United States Army

Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 905
Main Post-West Area

NJDEP UST Registration No. 81533-145 Dicar No. 97-06-24-1325-26

MARCH 2001

UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 905

MAIN POST-WEST AREA NJDEP UST REGISTRATION NO. 81533-145

MARCH 2001

PREPARED FOR:

UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
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EXECUTIVE SUMMARY

UST Closure

On June 24, 1997, a steel underground storage tank (UST) was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) closure procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-145 (Fort Monmouth ID No. 905), was located west of Building 905. UST No. 0081533-145 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. 97-06-24-1325-26. Approximately 216 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 TPHC concentrations ranging from non-detect to 983.10 mg/kg, except for sample E (October 29, 1997) that had a TPHC concentration of 1,444.27 mg/kg. A VOA analysis (EPA Method 8260) was completed on sample E and all known compounds searched for in the analysis were not detected. Three tentatively identified compounds were detected below the method detection limit. Groundwater was encountered at a depth of 5.0 feet bgs and sheen was observed on groundwater.

All post excavation soil samples collected from the UST excavation at Building 905 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 905. On December 4, 2000, and January 17, 2001, Building 905 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's).

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

No further action is proposed in regard to the closure and site assessment of UST No. 81533-145 at Building 905.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-145, was closed at Building 905 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 24, 1997. Refer to the site location map on Figure 1. This report presents the results of the Department of Public Works' (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 81533-145 complied with all applicable Federal, State, and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP approved Decommissioning/Closure Plan were posted onsite for inspection. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 81533-145 proceeded under the approval of the NJDEP Bureau of Federal Case Management (NJDEP-BFCM). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 81533-145 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 905 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-145 was located west of Building 905. 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 905. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area. A geological map is provided on Figure 1A.

Regional Geology

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

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

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

Local Geology

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

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

Hydrogeology

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

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

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

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

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

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

Building 905 is located approximately 600 feet south of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 905 is anticipated to be to the north.

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 250 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 TPHC concentrations ranging from non-detect to 983.10 mg/kg, except for sample E (October 29, 1997) that had a TPHC concentration of 1,444.27 mg/kg. A VOA analysis (EPA Method 8260) was completed on sample E and all known compounds searched for in the analysis were not detected. Three tentatively identified compounds were detected below the method detection limit. Groundwater was encountered at a depth of 5.0 feet bgs and sheen was observed on groundwater.

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 216 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 5.0 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: Dinker Desai Employer: U.S. Army, Fort Monmouth Phone Number: (732) 532-1475
 NJDEP Certification No.: 10173

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: Richard Dirienzo 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 5.0 feet below ground surface and sheen was observed on groundwater.

2.3 SOIL SAMPLING

On June 27, 1997, following the removal of the UST and associated piping, post-excavation soil samples A, B, C, D, E, F, G, H, and DUP A were collected from a total of eight (8) locations of the UST excavation. Sidewall samples A, B, C, F, and DUP A were collected at a depth of 6.0 feet bgs. Samples D, E, G, and H were collected along the excavation floor at a depth of 9.0 feet bgs. All samples were analyzed for TPHC and total solids.

On October 23, 1997, following the removal of 138 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, E, F, and DUP B were collected from a total of six (6) locations of the UST excavation. Samples A, B, C, D, and DUP B were collected along the excavation floor at a depth of 9.0 feet bgs. Sidewall samples E and F were collected at a depth of 6.5 feet bgs. All samples were analyzed for TPHC and total solids.

On October 23, 1997, following the removal of 42 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, E, F, G, H, I, J, K, L, and DUP K were collected from a total of twelve (12) locations of the UST excavation. Samples A and B were collected along the excavation floor at a depth of 9.0 feet bgs. Sidewall samples C, D, E, F, G, H, I, J, K, L, and DUP K were collected at a depth of 6.5 feet bgs. All samples were analyzed for TPHC and total solids.

On October 29, 1997, following the removal of 24 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, E, and DUP A were collected from a total of five (5) locations of the UST excavation. Sample A was collected along the excavation floor at a depth of 9.0 feet bgs. Sidewall samples B, C, D, E, and DUP A were collected at a depth of 6.5 feet bgs. All samples were analyzed for TPHC and total solids. Based on preliminary TPHC results, a VOA analysis (EPA Method 8260) was completed on sample E.

On November 3, 1997, following the removal of 12 cubic yards of potentially petroleum contaminated soil from the excavated area, post-excavation soil samples A, B, C, D, E, F, G, and DUP C were collected from a total of seven (7) locations of the UST excavation. Samples A and B were collected along the excavation floor at a depth of 9.0 feet bgs. Sidewall samples C, D, E, F, and DUP C were collected at a depth of 6.5 feet bgs. Geoprobe boring sample G was collected at a depth of 6.5 feet bgs. All samples were analyzed for TPHC and total solids.

On November 18, 2000, three (3) geoprobe soil samples were collected from the excavated area to verify the effectiveness of the soil excavation activities. The samples were collected at a depth of 6.5 feet bgs. All samples were analyzed for TPHC and total solids.

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

2.4 GROUNDWATER SAMPLING

On December 4, 2000, and January 4, 2001, Building 905 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 June 26, 1997, and November 18, 2000 from a total of forty-one (41) locations. All samples were analyzed for TPHC and total solids. In addition, sample E was 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 analysis for sample E as 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 June 26, 1997, and November 18, 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

= 1

No compounds were detected in the sample collected from Building 905 on December 4, 2000.

The sample collected from Building 905 on January 17, 2001, contained butylbenzylphthalate at a concentration of 3.56 ug/l and bis(2-ethylhexyl)phthalate at a concentration of 2.87 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 17, 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 905 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 905 on December 4, 2000, and January 17, 2001, groundwater quality at Building 905 was either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment of UST No. 81533-145 at Building 905.

TABLES

geographical series

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TABLE 1

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Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
**A	6/26/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**B	6/26/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**C	6/26/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**F	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
H	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**DUP A	6/27/97	6/30/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

TPHC Total Petroleum Hydrocarbons Sample location was further remediated and resampled

TABLE 1

Page 2 of 7

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
Α .	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
В	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**E	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
F	10/23/97	10/24/97	Soil	Post-Excavation	ТРНС	OQA-QAM-025
DUP B	10/23/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

TPHC Total Petroleum Hydrocarbons Sample location was further remediated and resampled

TABLE 1

Page 3 of 7

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
Α	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
В	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**C	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**E	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**F	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
G	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
Н	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
I	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**J	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
K	10/24/97	10/24/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**L	10/24/97	10/24/97	Seil	Post-Excavation	TPHC	OQA-QAM-025
DUP K	10/24/97	10/24/97	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 905, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

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Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
Α	10/29/97	10/31/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
В	10/29/97	10/31/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	10/29/97	10/31/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	10/29/97	10/31/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	10/29/97	10/31/97	Soil	Post-Excavation	TPHC,VOA	OQA-QAM-025
DUP A	10/29/97	10/31/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

TABLE.1

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Sample ID	Date of Collection	Date Analysis • Started	Matrix	Sample Type	Analytical Parameters*	NJDEP Method
A	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
В	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**F	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**G	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUP C	11/3/97	11/4/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

** Sample location was resampled

TABLE 1

Page 6 of 7

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 Post-Excavation Post-Excavation Post-Excavation	TPHC	OQA-QAM-025
B2	11/18/00	11/20/00	Soil		TPHC	OQA-QAM-025
B3	11/18/00	11/20/00	Soil		TPHC	OQA-QAM-025
DUP B1	11/18/00	11/20/00	Soil		TPHC	OQA-QAM-025

Note:

TABLE 1

Page	7	of 7	

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
5890.01	12/4/00	12/4/00	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
221	1/17/01	1/18/01	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:

*VOCs:

Volatile Organic Compounds plus 15 tentatively identified compounds Semivolatile organic compounds plus 15 tentatively identified compounds Passively Placed Narrow Diameter Point

*SVOCs: **PPNDP:

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS BUILDING 905, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 1 of 6

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*=	2753.01	6/26/97	6/30/97	Total Solid	- - -		81:89 %	77	
				TPHC	188	yes	297.64	10,000	No
***B/6.0'=	2753.02	6/26/97	6/30/97	Total Solid TPHC	 197	Yes	77.87 % 1018.98	 10,000	- No
***C/6.0'=	2753.03	6/26/97	6/30/97	Total Solid	477	105	77.48 %	10,000	1319 1
				TPHC	197	Yes	937.50	10,000	No
D/9.0'=	2753.04	6/27/97	6/30/97	Total Solid			72.09 %		
				ŢPHC	209	yes	ND	10,000	No
E/9.0'=	2753.05	6/27/97	6/30/97	Total Solid			72.28 %		
The state of the second	The state of the common contract of the contra	en stora characteriste in more month object i se sono month on ch		TPHC	208	yes	ND	10,000	No
***F/6.0'=	2753.06	6/27/97	6/30/97	Total Solid .	75. 44		77.40 %		-
				TPHC	198	yes	9094,46	-10,000	No
G/9.0'=	2753.07	6/27/97	6/30/97	Total Solid			72.03 %	·	
	•			TPHC	217	yes ·	ND	10,000	No ·
H/9.0'=	2753.08	6/27/97	6/30/97	Total Solid			71.95 %		
				TPHC	206	yes	ND	10,000	No
***DUPA/6.0'=	2753.09	6/27/97	6/30/97	Total Solid		- 22	79.77%		
				TPHC	194	yes	1030.62	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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS **BUILDING 905, MAIN POST-WEST AREA** FORT MONMOUTH, NEW JERSEY

Page 2 of 6

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/9.0'=	3095.01	10/23/97	10/24/97	Total Solid			72.33 %		
				TPHC	215	yes	ND	10,000	No
B/9.0'=	3095.02	10/23/97	10/24/97	Total Solid	· · ·		75.19 %		
				TPHC	206	Yes	ND	10,000	No
C/9.0'=	3095.03	10/23/97	10/24/97	Total Solid			72.33 %		***
				TPHC	208	Yes	ND	10,000	No
D/9.0'=	3095.04	10/23/97	10/24/97	Total Solid			70.65 %	, 	
277.0				TPHC	213	yes	ND	10,000	No
***E/6.5'=	3095:05	10/23/97	10/24/97	Total Solid		- -	79.18.%	e e e e e e e e e e e e e e e e e e e	
			• · · · · · · · · · · · · · · · · · · ·	TPHC	190	ves	1021.13	10,000	No
· F/6.5'=	3095.06	10/23/97	10/24/97	Total Solid		# 2 365 Section of the Confession of the Confes	77.65 %		CONTRACTOR
170.5	20,2.00	10,25,5,	10/2 1/5/	TPHC	194	yes	983.10	10,000	No
DUPB/9.0'=	3095.08	10/23/97	10/24/97	Total Solid		, cs	73.21 %		
DUI D/2.0 -	5075.00	10/23/7/	10/24/7/	TPHC	203	yes	ND	10,000	No
				11 IIC	203	yes	ND	10,000	110

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 ***

Not detected above stated method detection limit ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS **BUILDING 905, MAIN POST-WEST AREA** FORT MONMOUTH, NEW JERSEY

Page 3 of 6

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/9.0'=	3105.01	10/24/97	10/24/97	Total Solid	, 		71.33 %		
				TPHC.	219	yes	ND	10,000	No
B/9.0'=	3105.02	10/24/97	10/24/97	Total Solid			70.75 %		
				TPHC	214	Yes	ND	10,000	No
***C/6.5'=	3105.03	10/24/97	10/24/97	Total Solid		:	80.62 %		
				TPHC	186	Yes	4397.79	10,000	No
D/6.5'=	3105.04	10/24/97	10/24/97	Total Solid			85.79 %		
e energi	and the second s	e and constitution of the first community	The second secon	TPHC	172	yes	ND	10,000	No
***E/6.5'=	3105.05	10/24/97	10/24/97	Total Solid		4.0	78.58 %		
		\$ 44 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		TPHC	195	yes	3441.19	10,000	No
***F/6.5'=	3105.06	10/24/97	10/24/97	Total Solid	7 47 7 7		72,27 %		
				TPHC	216	yes	2764,43	10,000	No
G/6.5'=	3105.07	10/24/97	10/24/97	Total Solid			81.04 %		
				TPHC	189	yes	859.80	10,000	No
H/6.5'=	3105.08	10/24/97	10/24/97	Total Solid			79.84 %		
				TPHC	192	Yes	906.56	10,000	No
I/6.5'=	3105.09	10/24/97	10/24/97	Total Solid			79.37 %		
* 1. 1. <u>4.1</u> 11 11 11 1				TPHC	197	Yes	789.24	10,000	No
***J/6.5'=	3105,10	10/24/97	10/24/97	Total Solid	***	7	80.35 %		
	2105.11	10/04/07	10/04/07	TPHC	194	yes	1792.48	10,000	No
K/6.5'=	3105.11	10/24/97	10/24/97	Total Solid TPHC	107		76.21 %	10.000	 NI
PART IN FO	0.402.40	10/04/00	3.040.440.72	Director Company of English (See Annal St. 1997)	197	yes	815.19	10,000	No
***L/6.5'=	3105,12	10/24/97	10/24/97	Total Solid TPHC	 197	 ves	79.09 % 4197.73	10.000	No
DUPK/6.5'=	3105.14	10/24/97	10/24/97	Total Solid		A SEASON DATE AND ASSOCIATION OF THE PARTY O	76.98 %	wyppy	HSTALPELY REPORTED IN
DUPMO.5 =	3103.14	10/24/3/	10/24/7/	TPHC	195	 VAC	70.98 % 526.84	10,000	No
				Trac	133	yes	340.04	10,000	INU

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

TABLE 2 POST-EXCAVATION SOIL SAMPLING RESULTS

BUILDING 905, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 4 of 6

	Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
	A/9.0'=	3119.01	10/29/97	10/31/97	Total Solid		<u></u> .	71.96 %		
					TPHC	217	yes	ND	10,000	No
	B/6.5'=	3119.02	10/29/97	10/31/97	Total Solid			73.75 %		
					TPHC	211	Yes	ND	10,000	No
•	C/6.5'=	3119.03	10/29/97	10/31/97	Total Solid			80.12 %		
					TPHC	189	Yes	ND	10,000	No
	D/6.5'=	3119.04	10/29/97	10/31/97	Total Solid			75.19 %		
	_,				TPHC	203	yes	ND	10,000	No
	E/6.5'=	3119.05	10/29/97	10/31/97	Total Solid			78.03 %	••	
					TPHC	191	ves	1444.27	10,000	No
	DUPA/9.0'=	3119.06	10/29/97	10/31/97	Total Solid			73.19 %		
	201127.0 -	2127.00		1	TPHC	201	yes	ND	10,000	No

Note:

*

Total Solid results are expressed as a percentage.

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

Not detected above stated method detection limit ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS **BUILDING 905, MAIN POST-WEST AREA** FORT MONMOUTH, NEW JERSEY

Page 5 of 6

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Parameters	Method Detection Limit (mg/kg)	Compound of Concern	Results (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/9.0'=	3138.01	11/3/97	11/4/97	Total Solid			70.67 %		
				TPHC	217	yes	ND	10,000	No
B/9.0'=	3138.02	11/3/97	11/4/97	Total Solid			70.70 %		
	•			TPHC	220	Yes	ND	10,000	No
C/6.5'=	3138.03	11/3/97	11/4/97	Total Solid			91.07 %		
				TPHC	172	Yes	ND	10,000	No
D/6.5'=	3138.04	11/3/97	11/4/97	Total Solid			90.56 %		
				TPHC	173	yes	ND	10,000	No
E/6.5'=	3138.05	11/3/97	11/4/97	Total Solid			86.10 %		
				TPHC	171	yes	ND	10,000	No
***F/6.5'=	3138.06	11/3/97	11/4/97	Total Solid :			84.65 %		-
				TPHC	177	yes	1037,24	. 40,000	No
***G/6.5'=	3138.07	1.1/3/97	11/4/97	Total Solid	-		83:65 %	7	
				TPHC	181	yes	12084.06	10,000	Yes
DUPC/6.5'=	3138.08	11/3/97	11/4/97	Total Solid			87.62 %		
				TPHC	171	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 resampled
Not detected above stated method detection limit ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS BUILDING 905, MAIN POST-WEST AREA FORT MONMOUTH, NEW JERSEY

Page 6 of 6

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
B1/6.5'=	5862.01	11/18/00	11/20/00	Total Solid			86.34 %		
				TPHC	180	yes	ND	10,000	No
B2/6.5'=	5862.02	11/18/00	11/20/00	Total Solid			79.67 %	·	
				TPHC	194	Yes	531.07	10,000	No
B3/6.5'=	5862.03	11/18/00	11/20/00	Total Solid			86.82 %		
				TPHC	177	Yes	ND	10,000	No
DUPB1/6.5'=	5862.04	11/18/00	11/20/00	Total Solid	 ,		85.64 %		
= + - = 1. 0.0				TPHC	179	yes	ND	10,000	No

Note:

Total Solid results are expressed as a percentage.

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

Not detected above stated method detection limit ND

1 of 2

Table 3 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

<u>FMETL</u>

NJDEP#

<u>13461</u>

Matrix: (soil/water) SOIL

Date Sampled:

10/29/97

Location:

<u>905</u>

Lab Sample ID: 3119.05(SAMPLE E)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON- RESIDENTIAL
107028	Acrolein	2000	U	NA	NA
107131	Acrylonitrile	2000	U	1000	5000
75650	tert-Butyl alcohol	3700	U	NA	NA
1634044	Methyl-tert-Butyl ether	850	U	NA	NA
108203	Di-isopropyl ether	570	U	NA	NA
	Dichlorodifluoromethane	1100	U	NA	NA
74-87-3	Chloromethane .	280	U	520000	1000000(d)
75-01-4	Vinyl Chloride	850	U	2000	7000
74-83-9	Bromomethane	570	U .	79000	1000000(d)
75-00-3	Chloroethane	850	U	NA	NA
75-69-4	Trichlorofluoromethane	570	υ	NA	NA
75-35-4	1, 1-Dichloroethene	280	U	8000	150000
67-64-1	Acetone	570	U	1000000(d)	1000000(d)
75-15-0	Carbon Disulfide	280	U	NA	NA
75-09-2	Methylene Chloride	5600	υ	49000	210000
156-60-5	trans-1,2-Dichloroethene	570	U	1000000(d)	1000000(d)
75-35-3	1,1-Dichloroethane	280	U	570000	1000000(d)
108-05-4	Vinyl Acetate	850	U	NA	NA
78-93-3	2-Butanone	850	U	1000000(d)	1000000(d)
156-59-2	cis-1,2-Dichloroethene	280	U	79000	1000000(d)
67-66-3	Chloroform	280	U	19000(k)	28000(k)
75-55-6	1,1,1-Trichloroethane	280	U	NA	NA
56-23-5	Carbon Tetrachloride	570	υ	2000(k)	4000(k)
71-43-2	Benzeze	280	υ	3000	13000
107-06-2	1,2-Dichloroethane	570	U	6000	24000

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2 of 2

Table 3 **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) SOIL

Date Sampled:

10/29/97

Location:

<u>905</u>

Lab Sample ID: 3119.05(SAMPLE E)

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

CAS NO.	PARAMETER	MDL	QUALIFIER	RESIDENTIAL	NON- RESIDENTIAL
79-01-6	Trichloroethene	280	U	23000	54000(k)
78-87-5	1, 2-Dichloropropane	280	U	10000	43000
75-27-4	Bromodichloromethane	280	U	11000(g)	46000(g)
110-75-8	2-Chloroethyl vinyl ether	570	U	NA	NA
10061-01-5	cis-1,3-Dichloropropene	280	U	NA	NA
108-10-1	4-Methyl-2-Pentanone	570	U	1000000(d)	1000000(d)
108-88-3	Toluene	280	U	1000000(d)	1000000(d)
10061-02-6	trans-1,3-Dichloropropene	570	U	NA	NA
79-00-5	1,1,2-Trichloroethane	570	U	22000	420000
127-18-4	Tetrachloroethene	280	U	4000(k)	6000(k)
591-78-6	2-Hexanone	570	υ	NA	NA
126-48-1	Dibromochloromethane	570	U	NA	NA
108-90-7	Chlorobenzene	280	υ	37000	680000
100-41-4	Ethylbenzene	570	U	1000000(d)	1000000(d)
1330-20-7	m+p-Xylenes	850	U	NA	NA
1330-20-7	o-Xylene	570	υ.	NA	NA
100-42-5	Styrene	570	U	23000	97000
75-25-2	Bromoform	570	U	86000	370000
79-34-5	1,1,2,2-Tetrachloroethane	570	U	34000	70000(k)
541-73-1	1,3-Dichlorobenzene	850	υ	5100000	10000000(c)
106-46-7	1,4-Dichlorobenzene	850	U	570000	10000000(c)
95-50-1	1,2-Dichlorobenzene	850	ប	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 NOTED 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 ENVIRONMENTAL 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 UTILIZING 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 GEOCHEMISTRY 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.

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Table 4 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

12/4/00

Location:

905

Lab Sample ID: 5890.01(Bldg 905)

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

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2 of 8

Table 4 **VOLATILE ORGANICS ANALYSIS DATA SHEET**

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

12/4/00

Location:

<u>905</u>

Lab Sample ID: <u>5890.01(Bldg 905)</u>

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

Table 4 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

13461

Matrix: (soil/water) WATER

Date Sampled:

12/4/00

Location:

<u>905</u>

Lab Sample ID: 5890.01(Bldg 905)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	1.54	Not Detected		nie	по
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	по
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
	<u> </u>	4		<u> </u>		<u> </u>

Table 4 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

<u>12/4/00</u>

Location:

<u>905</u>

Lab Sample ID: 5890.01(Bldg 905)

F	<u></u>				F =	
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	по
132-64-9	Dibenzofuran	0.73	Not Detected		nle	no
121-14-2	2,4-Dinitrotoluene	1.41	Not Detected	_	10	по
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	по
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	по
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	<u></u>	50	no
129-00-0	Pyrene	1.53	Not Detected		200	no
85-68-7	Butylbenzylphthalate	1.24	Not Detected		100	no
56-55-3	Benzo[a]anthracene	2.68	Not Detected		10	по
91-94-1	3,3'-Dichlorobenzidine	1.60	Not Detected		60	по
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]fluoranthené	1.15	Not Detected		2	no
50-32-8	Вепго[а]ругепе	2.43	Not Detected	-	20	по
193-39-5	Indeno[1,2,3-cd]pyrene	2.24	Not Detected		20	по
53-70-3	Dibenz[a,h]anthracene	1.94	Not Detected		20	по
191-24-2	Benzo[g,h,i]perylene	2.04	Not Detected		nle	no
				<u> </u>		<u> </u>

Table 4 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

= 1

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

1/17/01

Location:

<u>905</u>

Lab Sample ID: 221(Bldg 905)

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 I, 2-Dichloropropane 0.40 Not Detected 1 no 75-27-4 Bromodichloromethane 0.55 Not Detected 1 no	CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
1071-75 Party March 1071	107028	Acrolein	1.85	Not Detected		50	no
1634044 Methyl-tert-Butyl ether 0.16	107131	Acrylonitrile	2.78	Not Detected	·	50	DO
108203 Di-isopropyl ether 0.25 Not Detected nle 00	75650	tert-Butyl alcohol	8.52	Not Detected		nle	no
Dichlorodifluoromethane 1.68	1634044	Methyl-tert-Butyl ether	0.16	Not Detected		nle	no
1.16	108203	Di-isopropyl ether	0.25	Not Detected		nle	BO
1.10		Dichlorodifluoromethane	1.68	Not Detected	_	nle	no
1.00 Not Detected	74-87-3	Chloromethane	1.16	Not Detected		30	no
1.10	75-01-4	Vinyl Chloride	1.06	Not Detected		5	no
1.01 1.02 1.03 1.04 1.05	74-83-9	Bromomethane	1.10	Not Detected		10	no
75-69-4 Trichlorofloromethane 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 nle no 108-05-4 Vinyl Acetate 0.78 Not Detected nle no 78-93-3 2-Butanone 0.62 Not Detected nle no 78-93-3 2-Butanone 0.62 Not Detected 10 no 67-66-3 Chloroform 0.30 Not Detected	75-00-3	Chloroethane	1.01	Not Detected		nle ·	no
1.36	75-69-4	Trichlorofluoromethane	0.50	Not Detected		nle	по
75-15-0 Carbon Disulfide 0.46 Not Detected nle no	75-35-4	1, 1-Dichloroethene	0.24	Not Detected		2	по
Not Detected 1.5 1	67-64-1	Acetone	1.36	Not Detected	-	700	'no
156-60-5 trans-1,2-Dichloroethene 0.16 Not Detected 100 no	75-15-0	Carbon Disulfide	0.46	Not Detected		nle	по
75-35-3 1,1-Dichloroethane 0.12 Not Detected 70 no 108-05-4 Vinyl Acetate 0.78 Not Detected nle no 78-93-3 2-Butanone 0.62 Not Detected 300 no 156-59-2 cis-1,2-Dichloroethane 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 75-27-4 Bromodichloromethane 0.55 Not Detected	75-09-2	Methylene Chloride	0.24	Not Detected		2	по
108-05-4 Vinyl Acetate 0.78 Not Detected nle no	156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected		100	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 1 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 nle no 110-75-8 2-Chloroethyl vinyl ether 0.65 Not Detected -	75-35-3	1,1-Dichloroethane	0.12	Not Detected		70	по
156-59-2 cis-1,2-Dichloroethene 0.17 Not Detected 10 no	108-05-4	Vinyl Acetate	0.78	Not Detected		nle	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	78-93-3	2-Butanone	0.62	Not Detected		300	no
67-50-5 Clintrotrin 0.30 Not Detected 30 no 75-55-6 1,1,1-Trichloroethane 0.23 Not Detected 2 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 nle no 110-75-8 2-Chloroethyl vinyl ether 0.65 Not Detected nle no	156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected		10	no
107-95-9	67-66-3	Chloroform	0.30	Not Detected		. 6	no
Not Detected	75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	-	30	no
107-06-2	56-23-5	Carbon Tetrachloride	0.47	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	71-43-2	Benzeze	0.23	Not Detected		1	no
78-87-5 I, 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	107-06-2	1,2-Dichloroethane	0.18	Not Detected		2	по
75-27-4 Bromodichloromethane 0.55 Not Detected 1 no 110-75-8 2-Chloroethyl vinyl ether 0.65 Not Detected nle no	79-01-6	Trichloroethene	0.23	Not Detected		1	no
110-75-8 2-Chloroethyl vinyl ether 0.65 Not Detected nle no	78-87-5	1, 2-Dichloropropane	0.40	Not Detected		ı	no
110-73-0 2 cinotocally may realize 5.03 Proceeded 110	75-27-4	Bromodichloromethane	0.55	Not Detected		1	no
10061-01-5 cis-1,3-Dichloropropene 0.69 Not Detected nle 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	по

Table 4 VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name:

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

1/17/01

Location:

<u>905</u>

Lab Sample ID: 221 (Bldg 905)

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

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

<u>1/17/01</u>

Location:

<u>905</u>

Lab Sample ID: 221(Bldg 905)

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	по
62-53-3	Aniline	1.85	Not Detected	-	nle	по
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	Benzył alcohol	0.62	Not Detected		nle	по
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	по
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	по
91-57-6	2-Methylnaphthalene	0.55	Not Detected		nle	no
77-47-4	Hexachlorocyclopentadiene	0.76	Not Detected		50	по
91-58-7	2-Chloronaphthalene	0.53	Not Detected		nie	no
88-74-4	2-Nitroaniline	0.79	Not Detected		nle	no
131-11-3	Dimethylphthalate	1.04	Not Detected		7000	по
208-96-8	Acenaphthylene .	0.70	Not Detected		nle	· no

Table 4 SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name:

g___

FMETL

NJDEP#

<u>13461</u>

Matrix: (soil/water) WATER

Date Sampled:

1/17/01

Location:

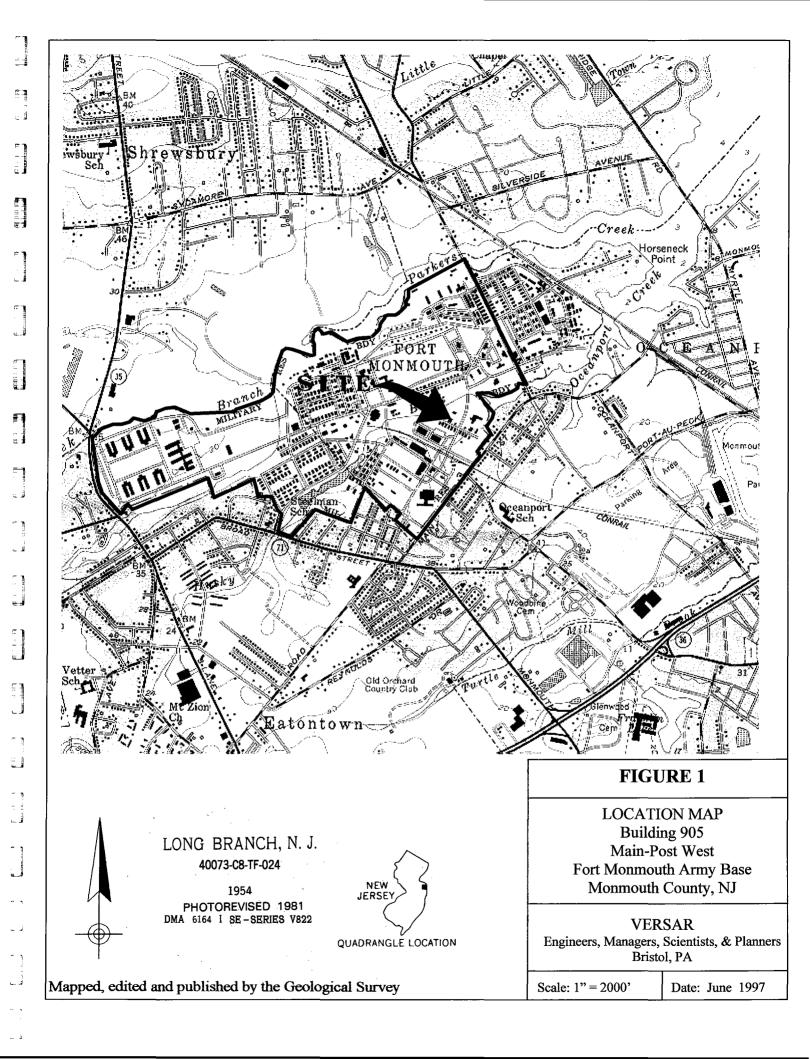
<u>905</u>

Lab Sample ID: 221(Bldg 905)

Date Sample	d. <u>1717/01</u>	Location	. <u>905</u>	Laus	anipic id. $\frac{ZZI(D)}{ZZI(D)}$	lug 903)
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	по
99-09-2	3-Nitroaniline	1.93	Not Detected		nle	no
83-32-9	Acenaphthene	0.62	Not Detected		400	по
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		пІе	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	по
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	3.56 ug/L		100	по
56-55-3	Benzo[a]anthracene	2.68	Not Detected		10	no
91-94-1	3,3'-Dichlorobenzidine	1.60	Not Detected		60	по
218-01-9	Chrysene	1.14	Not Detected		20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.34	2.87 ug/L		30	no
117-84-0	Di-n-octylphthalate	1.44	Not Detected		100	по
205-99-2	Benzo[b]fluoranthene	1.32	Not Detected		10	no
207-08-9	Benzo[k]fluoranthene	1.15	Not Detected		2	по
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	по
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

1



Geologic Map of New Jersey

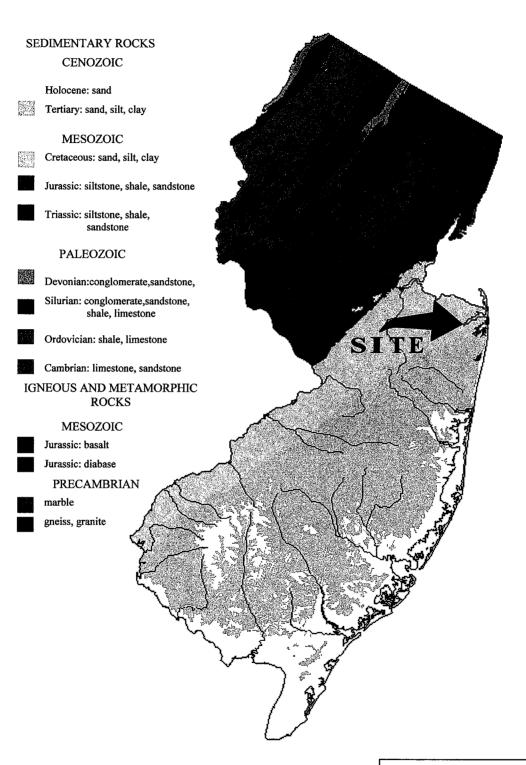
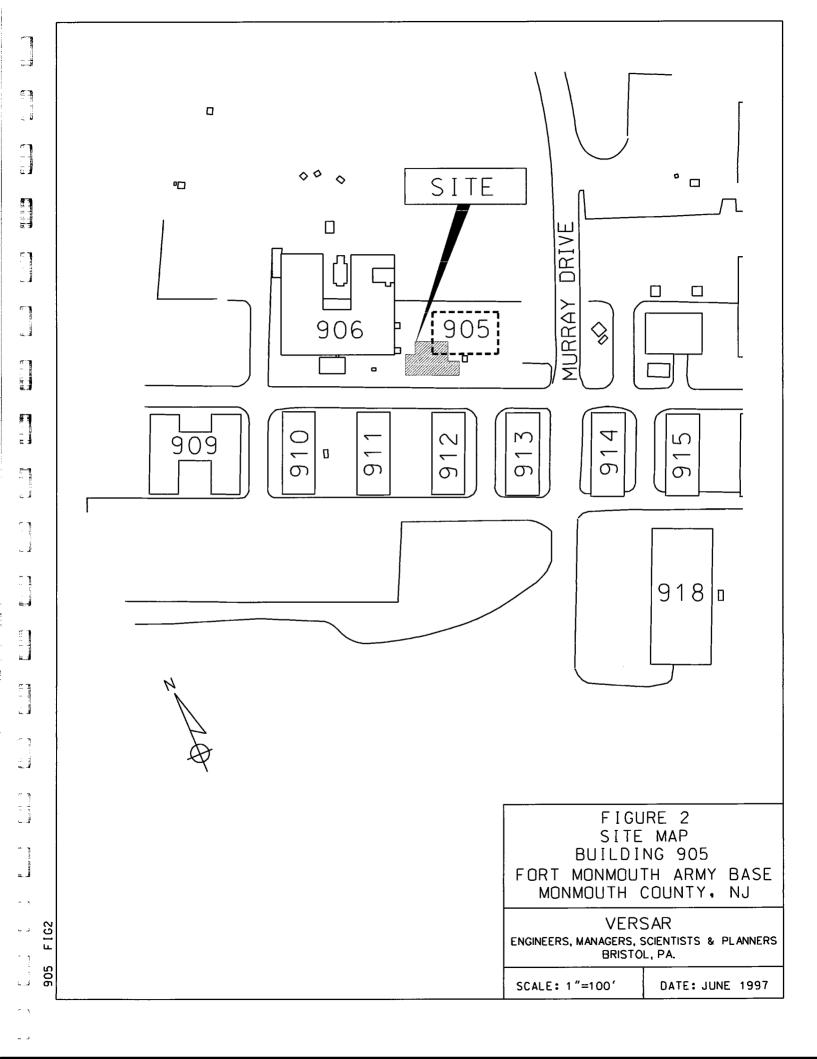
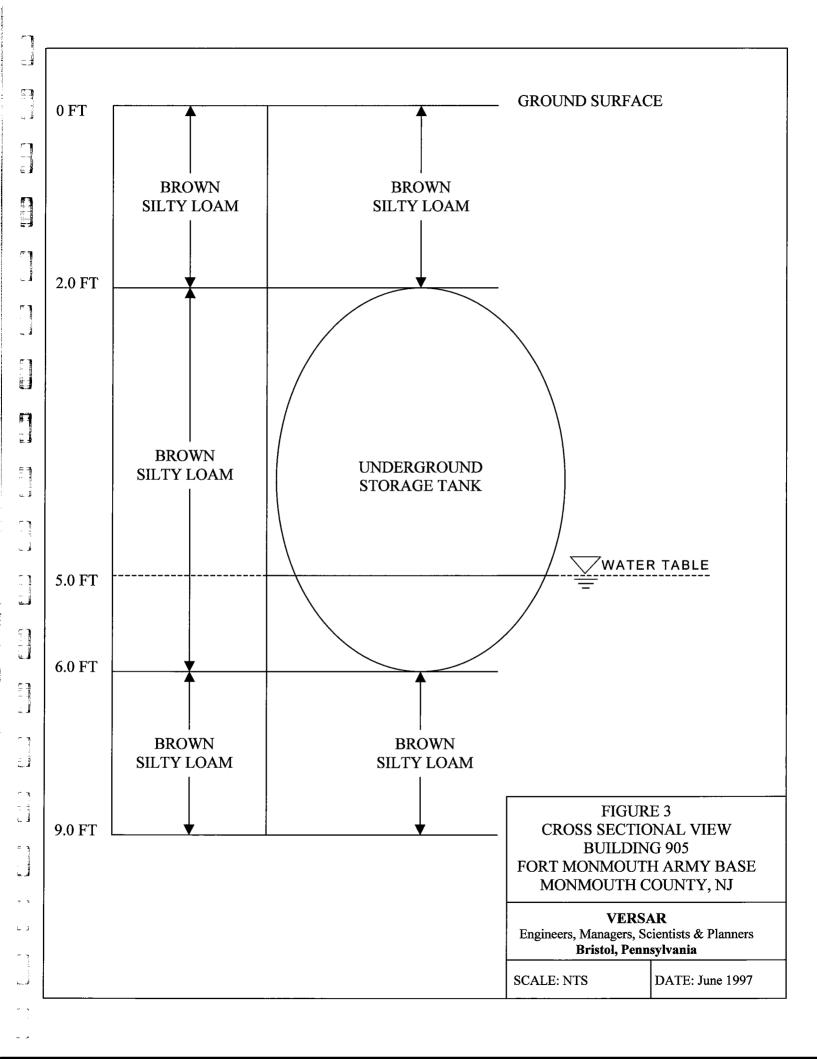


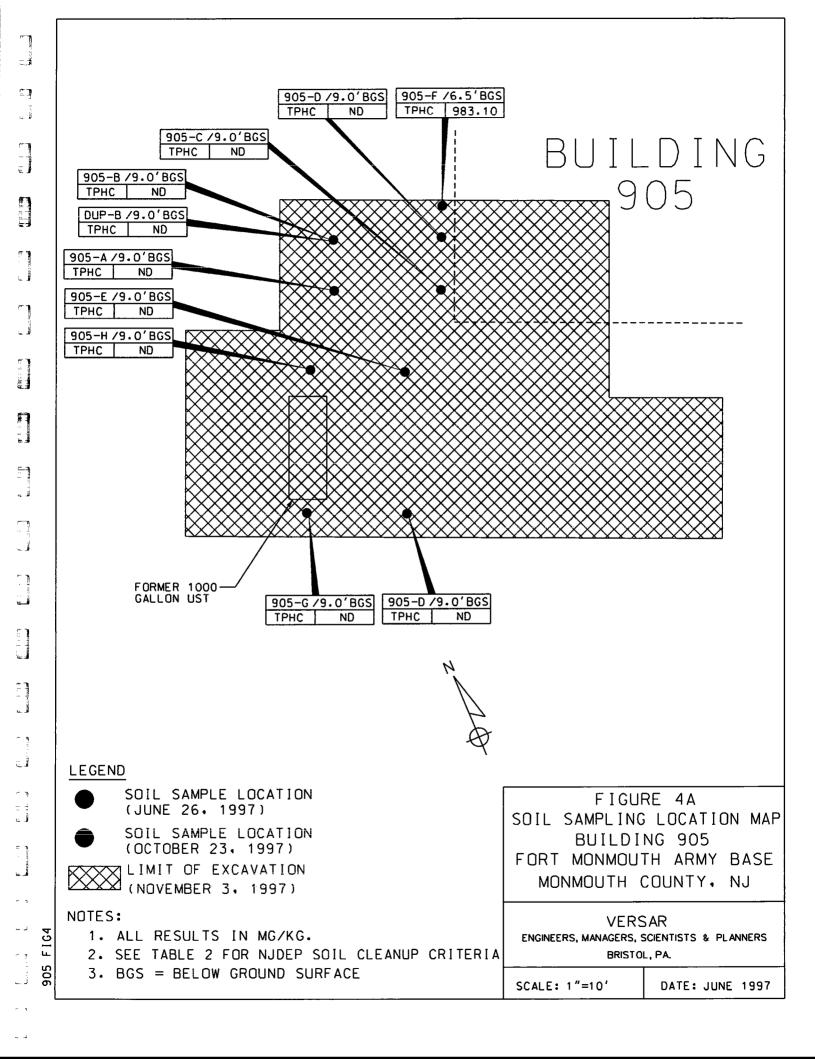
FIGURE 1A GEOLOGICAL MAP FORT MONMOUTH ARMY BASE MONMOUTH COUNTY, NJ

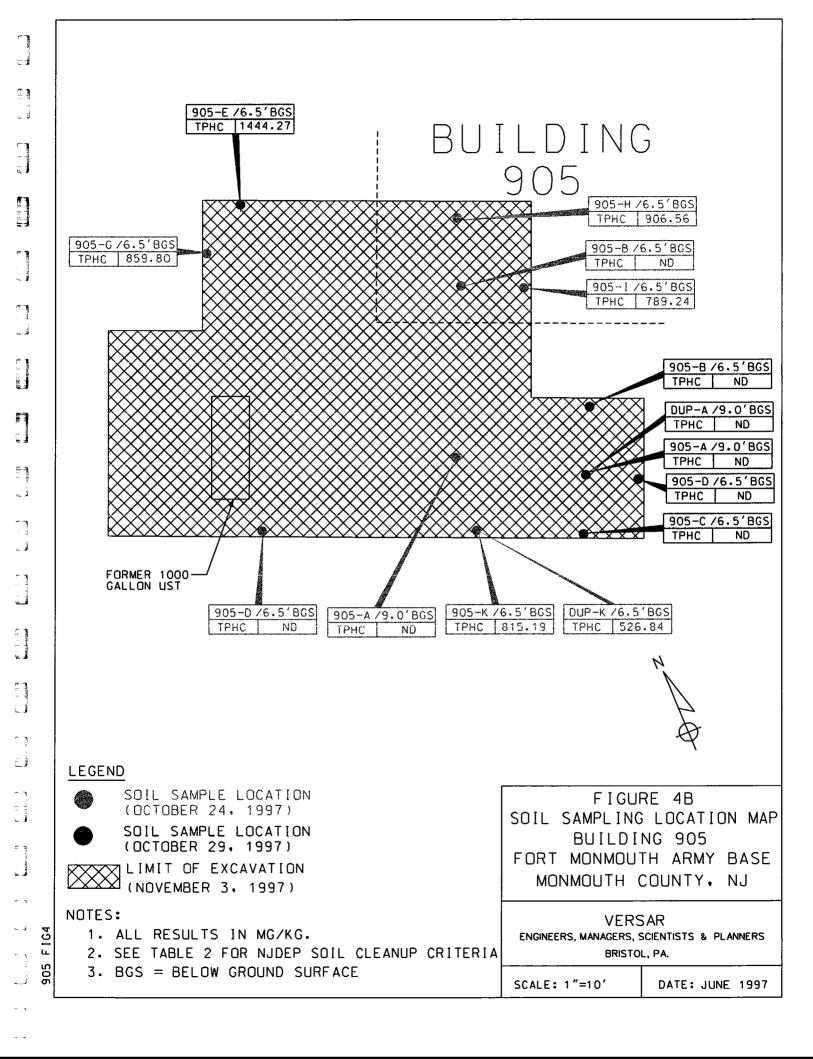
VERSAR

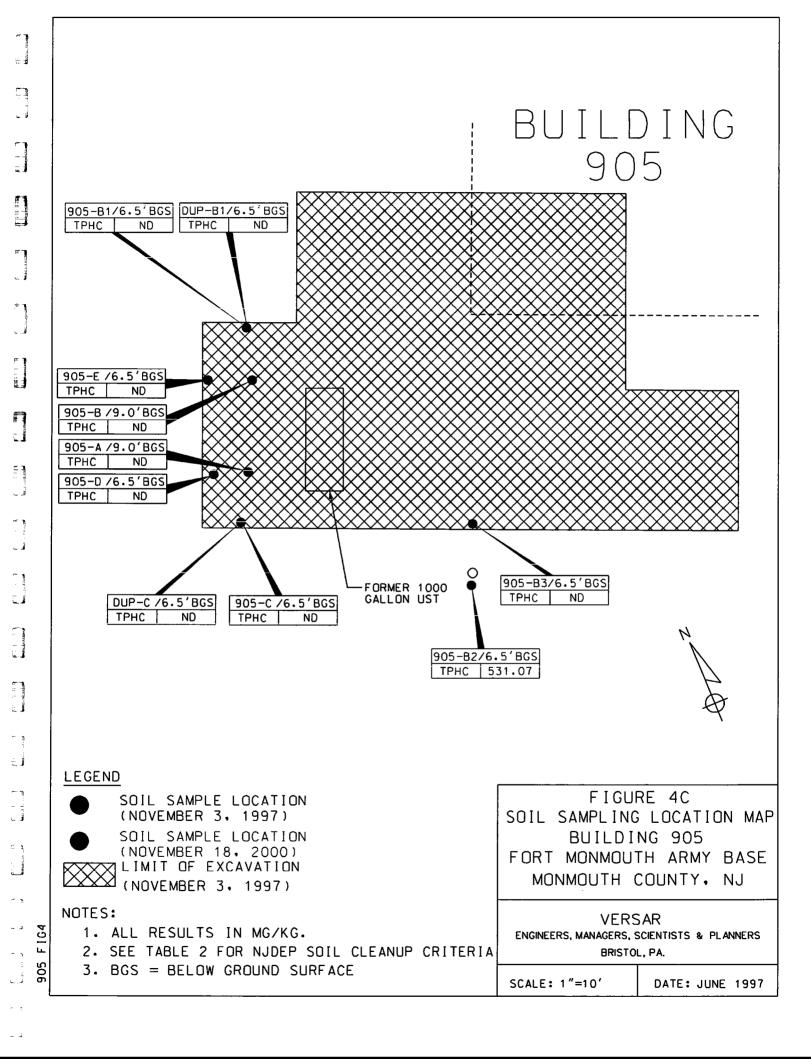
Engineers, Managers, Scientists & Planners Bristol, Pennsylvania

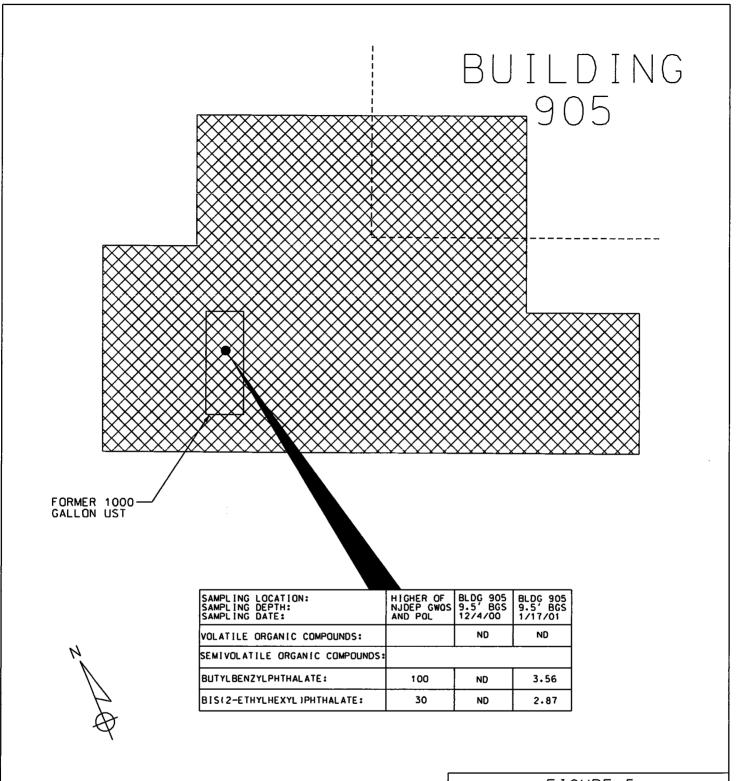












LEGEND

GROUNDWATER SAMPLE LOCATION (DECEMBER 4, 2000 AND JANUARY 17, 2000) LIMIT OF EXCAVATION

☑(NOVEMBER 3, 1997)

NOTES:

- 1. ND=INDICATES COMPOUND NOT DETECTED
- 2. ALL RESULTS IN UG/L
- 3. BGS = BELOW GROUND SURFACE
- 4. SEE TABLE 4 FOR NJDEP GROUNDWATER QUALITY CRITERIA

FIGURE 5 GROUNDWATER SAMPLING MAP BUILDING 905 FORT MONMOUTH ARMY BASE MONMOUTH COUNTY, NJ

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

SCALE: 1 "=10'

DATE: JUNE 1997

APPENDIX A NJDEP-STANDARD REPORTING FORM



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Departmen

Environmental Protection and Energ Divisio. of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0029

ATTN: UST Program (609) 984-3156

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

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	ANDARD REPORTING FORM conting activities at an UST facility:
General Facility Information Closure (Abandonment of Temporary Closure Change in Service	
Check ONLY One Ty	pe of Activity - Complete Form For That Activity
(More that	n one tank can be listed per activity)
	NEW tank installations at existing registered Registration Questionnaire for the new tanks.
Answer questions 1 through 5 and others as app	plicable.
Company name and address (as it appears on registration questionnaire):	U.S. ARMY - FORT MONMOUTH DPW - BUILDING 173 FORT MONMOUTH NIT 07703
	ATTN: EUGENE IN LESINSKI
2. Facility name and location (it different from above):	
3. Contact person for this activity:	GENE LESINSKI Telephone Number: (98) 532-0989
4. The identification number of the affected tan	x as it appears in Question Number 12 on the Registration Questionnaire:
5. Registration Number (If known):	ust- 008/533
6. For GENERAL FACILITY INFORMATION CHAPT	ges (address, telephone, contact person, etc. – supply NEW information only):
a. Facility name: b. Facility location: c. Owner's mailing address:	
	U
d. Block: Lot: Lot: e. Contact person (facility operator): f. Contact telephone number: (g. Other (Specify):	

Attach the necessary implements is schedule (3 capies) and all documental resided for abandonment per NLJAC, 7148-9.1 (d). D. IX Removal Date: 6 1 2019 Case No. 97-6-29-1325 CAsce No. 197-6-29-1325 CASCE STORED (chéck all trust apply): a. II Temporary Obsure (12 month maximum time - see NLJAC, 7148-9.1(b)). Remove all hazardous substances; leave tank in place. b. II Changes in service from a regulated substance to a non-regulated substance. Tank must be cleaned and the assessment performed per NLJAC, 7148-9.1(e). c. II Changes in service from one regulated hazardous substance to another regulated hazardous substance. Tank No. Old New New (Anach additional sheets if more space is needed) 9. For TRANSFER OF OWNERSHIP: Effective Date: New New (Anach additional sheets if more space is needed) 9. For TRANSFER OF OWNERSHIP: Effective Date: New Owner (operator) b. New Facility Name County Tele: 1 Date: New Additional space of the addition of spail/overflat primorbing systems, cathodic protection, etc.): a. Type of Modification b. "NOTE" Substantial modifications require a permit under NLJAC, 7:148-10. 11. For changes in FINANCIAL RESPONSIBILITY to (check appropriate changes and strach copies of new inform a. Pokey Type: 1 d. Company/Carrier: 1 b. Pokey Number: 1 c. Expiration Date: 1 c. Cherr: 1 c. Expiration Date: 1 c. Cherr: 1 c. Cherr: 1 d. Company/Carrier: 1 e. Expiration Date: 1 c. Cherr: 1 c. Cherr: 1 c. Expiration form shall be signed by the highest ranking individual at the farility with overall responsibilities and imprisonation: 1 c. Cherrier Cher	8. a b c Fab.	AT CO DEC DATE OF THE NEW TYPE	Handonment Removal tach the necestary in Temporary betances; less Change in Changes in Tank No. Tank N	per KLIA Date: ESSARY INT HAZARE Closure (ave tank i service in s	plementations coursely and place. com a regulation one record and a coursely and	9.1 (d). ion sche STANC maximum lated sut er N.J.A. egulated h addition Effe	county county county county county	Case pies). RED (che see N.J. to a non9.1(e). pus subst Date:	No. 9 éck all tra A.C. 7:14 regulated tance to a	7-6- at apply): IB-9.1(b)) I substant another re New New S needed	Remove a ce. Tank mu gulated hazz	325 6P&R II hazardor st be clear ardous su	the 17
b. fix Removal Date: 6.724/97 Attach the necessary implementation schedule (3 copies). Attach the necessary implementation schedule (3 copies). 8. For CHANGES IN HAZARDOUS SUBSTANCES STORED (check all that apply): a. 1 Temporary Closure (12 month maximum time – see N.J.A.C. 7:14E-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. 7:14E-9.1(e). c. Changes in service from one regulated hazardous substance to another regulated hazardous substance. Tank No. Old New New Tank No. Old New New (Anach additional sheets if more space is needed) 9. For TRANSFER OF OWNERSHIP: Effective Date: a. New Owner (operator) b. New Facility Name N.J. County Tele: "To For Substantial Modifications require a permit under N.J.A.C. 7:14B-10. 11. For changes in Financial modifications require a permit under N.J.A.C. 7:14B-10. 12. Pokey Number: a. Pokey Type: d. Company/Carrier: b. Pokey Number: c. Cherr: Conter: CERTIFICATION This registration form shall be signed by the highest ranking individual at the facility with overall responsibilities in provided in this document is true, accurate and complete. 1 This registration form shall be signed by the highest ranking individual at the facility with overall responsibilities in a maximum to provide in this document is true, accurate and complete. 1 CERTIFICATION This registration form shall be signed by the highest ranking individual at the facility with overall responsibilities are a maximum to see a security and complete. 1 Light increase as a maximum to see a security of law that the Information provided in this document is true, accurate and complete. 1 That livers are a maximum to see a security of the highest ranking individual at the larger of incomplete information provided in this document is true, accurate and complete. 1 Light increase as a maximum to the security of the highest area	8. a b c Fab.	or Transcorer St. Ne	Removal tach the necestary in Temporary instances; less change in Changes in Tank No	Date: essary in HAZARE Closure (ave tank service in sment pe sment pe revice if MODIF s, called	polementation of the place. The place of the	ion sche STANC maximum lated sut at NJA equiated h addition Effe	county county county county county	expies). RED (che see N.J. to a non- to a non- to substitute the substitute t	éck all that A.C. 7:14 regulated tance to a	at apply): IB-9.1(b)) I substant Inother re New New S needed	Remove a ce. Tank mu gulated haz	O P.S. R. Il hazardor st be clear ardous su	the 17
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(INIAD-2/92)

APPENDIX B SITE ASSESSMENT SUMMARY

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: D	irectorate of Public Works Building 173
Municipality: Oceanport	County: Monmouth
Block: L	ot(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	 Complete all that apply) Assigned Case Manager: <u>Ian Curtis, Federal Case Manager</u> UST Registration Number: <u>81533-145</u> (7 digits) Incident Report Number <u>97 - 06 - 24 - 1325 - 26</u> (10 or 12 digits)
X NA – Federal Agreement	Tank Closure Number : Federal Case Manager
•	Irface Evaluator: Ins to the specific reporting requirements of N.J.A.C. 7:26E
Firm: U.S. Army Fort Mon	nouth Firm's UST Cert. Number: NA-U.S. Army
State: NJ Z	Public Works Building 173 City: Fort Monmouth p: 07703 Telephone Number: 732-532-6224 required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)
The following certification shall. For a Corporation by a per resolution, certified as a true. 2. For a partnership or sole process. For a municipality, State, for a municipality, st	Insible Party(ies) of the Facility: all be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)] as follows: son authorized by a resolution of the board of directors to sign the document. A copy of the ecopy by the secretary of the corporation, shall be submitted along with the certification; or oprietorship, by a general partner or the proprietor, respectively; or deral or other public agency by either a principal executive officer or ranking elected Official. Title: Directorate of Public Works Title: Directorate of Public Works
Name (Print or Type): Signature:	James Ott Title: Directorate of Public Works
Company Name:	U.S. Army Port Monmouth Date: 5/18/03

APPENDIX C WASTE MANIFEST



RD. 1, BOX 5A - OLD BRIDGE, NJ 08857 1. Generator's US EPA ID No. 2. Page 1 **NON-HAZARDOUS** 005417 NHZ **WASTE MANIFEST** NJ3210020597 3. Generator's Name and Mailing Address to as Electronics Command Mailing Address to as Electronics Command Main Post do Tosed Fallow Blds. 177 main Post of Joseph Follow Blds. 173 AHN: SELFM-PW- EV Fort monmorth, N.J. 07703 Generator's Phone (908) 532-0989 A. Transporter's Phone 0500 5 Transporter 1 Company Name VERY CO INC N J D OUSEPAIDONUMBER 0 6 4 7. Transporter 2 Company Name US EPA ID Number B. Transporter's Phone 9. LIONETTI OIL RECOVERY CO INC DBA LORGO PETROLEUM SYCS C. Facility's Phone RUNYON&CHEESEQUAKE RDS N J D O 8 4 O 4 4 O 6 4 908 721-0900 OLD BRIDGE.NJ 08857 12. Containers 14, Unit Wt/Vol 11. Waste Shipping Name and Description Total Quantity No. Type ^{a.}PETROLEUM OIL(PETROLEUM OIL) COMBUSTIBLEL LIQUID UN1270 PGIII 0 0 T b. GENERATOR C. d. D. Additional Descriptions for Materials Listed Above E. Handling Codes for Wastes Listed Above TO4 FILTRATION WATER-20 % 15. Special Handling Instructions and Additional Information 721-0900 DECAL#363 2 ERG#128 DEXSIL TEST KIT RESULTS 4, 00 PPM MANIFEST USED FOR TRACKING PURPOSES ONLY 16. GENERATOR'S CERTIFICATION: I certify the materials described above on this sposal of Hazardous Waste UGENIE 17. Transporter 1 Acknowledgement of Receipt of Materials Day 06 18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Day Year 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. Printed Typed Name Signature

ORIGINAL - RETURN TO GENERATOR

APPENDIX D UST DISPOSAL CERTIFICATE

	The said of the contract of th	The second secon
DATE AMOL	WIAZZA'& SUNS, INC.	1350
	RECYCLING DIVISION 3230 SHAFPO RD.	
	TINTON FALLS, NJ 07753	06/00 55-7233/2
TOTAL OF INVOICES	PAY 1/6	ATE 7/3/9/
ESS % DISCOUNT	TO THE JEED M VINNEL	1.8476.76
ESS FARIGHT		+70/12
TOTAL DEDUCTIONS	Sovereign Bank	DOLLARS @=
AMOUNT OF CHECK	M Dovereign Dank	
		and Morro
#OO 1	3501 +1:2212723321:000 10910996	IGH"
To an annual to the same		
······································		
	MAZZA & SONS, INC.	NO. 259
	Metal Recyclers	NO
	3230 Shafto Rd.	? 5 ~ 67
	Tinton Falls, NJ	DATE. 3 5-7787
	(908) 922-9292	
Custom	7	
Custom Addres	er's Name Troom Vinivell	
	er's Name Troom Vinivell	
Addres	er's Name Troom Vinivell	
Addres Weigh: P	s	Weight Price Lt. Copper
Addres Weigh: P Cast Iron	s	Lt. Copper
Addres Weigh: P Cast Iron Steel	rice 75 Name 750 100 100 100 100 100 100 100 100 100 1	Lt. Copper Brass
Addres Weigh: P Cast Iron Steel	rice 75 Name 750 100 100 100 100 100 100 100 100 100 1	Lt. Copper
Weight P Cast Iron Steel Traum, 101.5	rice 75 Name 750 905	Lt. Copper Brass
Addres Weight P Cast Iron Steel Traum 101.5. Lt. Iron Copper #1	rice 75 Name 750 905	Lt. Copper Brass Alum Clean Lead
Addres Weight P Cast Iron Steel Traum, 101.5. Lt. Iron Copper #1	Price 75 Name 75 (000 VINIVECC) 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless
Addres Weight P Cast Iron Steel Tauk, 101.5. t. Iron Copper #1	Price 75 Name 75 (000 VINIVECC) 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead
Addres Weight P Cast Iron Steel Town 101.50 Lt. Iron Copper #1	Price 75 Name 75 (000 VINIVECC) 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless
Addres Weight P Cast Iron Steel Town 101.50 Lt. Iron Copper #1	Price 75 Name 75 (000 VINIVECC) 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless
Addres Weigh: P Cast Iron Steel	rice 75 Name 775 VINIVECC 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless Battery
Addres Weight P Cast Iron Steel Traum, 101.5. Lt. Iron Copper #1	Price 75 Name 75 (000 VINIVECC) 22380 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless
Addres Weight P Cast Iron Steel Traum, 101.5. Lt. Iron Copper #1	19480 LB 19480 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless Battery TOTAL AMOUNT:
Addres Weight P Cast Iron Steel Town 101.50 Lt. Iron Copper #1	19480 LB 19480 LB 19480 LB	Lt. Copper Brass Alum Clean Lead Stainless Battery

APPENDIX E SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

Total Petroleum Hydrocarbons

96-1262 Bldg. 905

> Project # 2753 Date Rec. 06/27/97 Date Comp. 07/03/97 Released by:

> > Daniel K. Wright Laboratory Director

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Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

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

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: GEN	E LESINSKI-DPW	Project No:	Project No: 96-1262					Analysis Parameters						Comments:			
Phone #: 2098	7	Location: B. 905					ØS	7	10	MED				*=5	Amp	LES	1
()DERA (X)OMA (3			UNSEU	12 1	Ba			8	KEPT	BEL	OW	l
Samplers Name / Cor	npany: GARY DIM	ARTINIS - TUS Sample			# 1		658011	3 %		TERMINED		CAB		42			
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	11	62	11	31	50			0	Remarks	/ Preserv	ation Meth	ıod
2753.0	905-A	6/26/97	1115	SOIL		\bowtie	\geq	\geq	\times				İ	510E W	ALL@	6.0' >	K
0)	905-B		1110										2				
63	905-C	V	1524						1				10		<u> </u>		
04	905-D	6/27/97	1037										ND	EXC. F	LOOR	@9.0'	
ەڭ	905-E		1004										ND	 	<u> </u>		
66	905-F		1320										6	SIDE L	JALL (<u>@6,0′</u>	
07	905-G		1352										NO	EXC. F	LOOR 6	29.0'	
08	905-H	V	1345										NO		<u>\</u>		
04	905-DUP			V	V	V	V	V						FIELD	DUPU	CATE	1
1																	
NOTE: OVA	FASZIY) CALIBRATION C	ED WY	Sppm (CHYN	ZE	Rol	D) A	RE	2//	DH.	es e	ענס	1/20	19764	. G. J	D'i Muni	17/4/-
- OUA	CALIBRATION C	HECKED	@0	945	RS.	ON	6/2	7/9	7								
11	1																
Relinguished by (signatur	Date/Time: 6/2/197 /545	Received by (signature): Date/Time: Received by (signature): Date/Time: Received by (signature):															
Relinquished by (signature	7-7-1	Received by (s	signature):		Relino	nquished by (signature): Date/Time: Received by (signature):											
Report Type: ()Full, (Standard, ()Screen / non-certified Turnaround time: ()Standard 4 wks, (SRush Days, (ASAP Verbal 24 Hrs. Remarks: DEDICATED SAMPLING TOOLS (LISED.																	

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

Client:

U.S. Army

Lab. ID#:

2753

DPW. SELFM-PW-EV

Date Rec'd:

27-Jun-97

Bldg. 173

Analysis Start:

30-Jun-97

Ft. Monmouth, NJ 07703

Analysis Complete:

03-Jul-97

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

- 1

P. Skelton

DICAR#:

Ext. Meth:	Shake			Location #:		B.905
Sample	Field ID	Dilution Factor	Weight (g)	% Selid	MDL (mg/kg)	TPHC Result (mg/kg)
2753.01	905-A	1.00	15.23	81.89	188	297.64
2753.02	905-B	1.00	15.29	77.87	197	1018.98
2753.03	905-C	1.00	15.36	77.48	197	937.50
2753.04	905-D	1.00	15.57	72.09	209	ND
2753.05	905-E	1.00	15.60	72.28	208	ND
2753.06	905-F	1.00	15.31	77.40	198	9094.46
2753.07	905-G	1.00	15.01	72.03	217	ND
2753.08	905-H	1.00	15.85	71.95	206	ND
2753.09	905-DUP	1.00	15.17	79.77	194	1030.62
METHOD BLANK	30-Jun-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

- 1

Total Petroleum Hydrocarbons

98-0001 Bldg. 905

Project # 3095
Date Rec. 10/23/97
Date Comp. 10/26/97

Released by:

Daniel K. Wright Laboratory Director

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Quality Control Spike Summary	12
Raw Sample Data	13-28
Laboratory Deliverable Checklist	29

- P

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

PHC Conformance/Non-conformance Summary Report

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

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 C Laboratory Manager

Fort Monmouth Envi. ...nmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPW-ENV		Project No: 96-1267 98-0001 Location: 8. 905				Analysis Parameters								Comments:	
Phone #:		Location:		- 70.	VOOI		a	3						*= SAMPLES KEPT	
()DERA (X)OMA	Other:	<u> </u>				THE CASE	54.05	3 3						BELOW 4°C.	
Samplers Name / Company : GALY DiMHA		TINIS-TUS		Sample	#	16	100	Mudser					87		
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles		6,	K					0	Remarks / Preservation Method	
3095.01	905-A	10-23-97	0921	SOIL	1	\boxtimes	\geq	\geq					ND	EXC. FLOOR @ 9.0' *	
. 02	\mathcal{B}		0925			\coprod							NO		
3ه .	C		0929										ND		
, 04	D		0933										NO	4	
.05	ϵ		0937										5	SIDE WALL @ 6.5'	
, OL	F		0941										8	↓	
. 07	ES		1042										50	EXC. SOIL (CONTAM.)	
. 54	DUP	1		V	Y	V	V	*						FIELD DUPLICATE Y	
														•	
NOTE: OVA	(#A52114) CALL by G. DIMART,	BRATED	W/95 A	om C	14	4 2	ERE	(0)	41R	e	090	D H	es .	ON 10-23-87	
	by G. DIMART,	WIS.				<u> </u>									
						<u> </u>		<u> </u>							
Relinquished by (signatur	Date/Time:	Received by (signature):	\mathcal{O}	Relino	quished	by (sigr	nature):		Date/	Time:	Receive	ed by (signature):	
May	16-23-97 1419	00	- A	F-957	<u>t</u>										
Relinquished by (signature	,			ı	elinquished by (signature):				Date/Time: Received by (ed by (signature):		
	eport Type: ()Full, Reduced, ()Standard, ()Screen / non-certified Innaround time: ()Standard 4 wks, Rush Days, RASAP Verbal Hrs. Remarks: DEDICATED SAMPLING TOOLS USED.														

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

Client:

U.S. Army

Lab. ID#:

3095

DPW. SELFM-PW-EV

Date Rec'd:

23-Oct-97

Bldg. 173

Analysis Start:

24-Oct-97

Ft. Monmouth, NJ 07703

Analysis Complete:

26-Oct-97

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

D.DEINHARDT

DICAR #:

Ext. Meth:	Shake			Location #:		B.905
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3095.01	905-A	1.00	15.14	72.33	215	ND
3095.02	905-B	1.00	15.17	75.19	206	ND
3095.03	905-C	1.00	15.65	72.33	208	ND
3095.04	905-D	1.00	15.65	70.65	213	ND
3095.05	905-E	1.00	15.59	79.18	190	1021.13
3095.06	905-F	1.00	15.63	77.65	194	983.10
3095.07	905-ES	1.00	15.53	79.86	189	6133.08
3095.08	905-DUP	1.00	15.85	73.21	203	ND
		-				
METHOD BLANK	26-Oct-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright

Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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1.	Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	
2.	Table of Contents submitted	
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5.	Chain of Custody submitted	
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7.	Methodology Summary submitted	
8.	Laboratory Chronicle and Holding Time Check submitted	
9.	Results submitted on a dry weight basis	
10.	Method Detection Limits submitted	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	
	oratory Manager or Environmental Consultant's Signature	

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

Total Petroleum Hydrocarbons

98-0001 Bldg. 905

> Project # 3105. Date Rec. 10/24/97 Date Comp. 10/25/97 Released by:

> > Daniel K. Wright Laboratory Director

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Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

PHC Conformance/Non-conformance Summary Report

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

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

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPW	EM	J	Proj	ect No:	98-0001	1			Analysis Parameters					Commer				
Phone #:			Loca	ition: <i>D</i>	905					2	1					*=SAMPLES KEPT BELOW 4°C.		T
()DERA (X)OMA (()Other	1		D	. 105				$\prod_{i,\lambda}$	3	23					BELO	₩ 4°c.	
Samplers Name / Company : GARY D. WAR		GARY D'MAR	TINIS	TINIS- TUS		Sample		#	PKC	078 7	Maser				ST.			
Lab Sample I.D.		nple Location	I	ate	Time	Ту	ре	bottles	11/2	123					8	1	Preservation Met	
3105.01	90	15-A	10-2	4-97	1148	50	IL	1	\geq	\boxtimes	\boxtimes				NO	EXC. F	LOOR @ 9.0'	*
3105 02		В			1151							<u> </u>			ND	ı	•	
3105 03		С	·		1212							<u> </u>			5	SIDE WA	LL@6.5'	
3105.04		D			1217				Ш			<u> </u>		<u> </u>	ND			
3105 05		E			1221				Ш						4			
3105.06		F	L		1226							<u> </u>			3			
3105.07		G			1231									<u> </u>	ND		<u> </u>	
3105.08		H			1236										3			
3105.09		I			1158										8			
3105.10		\mathcal{J}			1155										3			
3105 11	1	K			1208										2			
3105 12		. L			1204										10		↓	
3/05 13		E5			0951										ND	EXC. 50	IL (CLEAN)	
3/19/5 14		DUP	`	1		\		V	V		1						DUPLICATE	V
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Relinquished by (signature	e).	Date/Time:	Recei	ved by (s	ignature):			Reline	quished	by (sig	mature)	:	Date/Time:	Recei	ved by (signature):		
]	,			
Report Type: ()Full, 💢R	Reduced, (Standard, (Screen	/ non-	certified	ì	•			Rema							, ,		
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Report of Analysis U.S. Army, Fort Monmouth Environmental Laboratory NJDEP Certification # 13461

Client:

U.S. Army

Lab. ID#:

3105

DPW. SELFM-PW-EV

Date Rec'd:

24-Oct-97

Bldg. 173

Analysis Start:

24-Oct-97

Ft. Monmouth, NJ 07703

Analysis Complete:

25-Oct-97

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Analyst:

D.DEINHARDT

Closure #: DICAR #:

Ext. Meth:	Shake			Location #:					
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)			
3105.01	905-A	1.00	15.02	71.33	219	ND			
3105.02	905-B	1.00	15.50	70.75	214	ND			
3105.03	905-C	1.00	15.69	80.62	186	4397.79			
3105.04	905-D	1.00	15.89	85.79	172	ND			
3105.05	905-E	1.00	15.31	78.58	195	3441.19			
3105.06	905-F	1.00	15.06	72.27	216	2764.43			
3105.07	905-G	1.00	15.38	81.04	189	859.80			
3105.08	905-H	1.00	15.32	79.84	192	906.56			
3105.09	905-I	1.00	15.06	79.37	197	789.24			
3105.10	905-J	1.00	15.11	80.35	194	1792.48			
3105.11	905-K	1.00	15.66	76.21	197	815.19			
3105.12	905-L	1.00	15.09	79.09	197	4197.73			
3105.13	905-ES	1.00	15.29	88.79	173	375.45			
3105.14	905-DUP	1.00	15.65	76.98	195	526.84			
				,					
METHOD BLANK	24-Oct-97	1.00	15.00	100.00	157	ND			

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright

Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package 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	
	oratory Manager or Environmental Consultant's Signature	5

Laboratory Certification #13461

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

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

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

Total Petroleum Hydrocarbons

98-0001

Bldg. 905

Project #3119 Date Rec.10/30/97 Date Comp.10/31/97

Released by:

Daniel K. Wright **Laboratory Director**

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= 3

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

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

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPu	J-ENV	Project No:	98-600	,/		Analysis Parameters Sorros Sorros Wart 15				Comments:					
Phone #:		Location:	705		1		202	77	10					X = SAMPLES KEPT BELOW 4	۵ .
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		Date	Time	┪ '		16	83	Mai	104			!	8	Remarks / Preservation Me	ethod
Lab Sample I.D.	Sample Location 905- A	10-29-97		Soil	bottles				4	+			NA	EXC. FLOOR @ 9.0	
3/19.01	705-71 B	10.6111	1505	1	1 7-1	M		M		15.11	 		 		
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05	ϵ	 	1517	ff·'	171	 				15.80			7	 	- + !
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NOTE SAMOLO	E" IS AT THE	T I DCAT	FON OF	FOR	MER	SA	mple	F 9	05-1	Ed	Poul	FC76	b a	N 10/23/87	
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WEYNITE	10-30-97 0814		,									i _		•••	
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		l													
Report Type: ()Full,	Reduced, ()Standard, ()Screen	/ non-certified				Remar	ks: \mathcal{D}	ED1	CATI	स्थ	SAM	-pu	MG	Tours User.	
Turnaround time: ()Standa	- .	ASAP Verb			J	1					-				

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

Client:

U.S. Army

Lab. ID #:

3119

DPW. SELFM-PW-EV

Ft. Monmouth, NJ 07703

Date Rec'd:

30-Oct-97

Bldg. 173

Analysis Start:

Analysis Complete:

31-Oct-97 31-Oct-97

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

= <u>i</u>

D.DEINHARDT

DICAR #:

Analyst:	D.DEINHARD	1		DICAR #:						
Ext. Meth:	Shake			Location #:		B. 905				
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)				
3119.01	905-A	1.00	15.02	71.96	217	ND				
3119.02	905-B	1.00	15.11	73.75	211	ND				
3119.03	905-C	1.00	15.50	80.12	189	ND				
3119.04	905-D	1.00	15.38	75.19	203	ND				
3119.05	905-E	1.00	15.80	78.03	191	1444.27				
3119.06	905-DUP	1.00	15.95	73.19	201	ND				
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		<u>.</u>		ļ						
				<u> </u>						
METHOD BLANK	31-Oct-97	1.00	15.00	100.00	157	ND				

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Certification #13461

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

US ARMY FT, MONMOUTH ENVIRONMENTAL LABORATORY **NJDEPE # 13461**

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

= 1

Volatiles - EPA Method 8260

98-0001

Bldg. 905

Project #

3119

Date Rec.

10/30/97

Date Compl. 11/10/97

Released by:

Daniel K. Wright **Laboratory Director**

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Method Summary

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.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		Indicatę Yes, No, N/A
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	<u>Y</u>
2.	Retention times for chromatograms provided	4
3.	GC/MS Tune Specifications	
	a. BFB Meet Criteriab. DFTPP Meet Criteria	<u> </u>
4.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series	4
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	<u>Y</u>
6.	GC/MS Calibration Requirements	
	a. Calibration Check Compounds Meet Criteriab. System Performance Check Compounds Meet Criteria	7 7
7.	Blank Contamination - If yes, List compounds and concentrations in each blank:	7
	a. VOA Fraction b. B/N Fraction c. Acid Fraction	
8.	Surrogate Recoveries Meet Criteria	<u> </u>
	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	
	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)	<u>-Y</u>
	a. VOA Fraction b. B/N Fraction c. Acid Fraction	

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

	Indicate Yes, No, N/A
10. Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds which fall outside the acceptable range) a. VOA Fraction b. B/N Fraction c. Acid Fraction	Y
If not met, list number of days exceeded for each sample:	<u>-4</u>
12. Analysis Holding Time Met If not met, list number of days exceeded for each sample:	Y
Additional Comments:	
Laboratory Manager Date: \\- 72-98	

Fort Monmouth Environmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPL	J-ENU	Project No:	98-000	7					lysis l	Paran	eters			Comments:
Phone #:		Location:				l.,	50t	Musser	1.					X = SAMPLES KEPT BELOW 4°C.
()DERA POMA		L		·		X	ž	N.	12				3	Ner incom
Samplers Name / Cor	npany:GARY DIMI	4R77N15-	705	Sample	#	B	2	3	51+ MD)				12	
Lab Sample I.D.	Sample Location	Date	Time		bottles	7)	<u> </u>		133				7	Remarks / Preservation Method
3/19.01	905-A	10-29-97	1501	SOIL		X	类	\geq			<u> </u>			EXC. FLOOR @ 9.0'X
1 07	<i>B</i>		1505										מע	SIDE WALL @ 6.5'
03	C		1508										NO	
04	D		1511		\downarrow								ND	
05	ϵ		1517		1				X	·			3	
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67	TB	1,		METHAL	ez.l	J		1	X				_	TRIP BLANK
		V									 			
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NOTE: OVA	02 10-29-97	BRATED	w/9	3-1	em	Ct.	4 7	¥ Z	Pes	0/	AIR	@	149	5 brs.
	Ou 10-28-97	bu C	DiM	mil	115									
		7						 -						
NOTE: SAMPLE	E" IS AT THE	LOCAT	ion of	FOR	MER	519	mple	F 9	15-0		Pour	FCTE	90	N 10/23/87
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Relinguished by (signatur	e): Date/Time:	Received by (signature):		Relino			nature):			/Time:			(signature):
Report Type: ()Full,	Reduced, ()Standard, ()Screen	/ non-certified				Rema	ks: $\widehat{\mathcal{D}}$	100	CAT	य	SAM	pu	אייני	Touls liser.

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

Definition of Qualifiers

MDL: Method Detection Limit

J: Compound identified below detection limit
B: Compound in both sample and blank

D: Results from dilution of sample

U : Compound searched for but not detected

FIELD ID.

Daily Blank

Lab Name: **FMETL** NJDEP# 13461 Project: 980001 Case No.: 3119 Location: B.905 SDG No.: Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02393.D Level: (low/med) **MED** Date Received: 10/30/97 % Moisture: not dec. 0 Date Analyzed: 11/10/97 (mm) GC Column: Rtx502.2 ID: 0.25 Dilution Factor: 1.0 Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
71-43-2	Benzene	250	U
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	500	U
1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
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	٦
78-93-3	2-Butanone	750	U
	cis-1,2-Dichloroethene	250	د
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	500	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	Ü
108-10-1	4-Methyl-2-Pentanone	500	Ü
10061-02-6	trans-1,3-Dichloropropene	500	Ü
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	500	Ü

FIELD ID.

Daily Blank Lab Name: NJDEP# 13461 **FMETL** Project: 980001 Case No.: 3119 Location: B.905 SDG No.: Matrix: (soil/water) SOIL Lab Sample ID: Daily Blank Sample wt/vol: 10.0 (g/ml) G Lab File ID: V02393.D Level: (low/med) MED Date Received: 10/30/97 % Moisture: not dec. 0 Date Analyzed: 11/10/97 GC Column: Rtx502.2 ID: 0.25 Dilution Factor: 1.0 Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
126-48-1	Dibromochloron	nethane		500	U
108-90-7	Chlorobenzene			250	U
100-42-5	Styrene			500	U
75-25-2	Bromoform			500	U
79-34-5	1,1,2,2-Tetrach	loroethane		500	U
541-73-1	1,3-Dichlorober	zene		750	U
106-46-7	1,4-Dichlorober	zene	_	750	U
95-50-1	1,2-Dichlorober	zene		750	U

		•		905-E
Lab Name:	FMETL	NJDEP #	13461	<u></u>

Matrix: (soil/water) SOIL Lab Sample ID: 3119.05

Sample wt/vol: 11.3 (g/ml) G Lab File ID: V02398.D Level: (low/med) MED Date Received: 10/30/97

% Moisture: not dec. 21.97 Date Analyzed: 11/10/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

COMPOUND

CAS NO.

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

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/KG

FIELD ID.

Q

CAO NO.	COMI COND (ug/L of ug/kg)	UG/NG	Q
71-43-2	Benzene	280	U
108-88-3	Toluene	280	U
100-41-4	Ethylbenzene	570	Ų
1330-20-7	m+p-Xylenes	850	U
1330-20-7	o-Xylene	570	U
107028	Acrolein	2000	Ū
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	3700	U
1634044	Methyl-tert-Butyl ether	850	ح
108203	Di-isopropyl ether	570	U
	Dichlorodifluoromethane	1100	U
74-87-3	Chloromethane	280	ט
75-01-4	Vinyl Chloride	850	Ç
74-83-9	Bromomethane	570	U
75-00-3	Chloroethane	850	٦
75-69-4	Trichlorofluoromethane	570	J
75-35-4	1,1-Dichloroethene	280	J
67-64-1	Acetone	570	U
75-15-0	Carbon Disulfide	280	J
75-09-2	Methylene Chloride	570	J
156-60-5	trans-1,2-Dichloroethene	570	J
75-35-3	1,1-Dichloroethane	280	U
108-05-4	Vinyl Acetate	850	U
78-93-3	2-Butanone	850	U
	cis-1,2-Dichloroethene	280	U
67-66-3	Chloroform	280	U
75-55-6	1,1,1-Trichloroethane	280	U
56-23-5	Carbon Tetrachloride	570	U
107-06-2	1,2-Dichloroethane	570	U
79-01-6	Trichloroethene	280	U
78-87-5	1,2-Dichloropropane	280	U
75-27-4	Bromodichloromethane	280	U
110-75-8	2-Chloroethyl vinyl ether	570	U
10061-01-5	cis-1,3-Dichloropropene	280	U
108-10-1	4-Methyl-2-Pentanone	570	U
10061-02-6	trans-1,3-Dichloropropene	570	U
79-00-5	1,1,2-Trichloroethane	570	U
127-18-4	Tetrachloroethene	280	U
591-78-6	2-Hexanone	570	Ü

FIELD ID.

Lab Name:	FMETL			NJDEP # 13461	905-E	
Project:	980001		Case No.: 3119	Location: B.905 S	DG No.:	
Matrix: (soil/w	rater)	SOIL		Lab Sample ID:	3119.05	
Saṃple wt/vo	l:	11.3	(g/ml) G	Lab File ID:	V02398.D	
Level: (low/m	ned)	MED		Date Received:	10/30/97	
% Moisture: г	ot dec.	21.97		Date Analyzed:	11/10/97	
GC Column:	Rtx502	2.2 ID:	0.25 (mm)	Dilution Factor:	1.0	
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volu	me: <u>50</u> ((uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
126-48-1	Dibromochloromet	hane	57	70 U
108-90-7	Chlorobenzene		28	30 U
100-42-5	Styrene		57	70 U
75-25-2	Bromoform		57	70 U
79-34-5	1,1,2,2-Tetrachlord	oethane	57	70 U
541-73-1	1,3-Dichlorobenze	ne	88	50 U
106-46-7	1,4-Dichlorobenze	ne	88	50 U
95-50-1	1,2-Dichlorobenze	ne	85	50 U

FIELD ID.

905-TB

 Lab Name:
 FMETL
 NJDEP # 13461

 Project:
 980001
 Case No.:
 3119
 Location:
 B.905
 SDG No.:

 Matrix:
 (soil/water)
 SOIL
 Lab Sample ID:
 3119.07

 Sample wt/vol:
 10.0
 (g/ml)
 G
 Lab File ID:
 V02397.D

Level: (low/med) MED Date Received: 10/30/97

% Moisture: not dec. 0 Date Analyzed: 11/10/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
71-43-2	Benzene	250	U
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	500	U
1330-20-7	m+p-Xylenes	750	U
1330-20-7	o-Xylene	500	U
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	J
56-23-5	Carbon Tetrachloride	500	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
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	Ū
127-18-4	Tetrachloroethene	250	Ū
591-78-6	2-Hexanone	500	Ū

FIELD ID.

Lab Name:	FMETL		·	NJDEP # 13461	905-TB	
Project:	980001		Case No.: 3119	Location: B.905 S	DG No.:	
Matrix: (soit/w	vater)	SOIL	· ·	Lab Sample ID:	3119.07	
Sample wt/vo	oi:	10.0	(g/ml) G	Lab File ID:	V02397.D	
Level: (low/n	ned)	MED		Date Received:	10/30/97	
% Moisture: r	not dec.	0		Date Analyzed:	11/10/97	
GC Column:	Rtx502	2.2 ID:	0.25 (mm)	Dilution Factor:	1.0	
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volu	me: <u>50</u>	(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
126-48-1	Dibromochloror	nethane		500	U
108-90-7	Chlorobenzene			250	U
100-42-5	Styrene			500	U
75-25-2	Bromoform			500	U
79-34-5	1,1,2,2-Tetrach	loroethane		500	Ü
541-73-1	1,3-Dichlorober	nzene		750	U
106-46-7	1,4-Dichlorober	nzene		750	U
95-50-1	1,2-Dichlorober	nzene		750	U

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

Lab Name:	FMETL			NJDEP	# 13461	٠	Daily Bla	ank
Project:	980001		Case No.: 3119	Locat	ion: B.905	s	DG No.:	
Matrix: (soil/	water)	SOIL		L	.ab Sample	ID:	Daily Blank	
Sample wt/ve	ol:	10.0	(g/ml) <u>G</u>	L	.ab File ID:		V02393.D	_
Level: (low/r	med)	MED		C	Date Receiv	ed:	10/30/97	
% Moisture:	not dec.	0		Г	Date Analyz	ed:	11/10/97	<u>.</u>
GC Column:	Rtx50	2.2 ID:	0.25 (mm)	Œ	Dilution Fac	tor:	1.0	
Soil Extract \	Volume:	25000	(uL)	5	Soil Aliquot	Volu	me: 50	(uL)
Number TIC	s found:	0		CONCENTR (ug/L or ug/K				
CAS NO.		COMF	POUND		RT	ES	ST. CONC.	Q

Case No.: 3119

Project:

980001

TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

Lab Name: FMETL NJDEP # 13461 905-E

Matrix: (soil/water) SOIL Lab Sample ID: 3119.05

Sample wt/vol: 11.3 (g/ml) G Lab File ID: V02398.D

Level: (low/med) MED Date Received: 10/30/97

% Moisture: not dec. 21.97 Date Analyzed: 11/10/97

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

Location: B.905 SDG No.:

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

RT CAS NO. COMPOUND EST. CONC. Q 1. 015869-94-0 Octane, 3,6-dimethyl-29.90 1600 JN 2. unknown 30.34 1800 J 3. unknown 31.98 1600

15

TENTATIVELY IDENTIFIED COMPOUNDS

FIELD I	D.
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							905-T	в
Lab Name:	FMETL			NJDEP	# <u>13461</u>		. L	
Project:	980001	Ca	se No.: 3119	Locat	ion: <u>B.905</u>	_ S[DG No.:	
Matrix: (soil/	water)	SOIL	_	E	.ab Sample	ID:	3119.07	
Sample wt/ve	ol:	10.0	(g/ml) G		.ab File ID:		V02397.D	
Level: (low/r	ned)	MED		[Date Receiv	/ed:	10/30/97	<u>.</u>
% Moisture:	not dec.	0		ſ	Date Analyz	ed:	11/10/97	
GC Column:	Rtx50	2.2 ID: 0.	25_ (mm)	[Dilution Fac	tor:	1.0	
Soil Extract \	√olume:	25000	(uL)	5	Soil Aliquot	Volur	me: <u>50</u>	(uL)
Number TICs	s found:	0		CONCENTR (ug/L or ug/K		ITS: /KG		
CAS NO.		COMPOL	JND		RT	ES	T. CONC.	Q

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

		Indicate* Yes, No, N/A
1.	Cover Page, Title Page listing Lab Certification #, facility name & address, & data of report submitted	<u> </u>
2.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	<u> </u>
3.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s Lab ID's submitted	<u> </u>
4.	Document bound, paginated and legible	<u> </u>
5 .	Chain of Custody submitted	-4
6.	Samples submitted to lab within 48 hours of sample collection	4
7.	Methodology Summary submitted	
8.	Results submitted on a dry weight basis	-
9.	Method Detection Limits	<u> </u>
10.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	4
	poratory Manager of Environmental Consultant's Signature	

Laboratory Certification # 13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEPE # 13461

REPORT OF ANALYSIS

Client:

U.S. Army

DPW, SELFM-PW-EV

Bldg. 173

Ft. Monmouth, NJ 07703

Project:

Total Petroleum Hydrocarbons

98-0001 Bldg. 905

> Project # 3138 Date Rec.11/04/97 Date Comp.11/04/97 Released by:

> > Daniel K. Wright Laboratory Director

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Alle Control

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Continuing Calibration Summary	8
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Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

	<u>No</u>	<u>Yes</u>
1. Method Detection Limits provided.		
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	<u>v</u>	
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	ма	·
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	 -	<u>/</u>
7. Analysis holding time met.		
(If not met, list number of days exceeded for each sample)		
Additional Comments:		

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

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

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: DPW	PW - ENV Project No: 98-000! Analysis Parameters				Comments:	•										
Phone #:		Location:			Location: B 905		2 2							* SAMP BELOW	LES KEP	7
()DERA ()OMA ()Other:					J	Social	150					8	BELOW	4°c.	ı
Samplers Name / Con	upany: GARY DIMI	PRETINIS -	705	Sample	#	MC	5%	N					MA			ı
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles		6	1					0	Remarks / Pres		
3138.01	905-A	11-3-97	1555	Suic	1	\geq	\ge	\geq					ND	EXC. FLUE	R@9.0'2	大
1.02	В		1552.									<u> </u>	שנת	↓		
.03	С		1608										NO	SIDEWALL	Q6.5'	
ا ٢٥٠	D		1600										NO			
.05	E		1558										NO			
-06	F		1542										2	<u> </u>	<u></u>	
-07	G		1605										10	BURING (6.5')	
T .08	Dup			.	\rightarrow	\downarrow	V					·	_	FIELD DUP	LICATE V	
		•														
	<u> </u>													,		
NOTE: OUA (#	ASZIIY CALIBA	TED W	195 00	n CA	4 7	ZEA	00	All	26	15	30 H	rs. 0	U [[[3/97 by G.	DIMART	ins
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Day N. Mat 11-8-970813 .			VIC													
Relinquished by (signature): Date/Time:		Received by (s	ignature):		Relino	quished	by (sign	nature):		Date/	Time:	Receiv	ed by (signature):		
								عدد رسيساندي								
Report Type: ()Full, (Seeduced, ()Standard, ()Screen / non-certified						Remar		• •					_			ł
urnaround time: ()Standard 4 wks, Rush Days, (XASAP Verbal Hrs. DEDICATED : Ampling Tools USED.																

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

Client:

U.S. Army

Lab. ID#:

3138

DPW. SELFM-PW-EV

Date Rec'd:

04-Nov-97

Bldg. 173

Analysis Start:

04-Nov-97

Ft. Monmouth, NJ 07703

Analysis Complete:

04-Nov-97

Analysis:

OQA-QAM-025

UST Reg. #:

Matrix:

Soil

Closure #:

Analyst:

D.DEINHARDT

DICAR#:

Ext. Meth:	Shake			Location #:		B.905
Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3138.01	905-A	1.00	15.35	70.67	217	ND
3138.02	905-B	1.00	15.09	70.70	220	ND
3138.03	905-C	1.00	15.02	91.07	172	ND
3138.04	905-D	1.00	14.99	90.56	173	ND
3138.05	905-E	1.00	15.96	86.10	171	ND
3138.06	905-F	1.00	15.69	84.65	177	1037.24
3138.07	905-G	1.00	15.51	83.65	181	12084.06
3138.08	DUP	1.00	15.72	87.62	171	ND
					`	
METHOD BLANK	4-Nov-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright

Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

1.	Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	
2.	Table of Contents submitted	
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	<u></u>
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	1
8.	Laboratory Chronicle and Holding Time Check submitted	
9.	Results submitted on a dry weight basis	
10.	Method Detection Limits submitted	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	
	oratory Manager or Environmental Consultant's Signature	

Laboratory Certification #13461

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

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. 905

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
905-B1- 6.5'	5862.01	Soil	18-Nov-00 07:27	11/20/00
905-B2- 6.5'	5862.02	Soil	18-Nov-00 07:39	11/20/00
905-B3- 6.5'	5862.03	Soil	18-Nov-00 07:47	11/20/00
DUP.	5862.04	Soil	18-Nov-00	11/20/00

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, %SOLIDS

ENCLOSURE: CHAIN OF CUSTODY RESULTS

= 1

Daniel Wright/Date
Laboratory Director

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Method Summary

NJDEP Method OQA-QAM-025-10/97

<u>Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil</u>

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.

TPHC Conformance/Non-conformance Summary Report

1.	Method Detection Limits provided.	Indicate Yes, No, N/A
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).	<u>yes</u>
3 .	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
Addit	ional comments:	
Labor	mtory Manager Date	



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:	. Deas	Project No:				Analysis Parameters						Comments:		
Phone #: X2 14	15	Location:	3/4, 905	UST			ds.						P	44°C
()DERA ()OMA ()Other:	<u></u>				J	92 Solids						1	<i>- ()</i>
Samplers Name / Con	mpany: Cose Mc	Cornect	JUS	Sample	#	ТРИС	Ŋ						3	
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	<u> </u>	9,						Ŧ	Remarks / Preservation Method
5862,01	# 905-B1-6.5'	11/18/00	7,77	Soil	1	\	w						0.0	
, 02	905-B2-6.5' 905-B3-6.5 Dupe		0739			\	س						4.1	odor
,03	905-83-6.5		つがり		1	\	١						0,0	
,04	Dupe	4		V	1		<u></u>							
	V	l	L											
		1												
	.0 /													
Relinquished by (signature):		(signature):	ر ا	Relinc	luished	by (sigi	nature):	nature): Date/Time: Received			Receiv	ed by (signature):	
Relinquished by (signature	Date/Time:	Received by (70		Relinq	Relinquished by (signature): Date/Time: Received by (signature):		signature):						
Report Type: ()Full, ()Reduced, ()Strandard, ()Screen / non-certified, ()EDD Remarks: Turnaround time: ()Strandard 3 wks, ()Rush Days, ()ASAP Verbal Hrs.														

00003

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

Client:

US. Army

Project #:

UST Reg. #:

5862

DPW. SELFM-PW-EV

Location:

Bldg.905

Bldg. 173

Ft. Monmouth, NJ 07703

Analysis:

OQA-QAM-025

Date Received:

18-Nov-00

Matrix:

Soil

Date Extracted:

20-Nov-00

Inst. ID.:

GC TPHC INST. #1

Extraction Method: Analysis Complete:

Shake

Column Type:

RTX-5, 0.32mm ID, 30M

Analyst:

21-Nov-00 **B.Patel**

Injection Volume:

1uL

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
5862.01	905-B1	1.00	15.12	86.34	180	ND
5862.02	905-B2	1.00	15.19	79.67	194	531.07
5862.03	905-B3	1.00	15.32	86.82	177	ND
5862.04	Dupe	1.00	15.31	85.64	179	ND
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 <u>and</u> in the main body of the report.

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

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 Monitoring
Program

Bldg. 905

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
905-GW	5890.01	Aqueous	04-Dec-00 14:25	12/04/00

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

ENCLOSURE: CHAIN OF CUSTODY RESULTS

Daniel Wright/Date Laboratory Director

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Volatile Organics Analytical Results Summary Tune Results Summary Method Blank Results Summary Surrogate Recovery Summary MS/MSD Results Summary Internal Standard Area & RT Summary Chromatograms	10 11-37 38-46 4748 49 50 51-52 53-70
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CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

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

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

NJDEP Certification #13461

Chain of Custody Record

Customer: D.	DESAI	Project No: 01-0004				Analysis Parameters							Comments:	
Phone #: X2/C	/75	Location:	BLAC	00-		V	B							
()DERA (V)OMA ()Other:	Location: BL-06. 905			9	N								
Samplers Name / Con	npany: Mary Laure	£		Sample	#	20 4 +	+							
Lab Sample I.D.	Sample Location	Date	Time	Туре	bottles	200000000000000000000000000000000000000	15							Remarks / Preservation Method
5890.	905- GW	12-4-00	1425	AQ.	3	X	X							40L, 240C
	!		·											,
		· 							<u> </u>				<u> </u>	
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	····				-									
														
					-									
Relinguished by (signatur	e): Date/Time: (Received by (L	Relino	quished	by (sig	nature):		Date/	Time:	Recei	ved by (signature):
Relinquished by (signatur	Received by (signature): Relinq			quished by (signature): Date/Time:			Received by (signature):							
· \/ \	port Type: ()Full, ()Reduced, ()Standard, ()Screen / non-certified, ()EDD rnaround time: ()Standard 3 wks, ()Rush Days, ()ASAP Verbal Hrs.					Remarks:								

METHOD SUMMARY

Methodology Summary

EPA Method 624 Gas Chromatographic Determination of Volatiles in Water

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

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

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

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5890

Site: Bldg. 905

Hold Time Date **Date Sampled** 12/04/00 NA Receipt/Refrigeration 12/04/00 NA **Extractions** 1. BN 12/05/00 7 days Analyses 1. Volatile Organics 12/04,05/00 14 days 40 days 12/06,07/00 2. BN

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
l.	Chromatograms lab	eled/Compounds identified	
		and method blanks)	yes_
2.	Retention times for	chromatograms provided	yes
3.	GC/MS Tune Speci	fications	
	a.	BFB Meet Criteria	Yes
	b.	DFTPP Meet Criteria	Yes
4.		quency – Performed every 24 hours for 600	•
	series and 12 hours	for 8000 series	yes_
5.	GC/MS Calibration	- Initial Calibration performed before sample	
	-	ing calibration performed within 24 hours of	•
	sample analysis for	600 series and 12 hours for 8000 series	<u>yes</u>
6.	GC/MS Calibration	requirements	·
	a.	Calibration Check Compounds Meet Criteria	ves
	b .	System Performance Check Compounds Meet Criteria	Les
7.	Blank Contamination	on - If yes, List compounds and concentrations in each blank:	No_
	a .	VOA Fraction	
	b .	B/N Fraction	
	C.	Acid FractionNA	
8.	Surrogate Recoverie	es Meet Criteria	yes
	If not met, list to outside the acco	chose compounds and their recoveries, which fall eptable range:	·
	· a .	VOA Fraction	•
	b.	B/N Fraction	
	C.	Acid Fraction NA	
	If not met, were as "estimated"?	e the calculations checked and the results qualified	
9.		x Spike Duplicate Recoveries Meet Criteria e compounds and their recoveries, which fall ple range)	Yes
	and an appropriate		
	a .	VOA Fraction	
	b .	B/N Fraction	
	_	A and Management 1 1 Ki	

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

		Indicate Yes, No, N/A
10.	Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range)	yes
	a. VOA Fraction	
	b. B/N Fraction	
	c. Acid Fraction DA	
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:	
Add	itional Comments:	
Lab	oratory Manager:	>

VOLATILE ORGANICS

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

Data File Operator VB008932.D

Skelton

Sample Name

Vblk262 Vblk262

Date Acquired

4 Dec 2000 1:05 pm

Field ID

Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifie
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	1
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	1
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	ple	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene	·		not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	 -
71-55-6	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 1	0.23 ug/L	
107-06-2	1,2-Dichloroethane	 	ļ	not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	+ + -	0.23 ug/L	
78-87-5	1,2-Dichloropropane	 -	 	not detected	 	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1-1-	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	1	0.69 ug/L	
108-10-1		 -	·	not detected	100 nle	0.59 ug/L	
108-88-3	4-Methyl-2-Pentanone Toluene		 	not detected	1000	0.37 ug/L 0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene	<u> </u>		not detected		0.37 ug/L 0.87 ug/L	
79-00-5	T			not detected	nle 3	0.48 ug/L	 -
127-18-4	1,1,2-Trichloroethane			not detected		0.48 ug/L 0.32 ug/L	}
	Tetrachloroethene	 -			1		
591-78-6	2-Hexanone		 	not detected	nle	0.71 ug/L	
124-48-1	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	
00-00-0	m+p-Xylenes		 	not detected	nle	1.14 ug/L	
95-47-6	o-Xylene	<u> </u>	 	not detected	nle	0.62 ug/L	
100-42-5	Styrene	 	 	not detected	100	0.56 ug/L	
75-25-2	Bromoform	ļ		not detected	4-4-	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane	<u> </u>	ļ 	not detected	2	0.47 ug/L	├
541-73-1	1,3-Dichlorobenzene	ļ	ļ	not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	<u> </u>
95-50-1	1,2-Dichlorobenzene	L		not detected	600_	0.64 ug/L	l

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

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

•		ILMIAN	VELI IDENTI	I ILD OOMI C	ONDS		VII. 11.00	.	
Lab Name:	FMETL			Project:	01-0004	1	Vblk26	52	
NJDEP#:	13461	Cas	se No.: <u>5890</u>	Location	on: <u>905</u>	_ s	DG No.:		
Matrix: (soil/v	water)	WATER	=	L	ab Sample	ID:	Vblk262		
Sample wt/vo	ol:	5.0	(g/ml) ML	L	ab File ID:		VB008932.D		
Level: (low/n	ned)	LOW	<u></u>	D	ate Receiv	/ed:	12/4/00		
% Moisture: ı	not dec.			D	ate Analyz	ed:	12/4/00		
GC Column:	GC Column: RTX502. ID: 0.25 (mm)				Dilution Factor: 1.0				
Soil Extract V	/olume:		_ (uL)	Soil Aliquot Volume:					
Number TICs	s found:	0		CONCENTRA (ug/L or ug/Kg	– –		· 	,	
CAS NO.		COMPOL	IND NAME		RT	ES	ST. CONC.	Q	

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

Data File

VB008960.D

Sample Name

5890.01

Operator

Skelton

Field ID

905-GW

Date Acquired

5 Dec 2000 8:04 am

Sample Multiplier

CAS#	Compound Name	R.T.	Response _	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	,
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	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	nie	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	<u> </u>
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
71-55-6	1.1.1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	<u> </u>
71-43-2	Benzene			not detected	1 1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	1
79-01-6	Trichloroethene			not detected	1 1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected		0.40 ug/L	
75-27-4	Bromodichloromethane			not detected		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	l		not detected	nle	0.69 ug/L	<u> </u>
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	nie	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene		-	not detected		0.48 ug/L 0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	· · · · · · · · · · · · · · · · · · ·
124-48-1	Dibromochloromethane			not detected	10	0.71 ug/L 0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	T			not detected	700	0.35 ug/L 0.65 ug/L	
	Ethylbenzene	 -				0.03 ug/L 1.14 ug/L	
95-47-6	m+p-Xylenes	 		not detected	nle	0.62 ug/L	
	o-Xylene			not detected	nle	0.62 ug/L 0.56 ug/L	
100-42-5	Styrene	 		not detected	100		+
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	L		not detected	600 17:9-6 2-Sept-9	0.64 ug/L	1

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

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit NLE = No Limit Established

R.T. = Retention Time

1E

LATILE ORGANICS ANALYSIS DATA SHEET	Lab ID.
TENTATIVELY IDENTIFIED COMPOUNDS	
Project: 01 0004	905-GW

		ILMIAH	ACE, IDEIAL	II ILD COMI C	DIADO		205 0	1
Lab Name:	FMETL			Project:	01-0004	<u> </u>	905-G	w
NJDEP#:	13461	Cas	e No.: <u>5890</u>	Locatio	n: <u>905</u>	_ SD	G No.:	
Matrix: (soil/	water)	WATER		La	b Sample	ID: §	5890.01	
Sample wt/ve	ol:	5.0	(g/ml) ML	La	b File ID:		VB008960.D	
Level: (low/r	ned)	LOW		Da	ite Receiv	/ed: _	12/4/00	
% Moisture:	not dec.		<u>_</u>	Da	ite Analyz	ed: _	12/5/00	
GC Column:	RTX5	02. ID: 0.2	25 (mm)	Dil	ution Fac	tor:	1.0	
Soil Extract \	/olume:		_ (uĽ)	So	il Aliquot	Volun	ne:	(uL)
				CONCENTRATION (ug/L or ug/Kg)				
Number TICs	s found:	0		(-3/2 0, 43/119)				
CASNO		COMPOU	NO NAME		₽Τ	EST	L CONC	0

BASE NEUTRALS

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 M

Sample Multiplier

015#	None	D 00	D	Damilé	Regulatory Level (ug/L)*	MOI	
CAS#	Name	R.T.	Response	Result	T	MDL 1.54 ug/l	<u>Qualifiers</u>
110-86-1	Pyridine	 		not detected	NLE 20	0.69 ug/	
62-75-9	N-nitroso-dimethylamine				NLE	1.85 ug/l	
62-53-3	Aniline		· · · · · · · · · · · · · · · · · · ·	not detected			
111-44-4 541-73-1	bis(2-Chloroethyl)ether	 -		not detected	600	0.63 ug/ 0.62 ug/	
	1,3-Dichlorobenzene			not detected	75	0.62 ug/	
106-46-7 100-51-6	1,4-Dichlorobenzene	-	<u> </u>	not detected	NLE	0.58 ug/	
95-50-1	Benzyl alcohol		· · · · · · · · · · · · · · · · · · ·	not detected	600	0.62 ug/	
	1,2-Dichlorobenzene	 		not detected	300		
39638-32-9	bis(2-chloroisopropyl)ether			not detected		0.57 ug/l	
621-64-7	n-Nitroso-di-n-propylamine	-		not detected	20	0.64 ug/	
67-72-1	Hexachloroethane	 		not detected	10	0.34 ug/	
98-95-3	Nitrobenzene			not detected	100	0.51 ug/l	
78-59-1	Isophorone			not detected	100	0.45 ug/	
111-91-1	bis(2-Chloroethoxy)methane	 		not detected	NLE 9	0.48 ug/l	
120-82-1	1,2,4-Trichlorobenzene	 		not detected	NLE	0.54 ug/ 0.72 ug/	
91-20-3	Naphthalene	 		not detected	NLE	0.72 ug/l	
106-47-8 87-68-3	4-Chloroaniline	 	· · · · · · · · · · · · · · · · · · ·	not detected			
	Hexachlorobutadiene	 		not detected	NLE	0.43 ug/l	
91-57-6	2-Methylnaphthalene	 	····	not detected			
77-47-4 91-58-7	Hexachlorocyclopentadiene	 		not detected not detected	50 NLE	0.76 ug/l 0.53 ug/l	
88-74-4	2-Chloronaphthalene 2-Nitroaniline	 		not detected	NLE	0.79 ug/l	
131-11-3				not detected	7000	1.04 ug/l	
208-96-8	Dimethylphthalate	 		not detected	NLE	0.70 ug/l	
606-20-2	Acenaphthylene 2,6-Dinitrotoluene			not detected	NLE	0.70 ug/l	
99-09-2	3-Nitroaniline	1		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/	
121-14-2	2.4-Dinitrotoluene	 		not detected	10	1.41 ug/l	
84-66-2	Diethylphthalate	1		not detected	5000	1.54 ug/l	
86-73-7	Fluorene	 		not detected	300	0.98 ug/l	
7005-72-3	4-Chlorophenyl-phenylether	1		not detected	NLE	0.86 ug/l	
100-01-6	4-Nitroaniline	 		not detected	NLE	2.96 ug/l	
			-		20	2.90 ug/l	
86-30-6	n-Nitrosodiphenylamine	1		not detected	1		
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	<u> </u>	<u> </u>	not detected	300	1.48 ug/l	

Semi-Volatile Analysis Report Page 2

Data File Name

Date Acquired

Operator

BN04715.D

Bhaskar

Sample Name

Sblk444

6-Dec-00

Misc Info

Sblk444 A 001205

Sample Multiplier

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		ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected_	10		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

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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Field ID:

Lab Name:	FMETL		Lab Code 1	13461		Sblk4	44
Project:	01-0004	Case No.: 5890	Location:	Bl.905	SE	OG No:	
Matrix: (soil/	water)	WATER	Lab S	Sample	ID:	Sblk444	
Sample wt/v	ol:	1000 (g/ml) ML	Lab f	File ID:		BN04715.D	
Level: (low/r	med)	LOW	Date	Receive	ed:	12/4/00	
% Moisture:		decanted: (Y/N)	N Date	Extracte	ed:	12/5/00	
Concentrate	d Extract	Volume: 1000 (uL)	Date	Analyze	ed:	12/6/00	
Injection Vol	ume: <u>1.</u> 0	0 (uL)	Diluti	ion Fact	or:	1.0	
GPC Cleanu	p: (Y/N)	N pH:					
CONCENTRATION U						S:	
Number TIC	s found:	(ug/L or ug/Kg) UG/L					
CAS NUME	BER	COMPOUND NAME		RT	ES'	T. CONC.	Q

Semi-Volatile Analysis Report

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

Data File Name

BN04734.D

Sample Name

5890.01

Operator

Bhaskar

Misc Info

905-GW

Date Acquired 7-Dec-00

Sample Multiplier

1

					Regulatory Level			
CAS#	Name	R.T.	Response	Result	(ug/L)*	MDL		Qualifiers
110-86-1	Pyridine	-		not detected	NLE		ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20		ug/L	<u> </u>
62-53-3	Aniline			not detected	NLE	_	ug/L	
111-44-4	bis(2-Chloroethyl)ether	 		not detected	10		ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600		ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75		ug/L	
100-51-6	Benzyl alcohol	-		not detected	NLE		ug/L	
95-50-1	1,2-Dichlorobenzene		· · ·	not detected	600		ug/L	ļ
39638-32-9	bis(2-chloroisopropyl)ether	-		not detected	300		ug/L	ļ
621-64-7	n-Nitroso-di-n-propylamine	1		not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane	ļ		not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene	1		not detected	10	0.51	ug/L	ļ
78-59-1	Isophorone	<u> </u>		not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane	ļ		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	ļ <u> </u>		not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	<u> </u>
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	<u> </u>	·	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	<u> </u>		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	1		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		ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE		ug/L	
118-74-1	Hexachlorobenzene			not detected	10		ug/L	
85-01-8	Phenanthrene			not detected	NLE		ug/L	
120-12-7	Anthracene			not detected	2000		ug/L	
84-74-2	Di-n-butylphthalate			not detected	900		ug/L	
206-44-0	Fluoranthene			not detected	300		ug/L	

Semi-Volatile Analysis Report Page 2

Data File Name

BN04734.D

Sample Name

5890.01

Operator

Bhaskar

Misc Info

905-GW

Date Acquired

7-Dec-00

Sample Multiplier

1

G. 3"					Regulatory Level (ug/L)*	•		
CAS#	Name	R.T.	Response	Result		MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Ругепе			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

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- 1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

 905-CW

Field ID:

Lab Name:	FMETL		_ Lab Cod	de <u>13461</u>			
Project:	01-0004	Case No.: 5890	Locat	tion: Bl.905	_ SI	DG No:	
Matrix: (soil/	water)	WATER	· I	Lab Sample	D:	5890.01	· ·
Sample wt/ve	ol:	1000 (g/ml) ML	!	Lab File ID:		BN04734.D	
Level: (low/r	ned)	LOW		Date Recei	ved:	12/4/00	
% Moisture:		decanted: (Y/N)	N I	Date Extrac	ted:	12/5/00	
Concentrate	d Extract	Volume: 1000 (uL)	Date Analyzed: 1			12/7/00	
Injection Vol	ume: <u>1.0</u>) (uL)		Dilution Fac	tor:	1.0	
GPC Cleanu	p: (Y/N)	NpH:					
			CONCE	NTRATION	UNIT	ΓS:	
Number TICs	s found:	1	(ug/L or	ug/Kg)	UG/I		
CAS NUME	BER	COMPOUND NAME		RT	ES	T. CONC.	Q

23.60

1. 000084-69-5 1,2-Benzenedicarboxylic acid, bis

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

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

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

Blda. 905

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Bldg. 905 9.5'	221	Aqueous	17-Jan-01 10:55	01/17/01

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

ENCLOSURE: CHAIN OF CUSTODY **RESULTS**

Daniel Wright/Date

Laboratory Director

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

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

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

NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESA/			Project No: 01-0001			Analysis Parameters							Comments:				
Phone #:	X2 14	45			Location:	3101	را برا سرده										
()DERA	(JOMA	()Other	r:				703		V OA	B							
Samplers l	Name / Cor	mpany:	MARK L	sups -	TVS-PWS	07.	Sample	#	4	+							
Lab Sam	ple I.D.	Sa	mple Loc	ation	Date	Time	Туре	bottles		15							Remarks / Preservation Method
	221	BLDG.	905 -	9.5'	1-17-01	1055	AQ.	3	×	X							24°C, HCC.
													<u> </u>				-
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Relinquished	by (signatur	re):	1	e/Time:	Received by (Relino	quished	by (sig	nature):		Date/	Time:	Receiv	red by ((signature):
Report Type:	()Full, (V	/ Reduced,	()Standar	rd, ()Screen	/ non-certified	, ()EDD			Remar	ks: 5	HARE.	D. Ti	B. +	F.B.	wi	BU	6, 605
Turnaround ti	me: () Stand	lard 3 wks	s, (_)Rush	Days,	()ASAP Verl	oal Hrs.							SA	ME	DAY.		

200000

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 lab	eled/Compounds identified	
		and method blanks)	yes
2 .	Retention times for	chromatograms provided	yes
3.	GC/MS Tune Speci	fications	•
	a .	BFB Meet Criteria	yes
	b .	DFTPP Meet Criteria	<u>'Yes</u>
4.	GC/MS Tuning Fre series and 12 hours	quency – Performed every 24 hours for 600 for 8000 series	yes_
5.	analysis and continu	Initial Calibration performed before sample uing calibration performed within 24 hours of 600 series and 12 hours for 8000 series	yes
6.	GC/MS Calibration	requirements	
	a.	Calibration Check Compounds Meet Criteria	yes
	b .	System Performance Check Compounds Meet Criteria	yes_
7.	Blank Contamination	on - If yes, List compounds and concentrations in each blank:	<u>00</u>
	· a .	VOA Fraction	
	b.	B/N Fraction	
	C.	Acid Fraction NA	
8.	Surrogate Recoverie	es Meet Criteria	yes
	If not met, list outside the acc	those compounds and their recoveries, which fall eptable range:	·
	a.	VOA Fraction	
	b .	B/N Fraction	
	C.	Acid Fraction NA	
	If not met, wer as "estimated"?	e the calculations checked and the results qualified	
9.	Matrix Spike/Matri	x Spike Duplicate Recoveries Meet Criteria	yes
		e compounds and their recoveries, which fall	1
	outside the acceptal	ole range)	
	a.	VOA Fraction	
	b .	B/N Fraction	
	C.	Acid Fraction NA	

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.) Indicate Yes, No. N/A 10. Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range) VOA Fraction b. B/N Fraction **Acid Fraction** 11. Extraction Holding Time Met If not met, list the number of days exceeded for each sample: 12. Analysis Holding Time Met If not met, list the number of days exceeded for each sample: **Additional Comments:** Date: Laboratory Manager: ____

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 221

Site: Bldg. 905

Hold Time Date **Date Sampled** 01/17/01 NA Receipt/Refrigeration 01/17/01 NA **Extractions** 1. BN 01/18/01 7 days **Analyses**

1. Volatile Organics 14 days 01/19/01 01/24,25/01 2. BN 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

Results are from a dilution of the sample
 Compound searched for but not detected
 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
Operator Skelton
Date Aquired 19-Jan-01

Sample Name Field ID MB MB

Multiplier

MLB

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein		<u> </u>	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	1
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		7	not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	1
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		1	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	0.70 ug/L 0.47 ug/L	
	1,3-Dichlorobenzene		 	not detected	600		+
541-73-1			 			0.55 ug/L	
106-46-7	1,4-Dichlorobenzene		1	not detected	75	0.57 ug/L	1

*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:
--------------	-----

		TENTATIVELTIDEN	TIFIED CONIF	COMPS		ND 040	
Lab Name:	FMETL		NJDEP#	‡: <u>13461</u>		MB 010	119
Project:	010001	Case No.: 221	Locat	ion: <u>905</u>	_ s	DG No.:	
Matrix: (soil/	water)	WATER	l	.ab Sample	e ID:	МВ	
Sample wt/ve	ol:	5.0 (g/ml) ML	<u>. </u>	ab File ID	:	VC004743.D	·
Level: (low/r	ned)	LOW		Date Recei	ived:	1/17/01	··
% Moisture:	not dec.	<u>.</u>	(Date Analy	zed:	1/19/01	
GC Column:	RTX5	02. ID: <u>0.25</u> (mm)	ſ	Dilution Fa	ctor:	1.0	
Soil Extract \	Volume:	(uL)	;	Soil Aliquot	t Volu	me:	(uL
			CONCENTR				
Number TIC:	s found:	0	(ag/L of ag/N	.g/ <u>00</u>	A7 b		
CAS NO.		COMPOUND NAME		RT	ES	ST. CONC.	Q

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

Data File VC004754.D'
Operator Skelton
Date Aquired 19-Jan-01

Sample Name 221
Field ID Bld;

Multiplier

Bldg905 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein		<u> </u>	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	. I
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	1
74-83-9	Bromomethane			not detected	10	1.10 ug/L	1
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	1
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	1
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		1	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		1	not detected	4	0.70 ug/L	T
79-34-5	1,1,2,2-Tetrachloroethane		†	not detected	2	0.47 ug/L	
541-73-1	1.3-Dichlorobenzene		 	not detected	600	0.55 ug/L	<u> </u>
106-46-7	1,4-Dichlorobenzene		1	not detected	75	0.57 ug/L	
100-40-7							

*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

Bldg905

		TENTATI	VELY IDEN	rified compo	UNDS		Did =00)E
Lab Name:	FMETL			NJDEP#	13461		Bldg90	,5
Project:	010001	Ca	se No.: 221	Location	on: <u>905</u>	SE	OG No.:	
Matrix: (soil/	water)	WATER	_	L	ab Sample	ID:	221	
Sample wt/ve	oi:	5.0	(g/ml) ML	L	ab File ID:	_	VC004754.D	
Level: (low/r	ned)	LOW	 -	D	ate Receiv	ved:	1/17/01	
% Moisture:	not dec.			D	ate Analyz	zed:	1/19/01	
GC Column:	RTX50	02. ID: <u>0.</u> 2	25_ (mm)	D	ilution Fac	tor:	1.0	
Soil Extract \	/olume:		_ (uL)	S	oil Aliquot	Volur	ne:	(uL
				CONCENTRA				
Number TICs	s found:	0		, ,				
CASNO		COMPO	IND NAME	'	DT	EG.	T CONC	0

BASE NEUTRALS

Semi-Volatile Analysis Report

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

Data File Name

BNA04856.D

Sample Name

MB-250

Operator

Bhaskar

Misc Info

MB-010118

Date Acquired

24-Jan-01

Sample Multiplier

1

CAS#	Name	R.T.	Response	. Result	Regulatory Level (ug/L)*	MDL		Oualifiers ·
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	Quantities
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69		
62-53-3	Aniline			not detected	NLE	1.85		
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	_	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62		
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58		
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	ļ	-	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	<u> </u>		not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene	1		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	ļ		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		
84-74-2	Di-n-butylphthalate			not detected	900	2.49		
206-44-0	Fluoranthene			not detected	300	1.48		

Semi-Volatile Analysis Report Page 2

Data File Name

BNA04856.D

Sample Name

MB-250

1

Operator

Bhaskar

Misc Info

MB-010118

Date Acquired

24-Jan-01

Sample Multiplier

			_	. .	Regulatory Level (ug/L)*			
CAS#	Name	R.T.	Response	Result	· · · · · · · · · · · · · · · · · · ·	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]pervlene		•	not detected	NLE		ug/L	

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

Qualifiers

E= Value Exceeds Linear Range D= Value from dilution

B= Compound in Related Blank

PQL= Practical Quantitation Limit

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

Page 2 of 2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Field Id:

Lab Name:	FMETL	,		Lab Co	de 13461		MB-250
Project:	01-0001	Ca	ase No.: 221	Loca	tion: Bl.905	SE	OG No.:
Matrix: (soil/w	rater)	WATER		i	Lab Sample	ID:	MB-250
Sample wt/vo	ol:	1000	(g/ml) <u>ML</u>		Lab File ID:	-	BNA04856.D
Level: (low/m	ned)	LOW	_	١	Date Receiv	red:	1/17/01
% Moisture:		ded	canted: (Y/N)	N	Date Extrac	ted:	1/18/01
Concentrated	Extract \	/olume:	1000 (uL)	I	Date Analyz	:ed:	1/24/01
Injection Volu	me: <u>1.0</u>	(uL)	•	I	Dilution Fac	tor:	1.0
GPC Cleanup	o: (Y/N)	N	pH:				
				CONCE	NTRATION	UNIT	·S:
Number TICs	found:	2		(ug/L or	ug/Kg)	UG/L	

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.11	15	J
2.	unknown	33.96	140	J

Semi-Volatile Analysis Report

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

Data File Name

BNA04871.D

Sample Name

221

1

Operator

Date Acquired

Bhaskar 25-Jan-01 Misc Info

Bldg.905

Sample Multiplier

Regulatory

CAS#	Name	R.T.	Response	Result	Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54 ug/L	Junicis
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	T		not detected	10	0.63 ug/L	
541-73-1	1,3-Dichlorobenzene	T^{-}		not detected	600	0.62 ug/L	T
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58 ug/L	1
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	Ţ.		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	<u> </u>		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	<u> </u>		not detected	10	1.41 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54 ug/L	
86-73-7	Fluorene	\perp		not detected	300	0.98 ug/L	
7005-72-3	4-Chlorophenyl-phenylether	1		not detected	NLE	0.86 ug/L	
100-01-6	4-Nitroaniline	<u> </u>		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	1		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

BNA04871.D

Sample Name

221

Operator

Bhaskar

Misc Info

Bldg.905

Date Acquired

25-Jan-01

Sample Multiplier

G1.5#	N'	n w	Damana	Dage 14	Regulatory Levei (ug/L)*	MDI		
CAS#	Name	R.T.	Response	Result		MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	<u> </u>
129-00-0	Pyrene	\bot		not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate	26.54	93925	3.56 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	27.94	110089	2.87 ug/L	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		<u> </u>	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		L	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

Page 2 of 2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Field Id:

Lab Name:	FMETL		Lab Code 13461	Bldg.905
Project:	01-0001	Case No.: 221	Location: Bl.905	SDG No.:
Matrix: (soil/v	water) WATE	R_	Lab Sample ID): 221
Sample wt/vo	ol: <u>1000</u>	(g/ml) ML	Lab File ID:	BNA04871.D
Level: (low/r	ned) <u>LOW</u>		Date Received	l: <u>1/17/01</u>
% Moisture:		decanted: (Y/N)	N Date Extracted	i: 1/18/01
Concentrated	d Extract Volume	e: 1000 (uL)	Date Analyzed	: 1/25/01
Injection Volu	ume: <u>1.0</u> (u	L)	Dilution Factor	: 1.0
GPC Cleanu	p: (Y/N) <u>N</u>	pH:		
Number TICs	e found: 2		CONCENTRATION UN	
Number TiCs	s found: 2	:		NITS:

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.11	6	j
2. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.99	4	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 <u>and</u> in the main body of the report.

1.	Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	
2.	Table of Contents submitted	
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	
4.	Document paginated and legible	
5.	Chain of Custody submitted	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection	
7.	Methodology Summary submitted	
8.	Laboratory Chronicle and Holding Time Check submitted	
9.	Results submitted on a dry weight basis	NA
10. 11.	Method Detection Limits submitted Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	
Date	Laboratory Manager or Environmental Consultant's Signature	55

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

Laboratory Certification #13461

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager