NJ _____
_____
d. Block: _____ Lot: _____
e. Contact person (facility operator): _____
f. Contact telephone number: (_____) _____ – _____
g. Other (Specify): _____

(OVER)

7. For CLOSURE (abandonment / removal – check all that apply):
   a. ☐ Abandonment Date: ___/___/___ Case No: _____
   Attach the necessary implementation schedule (3 copies) and all documentation needed for abandonment per N.J.A.C. 7:14B-9.1 (d).
   b. ☒ Removal Date: 5/22/96 Case No. 96-5-22-1432-3.1
   Attach the necessary implementation schedule (3 copies).

8. For CHANGES IN HAZARDOUS SUBSTANCES STORED (check all that apply):
   a. ☐ Temporary Closure (12 month maximum time – see N.J.A.C. 7:14B-9.1(b)). Remove all hazardous substances; leave tank in place.
   b. ☐ Change in service from a regulated substance to a non-regulated substance. Tank must be cleaned and site assessment performed per N.J.A.C. 7:14B-9.1(e).
   c. ☐ Changes in service from one regulated hazardous substance to another regulated hazardous substance.

   Tank No. _____ Old _____ New _____
   Tank No. _____ Old _____ New _____
   Tank No. _____ Old _____ New _____
   (Attach additional sheets if more space is needed)

9. For TRANSFER OF OWNERSHIP: Effective Date: ___/___/___
   a. New Owner (operator) _____
   b. New Facility Name _____
   _____
   _____ NJ _____
   _____
   County
   c. Closing Attorney _____ Tele: (___)_____-_____

10. For SUBSTANTIAL MODIFICATIONS (to include any retrofitted activity – e.g. the addition of spill/overfill protection, monitoring systems, cathodic protection, etc.):
   a. Type of Modification _____ Date: ___/___/___
   b. "NOTE" Substantial modifications require a permit under N.J.A.C. 7:14B-10.

11. For changes in FINANCIAL RESPONSIBILITY to (check appropriate changes and attach copies of new information):
   a. Policy Type: ☐
   b. Policy Number: ☐
   c. Other: ☐
   d. Company/Carrier: ☐
   e. Expiration Date: ☐

   _____
   _____
   _____
   (Specify)

NOTE: ALL appropriate and applicable permits, licenses and certificates required by the above activity(ies) from any local, state and/or federal agencies must be obtained separately from this notification.

CERTIFICATION

"This registration form shall be signed by the highest ranking individual at the facility with overall responsibility for that facility (N.J.A.C. 7:14B-2.3 (a) 1)."

"I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment."

Signature: James Ott

Name (print or type): JAMES OTT

Title: DIRECTOR - DEPT OF PUBLIC WORKS Date: 1/29/97

ERF-UST
(INT/MOD-2/92)

APPENDIX B

SITE ASSESSMENT SUMMARY

(12/97) **New Jersey Department of Environmental Protection**

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

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

Facility Street Address : Directorate of Public Works Building 173

Municipality: Oceanport County : Monmouth

Block: Lot(s): Telephone Number : 732-532-6224

B. Owner (RP)'s Name:

Street Address: City :

State: Zip: Telephone Number :

C. (Check as appropriate)

___ Site Investigation Report (SIR) $500 Fee

___ Remedial Investigation Report (RIR) $1000 Fee

_X_ NA – Federal Agreement

D. (Complete all that apply)

- Assigned Case Manager : Ian Curtis, Federal Case Manager
- UST Registration Number : 90010-19 (7 digits)
- Incident Report Number 96 – 05 – 22 – 1432 – 31 (10 or 12 digits)

___ – ___ – ___ – _____ – ___

- Tank Closure Number : Federal Case Manager

E. Certification by the Subsurface Evaluator:

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

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

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

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

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

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

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

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

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

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

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

Signature: James Ott

Company Name: U.S. Army Fort Monmouth Date: 5/18/02

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 173 REG.#: 0090010 - 19 CLOSURE#: NJDEP CTR 9-25-
DATE: 5-22-96 TOA: * 1100 TOD: 1600
GOV. SSE: LESINSKI NJDEP CERT.#: 80/4537
REMOVAL CONTRACTOR: SAI Inc.
CLOSURE SUPERVISOR: DeMartinis NJDEP CERT.#: _____
WEATHER: SUNNY - 85°F

ACTIVITY	YES / NO
THE SUPERVISOR (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED TO THE NJDEP (609-292-7172), CASE# 96-5-22-1432-31 #16	Y
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 4 FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
IF OVA/Hnu WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	N
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	N
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	N
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	N
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)	—
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	Y
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)	

CHECK ALL BOXES, LEAVE NO BLANKS

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

SIGNATURE: _____ DATE: 5-22-96

\\ms\ust\removal\sitessls.doc

APPENDIX C

WASTE MANIFEST

LORCC PETROLEUM SERVICES

RD1 Box 5A
Old Bridge, N.J. 08857
(908) 721-0900
Fax (908) 721-0231

STANDARD COLLECTION ORDER FORM

130191

GENERATOR/LOCATION

OFFICE USE ONLY

NAME: US Army Com Elec Command
INFORMATION/ATTENTION LINE: Mail Post
ACCOUNT APPROVAL CODE:
DELIVERY ADDRESS: BLD 173
CITY: Fort Monmouth
STATE: NJ
ZIP:
PHONE NUMBER: –
PURCHASE ORDER NUMBER:
USA EPA ID NO. (IF APPLICABLE)
STATE ID NO.

BILL TO (IF DIFFERENT FROM LOCATION)

NAME
INFORMATION/ATTENTION LINE
ACCOUNT APPROVAL CODE:
DELIVERY ADDRESS
CITY
STATE
ZIP
PHONE NUMBER
PURCHASE ORDER NUMBER

MANIFEST NUMBER 2594129

SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

NO.	TYPE	QTY.	UNIT	US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	SALES REPRESENTATIVE
					Jm

SERVICE SECTION

SALES CODE	DESCRIPTION	WASTE CODE	QUANTITY	UNIT OF MEASURE	PRICE	TAX	LINE TOTAL
40500	USED OIL REMOVAL						
40501	OIL WATER DISPOSAL	X722	435	GAL			
40502	SLUDGE DISPOSAL						
41000	NON HAZARDOUS DISPOSAL						
41001	RCRA WASTE DISPOSAL						
41500	VAC TRUCK & OPERATOR		8am TO 11am				
41501	DRUM DISPOSAL						
41502	SEPARATOR CLEANING						
41503	QAQC ANALYTICAL TESTING						
41504	TANK CLEANING						
41505	CONFINED SPACE ENTRY						
42000	MANIFEST PROCESSING FEE						
42001	DEXSIL TEST KIT						

TOTAL

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. $

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261. GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is X722.
In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

Print Name: Eugene W Dewalt   Title: ENV PROT SPEC
Signature: [signature]   Date: 5 20 96

GENERATOR/CUSTOMER

SMALL QUANTITY GENERATOR CERTIFICATION

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

NA
GENERATOR'S SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT TEST RESULTS
<1000 PPM

PAYMENT RECEIVED SECTION

CASH ☐
TOTAL RECEIVED
CHECK NUMBER

PAYMENT MADE SECTION

PAYMENT METHOD	PAYMENT AMOUNT
CASH ☐ CHECK ☐	

RECEIVED BY.

CUSTOMER'S SIGNATURE

In accordance with 40 CFR 266 § 43(5) LORCO has notified the US EPA of its location and used oil management activities.

Print Name: Guy Neck
Signature: [signature]   Date: 5-20-96
LORCO REPRESENTATIVE

APPENDIX D

UST DISPOSAL CERTIFICATE

MAZZA & SONS, INC.

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

NO. 295

DATE 29 May 96

Customer's Name Tecom - Vinnell

Address 1,000 gal

Make of Autos

Tires
Tank
Price:

13940 LB
12280
1660

BLDG 173
0090010-13
1000 GAL

MAY 2 9 1996

Unit 3268

	Weight	Price
Cast Iron		
Steel	ZUM	58.10
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT:		

Weigher _____ Customer _____

THIS CHECK IS DELIVERED FOR PAYMENT ON THE FOLLOWING ACCOUNTS.

DATE		AMOUNT	
TOTAL OF INVOICES			
LESS ___ % DISCOUNT			
LESS FREIGHT			
LESS			
TOTAL DEDUCTIONS			
AMOUNT OF CHECK			

BLDG 173
0090010-19
1000 GAL

MAZZA & SONS, INC.
RECYCLING DIVISION
DEBTOR IN POSSESSION
3230 SHAFTO RD.
TINTON FALLS, NJ 07753

3268

DATE 5/29/96

55-33/212 34

PAY TO THE ORDER OF Tecom Vinnell $ 58.10

Fifty Eight & 10/100 DOLLARS

NatWest Bank
NatWest Bank N.A.
Jumping Brook Office
3636 Highway 33, Neptune, NJ 07753

⑈003268⑈ ⑆021200339⑆ 34 11 4098 1⑈

MP

APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

SOUTH ENVIRONMENTAL TESTING LABORATORY

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #:	Sampler: Gary DiMartinis - TVS	Date / Time 5-28-96/1000	Analysis Parameters	Start:
Customer: GENE LESINSKI SELFM-PW-EV	Site Name: BUILDING #173			Finish:
Phone: (908) 532-0989				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsel	OVA	Remarks
2077.1	5-28-96 1026	173-A (SIDEWALL @ 3')	SOIL	1				6	*
.2	1030	173-B						2	* = SAMPLES
.3	1034	173-C						3	KEPT BELOW
.4	1043	173-D						10	4°C.
.5	1048	173-E						10	
.6	1053	173-F						5	
.7	1056	173-G (EXC. FLOOR @ 7.5')						20	
.8	1059	173-H						10	
.9	1134	173-I (Piping Run @ 15')						1	
.10	1143	173-J						10	
NOTE: OVA CALIBRATED TO 95 PPM METER READING W/ 95 PPM CH4 ZERO (0) AIR								84	G. DiMartinis @ 1015 hrs

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
[signature]	5-28-96 1530		HAND on 5-28-96 (SERIAL #A52114)
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		S. J. Hubbard	5-28-96 1530

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS

Environmental Laboratory

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #:	Sampler: GARY DiMARTINIS	Date / Time 5-28-96 1000	Analysis Parameters	Start:
Customer: GENE LESINSKI SELFM-PW-EV	Site Name: BUILDING #173			Finish:
Phone:				Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% SOLIDS	MUNISEL	OVA	Remarks	
2077.11	5-28-96	1154	173-K (Piping Run @ 1.5')	SOIL	1	X	X	X	25		*
.12		1301	173-L						30		
.13		1306	173-M						ND		
.14		—	173-DUP (FIELD DUPLICATE)						N/A		
										* = SAMPLES KEPT BELOW 4°C.	

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
[signature]	5-28-96 1530		HAND

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		[signature]	5-28-96 1530

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody.

Environmental Laboratory

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

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

Lab. ID #: 2077.1-.14
Sample Rec'd: 05/28/96
Analysis Start: 05/30/96
Analysis Comp: 05/31/96

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B.McKee
Ext. Meth: Shake

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: Bldg. 173

Lab ID.	Description	OVA	%Solid	MDL (mg/Kg)	Surrogate % Recovery	Result (mg/Kg)
2077.1	173-a (Sidewall @ 3')	6	84.5	317	99.7	ND
2077.2	173-b (Sidewall @ 3')	2	80.3	317	105.5	ND
2077.3	173-c (Sidewall @ 3')	3	92.7	317	100.0	ND
2077.4	173-d (Sidewall @ 3')	10	84.8	317	104.3	ND
2077.5	173-e (Sidewall @ 3')	10	86.1	317	98.5	ND
2077.6	173-f (Sidewall @ 3')	5	85.9	317	81.0	ND
2077.7	173-g (Excav. Floor @ 7.5')	20	79.9	317	108.5	ND
2077.8	173-h (Excav. Floor @ 7.5')	10	82.6	317	109.8	ND
2077.9	173-i (Piping Run @ 1.5')	1	81.1	317	104.5	1947.9
2077.10	173-j (Piping Run @ 1.5')	10	86.6	317	99.0	3467.5
2077.11	173-k (Piping Run @ 1.5')	25	91.3	317	109.6	1034.4
2077.12	173-l (Piping Run @ 1.5')	30	91.3	317	96.8	ND
2077.13	173-m (Piping Run @ 1.5')	ND	84.8	317	93.3	1056.8
2077.14	173-Field Duplicate	NA	85	317	97.0	ND
M. Bl.	Method Blank	NA	100	317	89.3	ND

QC: 2077.7S=153, 2077.7SD=149%, RPD= 2.3%, 2077.7dup,100% @ ND
QC Limits: Surrogate: 50% - 120% (initial)
MS/MSD: not established RPD: not established

Notes: ND = Not Detected, MDL = Method Detection Limit
NA = Not Applicable

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 2077.1-.14
Sample Rec'd: 05/28/96
Analysis Start: 05/30/96
Analysis Comp: 05/31/96

Analysis: Munsel

Lab ID#	Soil Color
2077.1	5G 4/1 Dark Greenish Gray
2077.2	5G 4/1 Dark Greenish Gray
2077.3	5G 4/1 Dark Greenish Gray
2077.4	5G 4/1 Dark Greenish Gray
2077.5	5G 4/1 Dark Greenish Gray
2077.6	5B 4/1 Dark Bluish Gray
2077.7	5B 4/1 Dark Bluish Gray
2077.8	5B 4/1 Dark Bluish Gray
2077.9	5BG 5/1 Greenish Gray
2077.10	3/N3 Very Dark Gray
2077.11	5GY 4/1 Dark Greenish Gray
2077.12	5GY 4/1 Dark Greenish Gray
2077.13	5YR 4/4 Reddish Brown
2077.14	5G 4/1 Dark Greenish Gray

Brian K. McKee
Laboratory Director

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 Resulst Summaty 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		✓
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: None

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.

Project #2077

Brian K. McKee
Laboratory Manager

FORT HUACHUCA ENVIRONMENTAL TESTING LABORATORY

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #:	Sampler:	Date / Time	Analysis Parameters	Start:
Customer: GENE LESINSKI SELFM-PW-EV	Gary DiMartinis - TVS	6-4-96 0730		Finish:
Phone: (908) 532-0989	Site Name: BUILDING #173			Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsel	OVA	Remarks	
2081.1	6-4-96	1202 173 A (EXC. FLOOR @ 4')	SOIL	1	X	X	X	40		*
.2		1207 173-B						10	* = SAMPLES	*
.3		1104 173-C						ND	KEPT BELOW	*
.4		1114 173-D						ND	4°C.	*
.5	↓	— 173-DUP (FIELD DUPLICATE)	↓	↓	↓	↓	↓	—		*

NOTE: OVA CALIBRATED TO 95 PPM METER READING W/ 95 PPM CH4 ZERO (0) AIR BY G. DiMartinis @ 1000 HRS

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:	
Gary DiMartinis	6-4-96 1245		HAND	on 6-4-96 (SERIAL # AS1903)

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
			6-4-96 1245

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS

Environmental Laboratory

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

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

Lab. ID #: 2081.1-.5
Sample Rec'd: 06/04/96
Analysis Start: 06/04/96
Analysis Comp: 05/06/96

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B.McKee
Ext. Meth: Shake

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: Bldg. 173

Lab ID.	Description	OVA	%Solid	MDL (mg/Kg)	Surrogate % Recovery	Result (mg/Kg)
2081.1	173-A (Excav. Floor @ 4')	40	80.2	317	120.5	3909
2081.2	173-B (Excav. Floor @ 4')	10	84.7	317	138.5	3526
2081.3	173-C (Excav. Floor @ 4')	ND	81	317	111.8	ND
2081.4	173-D (Excav. Floor @ 4')	ND	82	317	93.0	ND
2081.5	173-E (Field Duplicate)	NA	82.7	317	146.0	14297
M. Bl.	Method Blank	NA	100	317	118.0	ND

QC: 2078.5S=124%, 2078.5SD=136%, RPD= 8.7%, 2078.5dup, 170%
QC Limits: Surrogate: 50% - 154%
MS/MSD: not established RPD: not established

Notes: ND = Not Detected, MDL = Method Detection Limit
NA = Not Applicable
* = Matrix Interference

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 2081.1-.5
Sample Rec'd: 06/04/96
Analysis Start: 06/04/96
Analysis Comp: 06/06/96

Analysis: Munsel

Lab ID#	Soil Color
2081.1	5Y 3/2 Dark Olive Gray
2081.2	5Y 3/1 Very Dark Gray
2081.3	5Y 3/1 Very Dark Gray
2081.4	5GY 4/1 Dark Greenish Gray
2081.5	5Y 3/1 Very Dark Gray

Brian K. McKee
Laboratory Director

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

CHAIN-OF-CUSTODY

P.O. #: PWS-07

Project #:	Sampler: Gary DiMartinis - TVS	Date / Time 6-12-96 / 1500	Analysis Parameters	Start:
Customer: GENE LESINSKI SELFM-PW-EV	Site Name: BUILDING #173		TPHC, % SOLIDS, MUNSEL, VOA (TO BE DETERMINED), OVA	Finish:
Phone: (908) 532-0989				Preservation Method

Lab Sample ID Number	Date	Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsel	VOA			OVA	Remarks	Preservation Method
2092-1	6-12-96	1530	173-A (EXC. FLOOR @ 6')	SOIL	1	X	X	X	X			1		*
2	↓	1524	173-B ↓	↓	↓	↓	↓	↓	↓			2	* = SAMPLES	↓
3	↓	—	173-DUP (FIELD DUPLICATE)	↓	↓	↓	↓	↓				—	KEPT BELOW	↓
4	↓	1550	173-FIELD (FIELD BLANK)	AQ	2				X			—	4°C	HCl

NOTE: OVA CALIBRATED TO 95 PPM METER READING W/ 95 PPM CH4 ZERO'D ON ... BY G. DiMartinis @ 1515

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
[signature]	6-13-96 0845		HAND on 6-12-96 (SERIAL #A52114)
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		[signature]	6-13-96 0845

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS

SAI-ENV COC Form 01 Page 1 of 1 Pages Rev. A Date: 02 Apr 93

Environmental Laboratory

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

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

Lab. ID #: 2092.1-.3
Sample Rec'd: 06/13/96
Analysis Start: 06/19/96
Analysis Comp: 06/24/96

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: B.McKee
Ext. Meth: Shake

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: Bldg. 173

Lab ID.	Description	OVA	%Solid	MDL (mg/Kg)	Surrogate % Recovery	Result (mg/Kg)
2092.1	173-A (Exc. Floor @ 6')	1	80	200	118.0	ND
2092.2	173-B (Exc. Floor @ 6')	2	79.5	200	115.0	ND
2092.3	173- Duplicate	NA	80.2	200	122.3	ND
M. Bl.	Method Blank	NA	100	200	113.3	ND

QC: 2089.9S= 89%, 2089.9SD=107%, RPD=18.0%, 2089.9dup=104%
QC Limits: Surrogate: 50% - 165%
MS/MSD: not established RPD: not established

Notes: ND = Not Detected, MDL = Method Detection Limit
NA = Not Applicable
* = Matrix Interference

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 2092.1-.3
Sample Rec'd: 06/13/96
Analysis Start: 06/19/96
Analysis Comp: 06/24/96

Analysis: Munsel

Lab ID#	Soil Color
2092.1	5Y 3/2 Dark Olive Brown
2092.2	5Y 3/2 Dark Olive Brown
2092.3	5Y 3/2 Dark Olive Brown

Brian K. McKee
Laboratory Director

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	N/A	
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: None

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.

Project #2092

Brian K. McKee
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

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

Bldg. 173

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
173-B1-2'	5863.01	Soil	18-Nov-00 10:47	11/20/00
173-B2-2'	5863.02	Soil	18-Nov-00 10:57	11/20/00
DUP.	5863.03	Soil	18-Nov-00	11/20/00

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

11-27-00
Daniel Wright/Date
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Resulst Summaty 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/A
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)		✓

Limits Not Established

2078-5 = 92.5 ppm 2078.5 Dup = 165.9

Additional Comments: Non-Homogenous Matrix may have Contributed to the poor % Duplication

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.

Project #2081

Brian K. McKee
Laboratory Manager

TPHC Conformance/Non-conformance Summary Report

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

Additional comments: _____

Laboratory Manager

11-27-00
Date

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DCASL
Phone #: X2175
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg 173 UST

Samplers Name / Company: Corey McCormack, TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids						Hnu Read	Remarks / Preservation Method
58103-.01	* 173-B1-2'	11/18/00	1047	soil	1	✓	✓						72.1	Entire core has odor
.02	173-B2-1'		1057		1	✓	✓						1.0	slight odor @ 2'
.03	Dupe		—		1	✓	✓						—	lg angulars at 4' Boring is in excavation.

Analysis Parameters

Comments: <4°C

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCormack	11/18/00 880				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	20				

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

000003

print legibly

Coc.xls11/15/00

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

Client :	US. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :**	5863
		Location :	Bldg.173
		UST Reg. # :	
Analysis :	OQA-QAM-025	**Date Received :**	18-Nov-00
Matrix :	Soil	**Date Extracted :**	20-Nov-00
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	21-Nov-00
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5863.01	173-B1	**1.00**	15.23	78.77	196	**1934.54**
5863.02	173-B2	**1.00**	15.28	87.35	176	**ND**
5863.03	Dupe	**1.00**	15.09	81.60	191	**1202.17**
METHOD BLANK	TBLK439	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 11/27/00

Laboratory Certification #13461

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

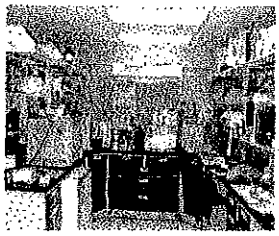
Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



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

Bldg. 173

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
B-1 2'	5888.01	Soil	04-Dec-00 15:05	12/04/00
B-2 2'	5888.02	Soil	04-Dec-00 15:13	12/04/00
173-GW	5888.03	Aqueous	04-Dec-00 15:25	12/04/00

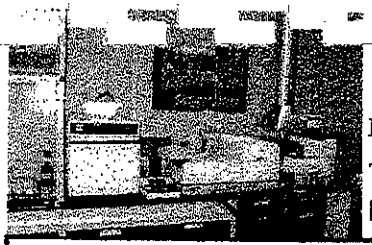
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

1-2-01
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: X21475
( )DERA (✓)OMA ( )Other:_____

Project No: 01-0004
Location: BLDG. 173

Samplers Name / Company: Mark Lauka - TVS-PWS 07

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	BN+15	%SOLIDS					Comments: Remarks / Preservation Method
5888. 1	B-1 2'	12-4-00	1505	SOIL	2	X		X					✓002200 <4°C
2	B-2 2'	"	1513	"	"	X		X					✓002201 "
3	173-GW	"	1525	AQ.	3	X	X						HCL, <4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12-4-00 1540	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

Report Type: ( )Full, (✓)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

print legibly

Coc.xls10/31/00

METHOD SUMMARY

Method Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

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

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

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

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

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

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

Indicate
Yes, No, N/A

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

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction NA

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 01/02/04

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5888

Site: Bldg. 173

	Date	Hold Time
Date Sampled	12/04/00	NA
Receipt/Refrigeration	12/04/00	NA
Extractions		
1. BN	12/05/00	7 days
Analyses		
1. Volatile Organics	12/14/00	14 days
2. BN	12/05,07/00	40 days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

Vblk200

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: Vblk200

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA008757.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 0 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1800	U
107131	Acrylonitrile	1800	U
75650	tert-Butyl alcohol	3200	U
1634044	Methyl-tert-Butyl ether	750	U
108203	Di-isopropyl ether	500	U
	Dichlorodifluoromethane	1000	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	750	U
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	750	U
75-69-4	Trichlorofluoromethane	500	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	500	U
156-60-5	trans-1,2-Dichloroethene	500	U
75-35-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl Acetate	750	U
78-93-3	2-Butanone	750	U
	cis-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	500	U
71-43-2	Benzene	250	U
107-06-2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	500	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	500	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	500	U
126-48-1	Dibromochloromethane	500	U
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	500	U

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

Vblk200

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: Vblk200

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA008757.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 0 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
95-50-1	1,2-Dichlorobenzene	750	U

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

B-1

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.01

Sample wt/vol: 11.2 (g/ml) G Lab File ID: VA008758.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 6.5 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1700	U
107131	Acrylonitrile	1700	U
75650	tert-Butyl alcohol	3100	U
1634044	Methyl-tert-Butyl ether	720	U
108203	Di-isopropyl ether	480	U
	Dichlorodifluoromethane	960	U
74-87-3	Chloromethane	240	U
75-01-4	Vinyl Chloride	720	U
74-83-9	Bromomethane	480	U
75-00-3	Chloroethane	720	U
75-69-4	Trichlorofluoromethane	480	U
75-35-4	1,1-Dichloroethene	240	U
67-64-1	Acetone	1300	
75-15-0	Carbon Disulfide	240	U
75-09-2	Methylene Chloride	480	U
156-60-5	trans-1,2-Dichloroethene	480	U
75-35-3	1,1-Dichloroethane	240	U
108-05-4	Vinyl Acetate	720	U
78-93-3	2-Butanone	2300	
	cis-1,2-Dichloroethene	240	U
67-66-3	Chloroform	240	U
75-55-6	1,1,1-Trichloroethane	240	U
56-23-5	Carbon Tetrachloride	480	U
71-43-2	Benzene	240	U
107-06-2	1,2-Dichloroethane	480	U
79-01-6	Trichloroethene	240	U
78-87-5	1,2-Dichloropropane	240	U
75-27-4	Bromodichloromethane	240	U
110-75-8	2-Chloroethyl vinyl ether	480	U
10061-01-5	cis-1,3-Dichloropropene	240	U
108-10-1	4-Methyl-2-Pentanone	480	U
108-88-3	Toluene	240	U
10061-02-6	trans-1,3-Dichloropropene	480	U
79-00-5	1,1,2-Trichloroethane	480	U
127-18-4	Tetrachloroethene	240	U
591-78-6	2-Hexanone	480	U
126-48-1	Dibromochloromethane	480	U
108-90-7	Chlorobenzene	240	U
100-41-4	Ethylbenzene	480	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID: B-1

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: _____ Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.01

Sample wt/vol: 11.2 (g/ml) G Lab File ID: VA008758.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 6.5 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	720	U
1330-20-7	o-Xylene	480	U
100-42-5	Styrene	480	U
75-25-2	Bromoform	480	U
79-34-5	1,1,2,2-Tetrachloroethane	480	U
541-73-1	1,3-Dichlorobenzene	720	U
106-46-7	1,4-Dichlorobenzene	720	U
95-50-1	1,2-Dichlorobenzene	720	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **B-1**

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: _____ Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.01

Sample wt/vol: 11.2 (g/ml) G Lab File ID: VA008758.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 6.5 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

B-2

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.02

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA008759.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 10.55 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1800	U
107131	Acrylonitrile	1800	U
75650	tert-Butyl alcohol	3400	U
1634044	Methyl-tert-Butyl ether	780	U
108203	Di-isopropyl ether	520	U
	Dichlorodifluoromethane	1000	U
74-87-3	Chloromethane	260	U
75-01-4	Vinyl Chloride	780	U
74-83-9	Bromomethane	520	U
75-00-3	Chloroethane	780	U
75-69-4	Trichlorofluoromethane	520	U
75-35-4	1,1-Dichloroethene	260	U
67-64-1	Acetone	520	U
75-15-0	Carbon Disulfide	260	U
75-09-2	Methylene Chloride	520	U
156-60-5	trans-1,2-Dichloroethene	520	U
75-35-3	1,1-Dichloroethane	260	U
108-05-4	Vinyl Acetate	780	U
78-93-3	2-Butanone	1000	
	cis-1,2-Dichloroethene	260	U
67-66-3	Chloroform	260	U
75-55-6	1,1,1-Trichloroethane	260	U
56-23-5	Carbon Tetrachloride	520	U
71-43-2	Benzene	260	U
107-06-2	1,2-Dichloroethane	520	U
79-01-6	Trichloroethene	260	U
78-87-5	1,2-Dichloropropane	260	U
75-27-4	Bromodichloromethane	260	U
110-75-8	2-Chloroethyl vinyl ether	520	U
10061-01-5	cis-1,3-Dichloropropene	260	U
108-10-1	4-Methyl-2-Pentanone	520	U
108-88-3	Toluene	260	U
10061-02-6	trans-1,3-Dichloropropene	520	U
79-00-5	1,1,2-Trichloroethane	520	U
127-18-4	Tetrachloroethene	260	U
591-78-6	2-Hexanone	520	U
126-48-1	Dibromochloromethane	520	U
108-90-7	Chlorobenzene	260	U
100-41-4	Ethylbenzene	520	U

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

B-2

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.02

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA008759.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 10.55 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	780	U
1330-20-7	o-Xylene	520	U
100-42-5	Styrene	520	U
75-25-2	Bromoform	520	U
79-34-5	1,1,2,2-Tetrachloroethane	520	U
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	780	U
95-50-1	1,2-Dichlorobenzene	780	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: B-2

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: 5888.02

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA008759.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 10.55 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 01/02/01

Laboratory Certification #13461

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

Laboratory Authentication Statement

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

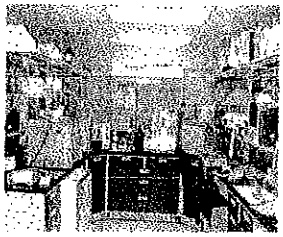
Daniel K. Wright
Laboratory Manager

APPENDIX F

GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



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

Bldg. 173

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
B-1 2'	5888.01	Soil	04-Dec-00 15:05	12/04/00
B-2 2'	5888.02	Soil	04-Dec-00 15:13	12/04/00
173-GW	5888.03	Aqueous	04-Dec-00 15:25	12/04/00

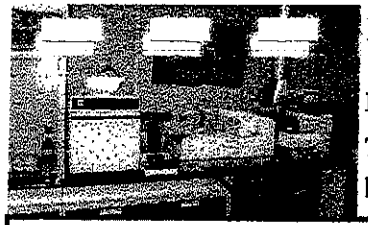
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

1-2-01
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: X21475
( )DERA (✓)OMA ( )Other:_____

Project No: 01-0004
Location: BLDG. 173

Samplers Name / Company: Mark Lewis - TVS-PWS 07

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	BN+15	%SOLS						Remarks / Preservation Method
5888. 1	B-1 2'	12-4-00	1505	SOIL	2	X		X						V002200 <4°C
2	B-2 2'	"	1513	"	"	X		X						V002201 "
3	173-GW	"	1525	AQ.	3	X	X							HCL, <4°C

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12-4-00 1540	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

200000

print legibly

Coc.xls10/31/00

METHOD SUMMARY

Method Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

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

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

NJDEP Method 8260

Gas Chromatographic Determination of Volatiles in Soil

A 50uL volume of Methanol Samples soil is added to 5mL aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system.

Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent solid, methanol volume and concentration.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

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

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

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — Yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

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

Indicate
Yes, No, N/A

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

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction N/A

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 01/02/04

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5888

Site: Bldg. 173

	Date	Hold Time
Date Sampled	12/04/00	NA
Receipt/Refrigeration	12/04/00	NA
Extractions		
1. BN	12/05/00	7 days
Analyses		
1. Volatile Organics	12/14/00	14 days
2. BN	12/05,07/00	40 days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

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

Data File	VA008757.D	Sample Name	Vblk200
Operator	Skelton	Field ID	Vblk200
Date Acquired	14 Dec 2000 8:25 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

12/26/00 1:46 PM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Vblk200**

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: Location Bldg173

Matrix: (soil/water) SOIL Lab Sample ID: Vblk200

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA008757.D

Level: (low/med) MED Date Received: 12/4/00

% Moisture: not dec. 0 Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VA008760.D	Sample Name	5888.03
Operator	Skelton	Field ID	173-GW
Date Acquired	14 Dec 2000 10:56 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone	10.68	59632	6.74 ug/L	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone	16.85	25384	2.65 ug/L	300	0.62 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

12/26/00 1:46 PM

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000016

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 173-GW

Lab Name: FMETL NJDEP# 13461

Project 01-0004 Case No.: 5888 SAS No.: _____ Location Bldg173

Matrix: (soil/water) WATER Lab Sample ID: 5888.03

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA008760.D

Level: (low/med) LOW Date Received: 12/4/00

% Moisture: not dec. _____ Date Analyzed: 12/14/00

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

SEMI-VOLATILES

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN04715.D**	Sample Name	**Sblk444**
Operator	**Bhaskar**	Misc Info	**Sblk444 A 001205**
Date Acquired	**6-Dec-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.79	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN04715.D**	Sample Name	**Sblk444**
Operator	**Bhaskar**	Misc Info	**Sblk444 A 001205**
Date Acquired	**6-Dec-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID: **Sblk444**

Lab Name: FMETL Lab Code 13461

Project: 01-0004 Case No.: 5888 Location: Bl.173 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: Sblk444

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN04715.D

Level: (low/med) LOW Date Received: 12/4/00

% Moisture: decanted: (Y/N) N Date Extracted: 12/5/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/6/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (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	**BN04728.D**	Sample Name	**5888.03**
Operator	**Bhaskar**	Misc Info	**173GW**
Date Acquired	**7-Dec-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene	14.08	376970	16.84 ug/L	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene	16.28	532767	34.81 ug/L	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.79	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene	19.33	12611	1.06 ug/L	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene	20.69	31718	2.53 ug/L	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene	23.13	88325	4.96 ug/L	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene	26.14	64087	3.50 ug/L	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN04728.D**	Sample Name	**5888.03**
Operator	**Bhaskar**	Misc Info	**173GW**
Date Acquired	**7-Dec-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene	26.80	113757	8.63 ug/L	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene	30.38	29982	3.23 ug/L	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID: **173-GW**

Lab Name: FMETL Lab Code 13461

Project: 01-0004 Case No.: 5888 Location: Bl.173 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 5888.03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN04728.D

Level: (low/med) LOW Date Received: 12/4/00

% Moisture: decanted: (Y/N) N Date Extracted: 12/5/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/7/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	10.38	30	J
2.		unknown	10.73	30	J
3.	006975-98-0	Decane, 2-methyl-	10.89	37	JN
4.	013151-34-3	Decane, 3-methyl-	11.03	30	JN
5.		unknown	12.26	64	J
6.		unknown	12.67	74	J
7.		unknown	12.96	51	J
8.	000535-77-3	Benzene, 1-methyl-3-(1-methylet	13.16	80	JN
9.	017301-28-9	Undecane, 3,6-dimethyl-	14.28	71	JN
10.	004292-75-5	Cyclohexane, hexyl-	14.97	29	JN
11.		unknown	15.31	31	J
12.		unknown	15.46	93	J
13.	074645-98-0	Dodecane, 2,7,10-trimethyl-	17.27	54	JN
14.	017312-62-8	Decane, 5-propyl-	18.56	40	JN
15.	001921-70-6	Pentadecane, 2,6,10,14-tetramet	21.68	58	JN

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 01/02/01

Laboratory Certification #13461

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

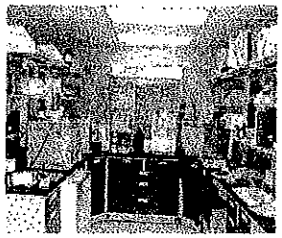
Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager

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:IJO# 01-0001

Bldg. 173

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	267	Aqueous	18-Jan-01	01/18/01
Field Blank	268	Aqueous	18-Jan-01 12:50	01/18/01
Bldg. 173-4.0'	269	Aqueous	18-Jan-01 13:30	01/18/01
Field DUP.	270	Aqueous	18-Jan-01	01/18/01

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

2-7-01
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: X21475
( )DERA (✓)OMA ( )Other:_____
Project No: 01-0001
Location: BLDG. 173
Samplers Name / Company: Mark Lucas - TVS PW507

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA + 15	BNT + 15						Comments: Remarks / Preservation Method
267	T.B.	1-18-01	—	AQ.	2	X							HCl
268	F.B.	"	1250	"	3	X	X						4°C, HCl
269	BLDG. 173 - 4.0'	"	1330	"	3	X	X						" "
270	F.D.	"		"	3	X	X						" "

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	1/18/01 1435	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

200002

print legibly

Coc.xls10/31/00

METHODOLOGY SUMMARY

Method Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

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

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

CONFORMANCE/NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

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

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

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

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

Indicate
Yes, No, N/A

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

    a. VOA Fraction_____
    b. B/N Fraction_____
    c. Acid Fraction N/A

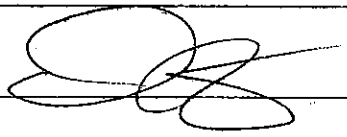
11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager:  Date: 2-7-01

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 267-270

Site: Bldg. 173

	Date	Hold Time
Date Sampled	01/18/01	NA
Receipt/Refrigeration	01/18/01	NA
Extractions		
1. BN	01/22/01	7 days
Analyses		
1. Volatile Organics	01/19,20/01	14 days
2. BN	01/25/01	40 days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

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

Data File	**VC004743.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**19-Jan-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 010119**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 267-270 Location: 173 SDG No.:

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC004743.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: not dec. Date Analyzed: 1/19/01

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC004764.D**	Sample Name	**267**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Aquired	**20-Jan-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 267-270 Location: 173 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 267

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC004764.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: not dec. _____ Date Analyzed: 1/20/01

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

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC004765.D**	Sample Name	**268**
Operator	**Skelton**	Field ID	**Field Blank**
Date Aquired	**20-Jan-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Field Blank**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 267-270 Location: 173 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 268

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC004765.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: not dec. _____ Date Analyzed: 1/20/01

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

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VC004766.D	Sample Name	269
Operator	Skelton	Field ID	Bldg173
Date Aquired	20-Jan-01	Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.74	164781	1.06 ug/L	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Bldg173**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 267-270 Location: 173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 269

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC004766.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: not dec. Date Analyzed: 1/20/01

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

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

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

Number TICs found: 7

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000108-87-2	Cyclohexane, methyl-	20.47	11	JN
2. 001678-91-7	Cyclohexane, ethyl-	25.45	5	JN
3. 000103-65-1	Benzene, propyl-	30.61	5	JN
4. 000135-01-3	Benzene, 1,2-diethyl-	33.37	6	JN
5. 000496-11-7	Indane	33.76	8	JN
6. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	34.44	11	JN
7. 027133-93-3	2,3-Dihydro-1-methylindene	34.93	11	JN

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

Data File	**VC004767.D**	Sample Name	**270**
Operator	**Skelton**	Field ID	**Field Dupe**
Date Aquired	**20-Jan-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.75	243612	1.42 ug/L	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

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

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

2/2/01 2:00 PM

D:\HPCHEM\Custrpt\Volatile\624fy00.crt

000020

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Field Dupe**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 267-270 Location: 173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 270

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC004767.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: not dec. Date Analyzed: 1/20/01

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

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

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

Number TICs found: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000108-87-2	Cyclohexane, methyl-	20.47	13	JN
2. 006876-23-9	Cyclohexane, 1,2-dimethyl-, trans	23.86	8	JN
3.	unknown	25.19	8	J
4. 000098-82-8	Benzene, (1-methylethyl)-	29.63	8	JN
5. 000103-65-1	Benzene, propyl-	30.61	8	JN
6. 000091-20-3	Naphthalene	30.89	7	JN
7. 000135-01-3	Benzene, 1,2-diethyl-	33.36	8	JN
8. 000496-11-7	Indane	33.76	10	JN
9. 000527-84-4	Benzene, 1-methyl-2-(1-methylet	34.44	16	JN
10. 027133-93-3	2,3-Dihydro-1-methylindene	34.93	13	JN

BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA04874.D**	Sample Name	**MB-284**
Operator	**Bhaskar**	Misc Info	**MB-010122**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA04874.D**	Sample Name	**MB-284**
Operator	**Bhaskar**	Misc Info	**MB-010122**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB-284**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 268-270 Location: Bl.173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-284

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA04874.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: decanted: (Y/N) N Date Extracted: 1/22/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/25/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.11	11	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA04886.D**	Sample Name	**268**
Operator	**Bhaskar**	Misc Info	**Field Blank**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA04886.D**	Sample Name	**268**
Operator	**Bhaskar**	Misc Info	**Field Blank**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **Field Blank**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 268-270 Location: Bl.173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 268

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA04886.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: decanted: (Y/N) N Date Extracted: 1/22/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/25/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.11	5	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA04887.D**	Sample Name	**269**
Operator	**Bhaskar**	Misc Info	**Bldg.173**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA04887.D**	Sample Name	**269**
Operator	**Bhaskar**	Misc Info	**Bldg.173**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate	26.54	25072	1.26 ug/L	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **Bldg.173**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 268-270 Location: Bl.173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 269

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA04887.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: decanted: (Y/N) N Date Extracted: 1/22/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/25/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 13 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	7.11	6	J
2.	006783-92-2	Cyclohexane, 1,1,2,3-tetramethyl-	9.44	4	JN
3.		unknown	10.78	5	J
4.	013151-35-4	Decane, 5-methyl-	11.07	4	JN
5.	006975-98-0	Decane, 2-methyl-	11.21	4	JN
6.		unknown	11.32	5	J
7.		unknown	12.26	7	J
8.	002958-76-1	Naphthalene, decahydro-2-methyl	12.52	7	JN
9.	006044-71-9	Dodecane, 6-methyl-	13.60	6	JN
10.	000638-36-8	Hexadecane, 2,6,10,14-tetrameth	14.46	9	JN
11.	074645-98-0	Dodecane, 2,7,10-trimethyl-	15.93	6	JN
12.	003891-98-3	Dodecane, 2,6,10-trimethyl-	17.04	7	JN
13.	055282-14-9	Docosane, 9-butyl-	27.47	5	JN

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA04888.D**	Sample Name	**270**
Operator	**Bhaskar**	Misc Info	**Field Dupe**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA04888.D**	Sample Name	**270**
Operator	**Bhaskar**	Misc Info	**Field Dupe**
Date Acquired	**25-Jan-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate	26.54	34850	1.57 ug/L	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **Field Dupe**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 268-270 Location: Bl.173 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 270

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA04888.D

Level: (low/med) LOW Date Received: 1/18/01

% Moisture: decanted: (Y/N) N Date Extracted: 1/22/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/25/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 13 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	9.44	5	J
2.	unknown	10.78	4	J
3. 013151-35-4	Decane, 5-methyl-	11.07	4	JN
4. 006975-98-0	Decane, 2-methyl-	11.21	4	JN
5.	unknown	11.32	6	J
6.	unknown	12.25	7	J
7. 002958-76-1	Naphthalene, decahydro-2-methyl	12.52	6	JN
8. 013150-81-7	2,6-Dimethyldecane	12.69	4	JN
9. 017301-23-4	Undecane, 2,6-dimethyl-	13.60	7	JN
10.	unknown	14.46	9	J
11. 074645-98-0	Dodecane, 2,7,10-trimethyl-	15.92	6	JN
12. 000544-76-3	Hexadecane	17.04	8	JN
13. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.99	5	JN

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 2/7/01

Laboratory Certification #13461

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

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager

APPENDIX G

PHOTOGRAPHS

B. 173 5-22-96

B. 173 5-22-96

MAY 22, 1996

PHOTOGRAPHIC LOG

UST NO. 90010-19

Building 173
Main Post-East
Fort Monmouth

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA