U.S. Army Garrison Fort Monmouth, New Jersey

Underground Storage Tank Closure Report

Main Post –(former)Building 1004 Razor Ave.

NJDEP UST Registration No. 81533-158

January 2010

UNDERGROUND STORAGE TANK REPORT

MAIN POST –(FORMER)BUILDING 1004 NJDEP UST REGISTRATION NO. 81533-158

JANUARY 2010

PREPARED FOR:

U.S. ARMY GARRISON, FORT MONMOUTH, NJ DIRECTORATE OF PUBLIC WORKS BUILDING 167 FORT MONMOUTH, NJ 07703

PROJECT NO. 06-34950

PREPARED BY:

TECOM-VINNELL SERVICES, INC. P.O. BOX 60 FT. MONMOUTH, NJ 07703

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EXECUTIVE SUMMARY

UST Closure

A single wall steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) guidelines on June 26, 1990. The UST was located on the northwest side of (former) Building 1004 in the Main Post area of Fort Monmouth. UST No. 81533-158 was a 3,000-gallon tank containing No. 2 heating oil.

Site Assessment

This site assessment was performed by TECOM-Vinnell Service (TVS) personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*.

During the time of UST removal, no closure soil samples were collected. Soil sampling was not required at the time. However, in order to confirm that the tank did not leak, this subsurface investigation was conducted. On January 24, 2006, a Geoprobe was utilized to collect soil samples 1004W, 1004C, 1004E, and 1004C (groundwater) from a total of three (3) locations along the tank centerline bottom. All soil samples were analyzed for total petroleum hydrocarbons (TPH). Groundwater was encountered at approximately seven (7.0) feet below surface grade in the borings. A sample of it was collected and analyzed for volatile organic analysis (VOA) and semi-volatile organic analysis (SVOA).

Findings

The closure soil samples collected from the location associated with UST No. 81533-158, contained TPH concentrations below the NJDEP health based criterion of 10,000 milligrams per kilogram (mg/kg) for total organic contaminants (N.J.A.C. 7:26E and revisions dated February 3, 1994). Soil samples 1004W, 1004C, 1004E, contained TPH concentrations below the analytical method detection limits.

Conclusions and Recommendations

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants are not present in the location of the UST. A groundwater sample, analyzed for volatile organic analysis and semi-volatile organic analysis, contained one compound above the analytical method detection limits-Methyl-tert-butyl ether (MTBE) at 0.75 ug/L, which is below the regulatory level of 70 ug/L.

No Further Action is proposed in regard to the closure and site assessment of UST No. 81533-158 at Building 1004.

1.0 UNDERGROUND STORAGE TANK CLOSURE SOIL SAMPLING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 81533-158, was closed at (former) Building 1004 located on the Main Post at the U.S. Army Garrison, Fort Monmouth, New Jersey. Refer to the site location map presented in Figure 1. This report presents the results of soil and groundwater sampling analysis to confirm that the tank did not leak. The UST was a 3,000-gallon, single-wall steel tank containing No. 2 heating oil. The UST was installed in 1969 and the removal was done on June 26, 1990. Archived documents including Removal Procedures, Site Assessment Compliance Statement, NJDEP Standard Reporting Form along with the NJDEP UST Site Investigation Report Form are included in Appendix A.

This UST Closure Report has been prepared by TVS to assist the U.S. Army Garrison DPW in complying with the NJDEP - Underground Storage Tanks regulations. The applicable NJDEP regulations at the date of closure were the *Closure of Underground Storage Tank Systems* (N.J.A.C. 7:14B-9 et seq. December, 1987 and revisions dated April 20, 2003).

This report was prepared using information required by the *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) (*Technical Requirements*). Section 1 of this UST Closure Report provides a summary of the UST site. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in Section 3 of this report.

1.2 SITE DESCRIPTION

(Former) Building 1004, Razor Ave., was located in the central portion (900 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 81533-158 was located on the northwest side of (former) Building 1004, just outside the mechanical room.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the 900 Area. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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, sand 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. Over 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).

<u>Hydrogeology</u>

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 (e.g., streams, lakes)

Due to the fluvial nature of the overburden deposits (e.g., 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 1004 is located approximately 500 feet south of Husky Brook, the nearest water body, which flows into Oceanport Creek and then into the Shrewsbury River. Based on the Main Post topography, the groundwater flow in the area of Building 1004 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

Work site health and safety hazards were minimized during all site investigation activities. All areas which posed a vapor hazard were monitored by a qualified individual utilizing a calibrated photo-ionizer detector: Thermo Instruments Organic Vapor Monitor (OVM) – Model #580-B. All work areas were properly vented to insure that there were no contaminants present in the breathing zone above the OSHA permissible exposure limits (PEL's).

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 Fort Monmouth Environmental Testing Laboratory, a NJDEP-certified testing laboratory. All sampling was performed by a NJDEP Certified Subsurface Evaluator according to the methods described in the NJDEP Field Sampling Procedures Manual (1992). Sampling frequency and parameters analyzed complied with the NJDEP document *Technical Requirements for Site Remediation*, 7:26E-3.9 (December 17, 2002 and revisions dated February 3, 2003) which was the applicable regulation at the date of the investigation. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Site Assessment Activities.

• Ft. Monmouth Directorate of Public Works-Environmental Division

Contact Person: Joseph Fallon Phone Number: (732) 532-6223

Subsurface Evaluator: Frank Accorsi

Employer: TECOM-Vinnell Services, Inc. (TVS)

Phone Number: (732) 532-5241 NJDEP License No.: 0010042

TVS - NJDEP License No.: US252302

Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory

Contact Person: Jacqueline Hamer Phone Number: (732) 532-4359

NJDEP Laboratory Certification No.: 13461

2.2 FIELD SCREENING/MONITORING

Field screening of the soils was performed by a NJDEP certified Subsurface Evaluator. The Subsurface Evaluator used an OVM and visual observations to identify potentially contaminated material, of which none were found.

2.3 SOIL SAMPLING

On January 24, 2006, closure soil samples 1004W, 1004C and 1004E were collected from a total of three (3) locations along the tank centerline bottom of the UST. Groundwater was encountered at approximately seven (7.0) feet below surface grade in the borings. All soil samples were analyzed for TPH. A soil sample location map is provided on Figure 3.

The site assessment was performed by TVS personnel in accordance with the NJDEP Technical Requirements for Site Remediation and the NJDEP Field Sampling Procedures Manual. A summary of sampling activities including parameters analyzed is provided on Table 1. The soil samples were collected into laboratory prepared glassware using properly decontaminated stainless steel trowels. After collection, the samples were immediately placed on ice in a cooler and delivered to Fort Monmouth Environmental Testing Laboratory for analysis.

2.4 GROUNDWATER SAMPLING

On January 24, 2006, groundwater sample 1004C-GW was collected from soil borehole 1004C to assess the groundwater quality in the location of the tank. A temporary PVC piezometer was installed in the borehole for sample collection. The sample was collected into laboratory prepared glassware using a disposable teflon bailer. The sample was analyzed for volatile organic analysis (VOA) and semi-volatile organic analysis (SVOA).

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Soil samples were collected from a total of three locations on January 24, 2006 to evaluate soil conditions in the location of the UST. All samples were analyzed for TPH. The closure soil sample results were compared to the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants (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 on Table 2. The analytical data package, including associated quality control data, is provided in Appendix B.

Soil samples collected on January 24, 2006 from UST 81533-158 contained no concentrations of TPH above the NJDEP health based criterion of 10,000 mg/kg total organic contaminants. Soil samples 1004W, 1004C and 1004E contained TPH concentrations below the analytical method detection limits.

3.2 GROUNDWATER SAMPLING RESULTS

One groundwater sample was collected via temporary PVC piezometer installed in soil borehole 1004C. There was one compound detected above the method detection limits for the volatile organic analysis. Methyl-tert-butyl ether (MTBE) was detected at 0.75 ug/L, which is below the regulatory level of 70 ug/L. No compounds were detected above the method detection limits for the semi-volatile organic analysis.

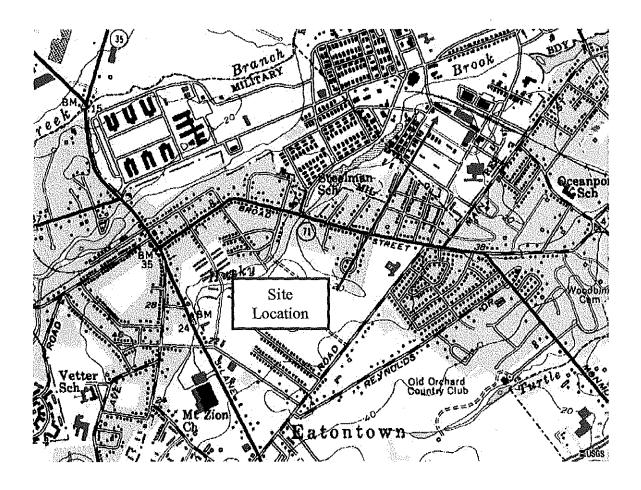
3.3 CONCLUSIONS AND RECOMMENDATIONS

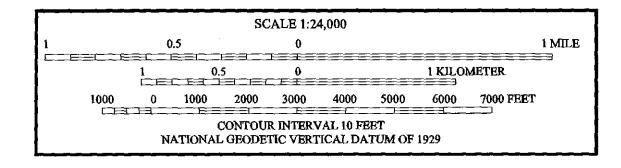
The analytical results for all soil and groundwater samples collected from the UST closure assessment at UST No. 81533-158 were below the regulatory limits.

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion for total organic contaminants of 10,000 mg/kg are not present at the location of UST No. 81533-158.

No Further Action is proposed in regard to the closure and site assessment of UST No. 81533-158 at Building 1004.

FIGURES

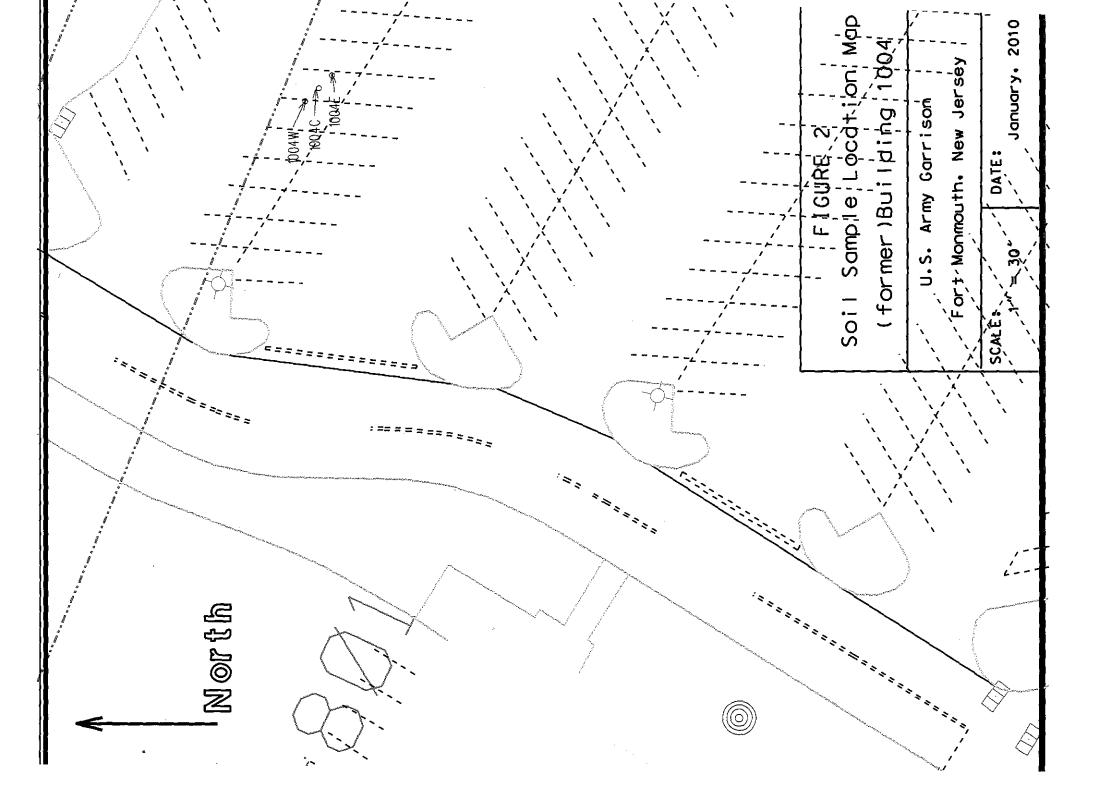




SOURCE: USGS 7½-MINUTE SERIES (TOPOGRAPHIC) LONG BRANCH QUADRANGLE, NEW JERSEY, 1981.

FIGURE 1

SITE LOCATION MAP BUILDING 1004 UST NO. 81533-158 FT. MONMOUTH, NJ



TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, (former) BUILDING 1004, UST No. 81533-158 24 January 2006

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
1004C	6004901	24-Jan-06	SOIL	TPH	OQA-QAM-25
1004E	6004902	24-Jan-06	SOIL	TPH	OQA-QAM-25
1004W	6004903	24-Jan-06	SOIL	TPH	OQA-QAM-25
1004C-	6004904	24-Jan-06	AQUEOUS	VOA, SVOA	SW-846, EPA 625
Groundwater			·		

<u>ABBREVIATIONS</u>:
TPH = Total Petroleum Hydrocarbons, Method NJDEP OQA-QAM-25

VOA = Volatile Organic Analysis, EPA SW-846 Method 8260

SVOA = Semi-Volatile Organic Analysis in Water, EPA Method 625

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS-SOIL

FT. MONMOUTH, (former) BUILDING 1004, UST No. 81533-158 24 January 2006

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY	SAMPLE LOCATION	SAMPLE	MATRIX	ТРН
	SAMPLEID		DEPTH		RESULTS
de como de como de la			(in feet)		mg/kg
1004W	6004901	WEST END UST	6.5 - 7.0	Soil	ND
1004C	6004902	CENTER UST	6.5 – 7.0	Soil	ND
1004E	6004903	EAST END UST	6.5 - 7.0	Soil	ND

ABBREVIATIONS:

mg/kg = milligrams per kilogram = parts per million

ND = Compound Not Detected

NA = Compound Not Analyzed

*= Further Analyzed for Volatile Organic Compounds

Notes:

Gray shading indicates exceedance of NJDEP

health based criterion of 5,100 ppm total organic contaminants

TABLE 3

SUMMARY OF LABORATORY ANALYTICAL RESULTS-GROUNDWATER

FT. MONMOUTH, (former) BUILDING 1004, UST No. 81533-158

24 January 2006

VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Benzene	Ethyl- benzene	Toluene	Total Xylenes
	UNITS	ug/L	ug/L	ug/L	ug/L
1004C- Groundwater	6004904	ND	ND	ND	ND
NJDEP Criteria	Ground Water Quality Crireria	1	700	600	1,000

SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Methyl-tert-butyl-ether (MTBE)
UNITS		ug/L
1004C- Groundwater	6004904	0.75
NJDEP Criteria	Ground Water Quality Crircria	70

ABBREVIATIONS:

ug/L = Micrograms Per Liter = parts per billion

ND = Compound Not Detected

NA = Compound Not Analyzed

NLE= No Limit Established

Notes:

Gray shading indicates exceedance of NJDEP

Class II Ground Water Quality Criteria

APPENDIX A CERTIFICATIONS

L	Site Remediation Program IST Site Remedial Investigation Report
A. Facility Name: (former) I	
Facility Street Address: R	azor Ave., Ft. Monmouth
Municipality: Oceanport	County: Monmouth
Block; NA I	ot(s): NA Telephone Number: 732-532-6292
B. Owner (RP)'s Name: U.S	
î .	rside Ave. City: Ft. Monmouth
State: NJ Zip	: 07703 Telephone Number: 732-532-6292
C. (Check as appropriate)	D. (Complete all that apply) Assigned Case Manager:
☐ Site Investigation Report (SIR) \$500 Fee	UST Registration Number: 81533-158 (7 digits)
☐ Remedial Investigation	• Incident Report Number:(10 or 12 digits)
Report (RIR) \$1000 Fee	• Tank Closure Number C(N)9 C 9 C9 (7 characters)
E. Certification by the Subs The attached report conforms to Name: Frank Accorsi	the specific reporting requirements of N.J.A.C. 7:26E
Firm: Tecom-Vinnell Service	Firm's UST Cert, Number: US252302
Firm Address: P.O. Box 60	City: Ft. Monmouth
	Zip: 07703 Telephone Number: 732-532-2577
(NOTE: Certification numbers	required only if work was conducted on USTs regulated per N.J.S.A. 5 8: 10A-2 1 et seq.)
1. For a Corporation by a person a resolution, certified as a true co 2. For a partnership or sole propri 3. For a municipality, State, feder "I certify under penalty application and all attainformation, I believe to significant civil penaltic committing a crime of	bible Party(ies) of the Facility: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7: 14B-1.7(b)] as follows: The signed [according to the requirement of N.J.A.C. 7:
Name (Print or Type):	Title:
Signature:	
Company Name:	Date:



DEPARTMENT OF THE ARMY

Headquarters, U.S. Army Garrison Fort Monmouth Fort Monmouth, New Jersey 07703-5000



REPLY TO ATTENTION OF

Directorate of Engineering and Housing

22 NOV 1991

SUBJECT: Removal Procedure:

U.S. Army Fort Monmouth
Main Post West
Site Registration #0081533
Tank #58, 88, 95, 104, 110, 113, 146, 148, 158, 163
POC: Soloseph M. Fallon (908) 532-6223

The remaining product inside each tank was removed for disposal by Lionetti Oil Recovery Co., Inc. Lionetti is a licensed hazardous waste transporter and treatment, storage, and disposal facility (USEPA ID #NJD084044064).

The top of each tank was excavated and cut open across the entire length of the tank. In addition, the inside of each tank was hand cleaned and thoroughly wiped down. The soil from the top of each excavation was visually inspected and analyzed using a HNU Model PI-101 photoionizer. No contamination was detected.

After each tank was cleaned, a visual inspection was made inside the tanks for signs of leakage. No corriston was found inside the tanks

Each tank was then removed from the ground and disposed of through a metal recycler. No contamination was discovered at the sites upon removing the tanks.

Each site was then backfilled with the excavated soil to close out the project.

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Bldg. 1004

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\mathfrak{m}_{ϵ}	Joseph M. Fallon
Telephone Number: (908)_	229-6992
	dan Marita da an dia Bartana
The identification number of the affected tank as it appears in Questionnaire:	
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Registration Number (if known): UST - # 00815	33

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	Page 15 on an attached sheet. Specify the product I on an attached sheet. Specify the product point on an attached sheet. Specify the product to specify the product to specify the product to specify the product to specify the specification.	pnature TABANDONMENT or REMOVAL Describe the proposed procedure in detail Specify the product last stored in the tank Date abandoned or removed Is Site Assessment Compliance St comple SUBSTANTIAL MODIFICATIONS: Describe the reason for the modification ar on an attached sheet. Specify the product presently stored in the Specify the product to be stored in the tank NEW OR REPLACEMENT INSTALLATIONS: Attach the specifications as required by the Specify the product (s) to be stored in the tank	Describe the proposed procedure in detail on an attached sheet Specify the product last stored in the tank: Date abandoned or (removed) Is Site Assessment Compliance Statement being completed and returned substantial Modifications. Describe the reason for the modification and, in detail, the proposition on an attached sheet. Specify the product presently stored in the tank: Specify the product to be stored in the tank: NEW OR REPLACEMENT INSTALLATIONS: Attach the specifications as required by the attached instructions. Specify the product (s) to be stored in the tank:	Describe the proposed procedure in detail on an attached sheet. Specify the product last stored in the tank: Date abandoned or removed Is Site Assessment compliance Statement being completed? (YES) or completed and returned within 90 days of SUBSTANTIAL MODIFICATIONS: Describe the reason for the modification and, in detail, the proposed procedure to be upon an attached sheet. Specify the product to be stored in the tank: Specify the product to be stored in the tank: NEW OR REPLACEMENT INSTALLATIONS: Attach the specifications as required by the attached instructions.



STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTIVE Bureau f Underground Storage Tanks CN-029, Trenton, NJ 08625

Date Rec	d
Auth_ Routing	
ust no.	the to subject

SITE ABBEBBHENT COMPLIANCE STATEMENT

Supplement to the New Jersey Standard Reporting Form (Complete for ALL regulated UST abandonments or removals)

Within ninety (90) days of completing the UST closure of any State or Federally-regulated tank, the owner or operator must submit this completed form to the NJDEP Bureau of Underground Storage Tanks. If the facility is located in one of the counties listed on the back, a copy of this form must also be sent to the Health Agency indicated.

The owner or operator of any Federally-regulated tank must also comply with the following:

40 CFR Part 280.72 Assessing the site at closure or change-in-service

"(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release."

PACILI	ex U.S. Ormy Fort Monn	mouth 081 00815	33 Tank No.
Check o	off the following items as appro	opriate for the site.	58, 88, 95,
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	The UST facility is only regula a site assessment is not manda	ated by State law, theref tory,	ore 104, 110, 413, 146, 148, 159
	The UST facility is regulated lassessment was conducted.	by Federal law and a site	
The res	ults of the site assessment ind	dicate:	· 19
	There was NO release from the	UST system.	
	There was a release from treported to the DEP Environmen	the UST system and it to the total Hotline (609-292-717)	was 2).
NOTE: the DI to be	The results of the site asser P or Health Agency unless requ available for inspection at the	lested to do so. The re-	uitted to sults are
	Questions can be directed to the	ne Bureau at (609) 984-31!	56.
This regi	stration form shall be signed by the highest ranking:-2.3 (a) 1). ***	g individual at the facility with overall resp	
nin gothwei	er penalty of lew that the information provided in it is true, accurate and complete, I am aware that	LANES OTT	2 2 NOV 1991 Date / ,

tcting Birector

Jiv, Engineering and Housing

(Title)

false, inaccurate or incomplete information, including fines

and/or imprisonment

SACS-2,1/89

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-4359 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: BLDG. 1004

Bldg. 1004

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
1004W 7.5-8.0°	6004901	Soil	24-Jan-06 12:21	01/24/06
1004C 7.5-8.0°	6004902	Soil	24-Jan-06 13:00	01/24/06
1004E 7.5-8.0'	6004903	Soil	24-Jan-06 13:42	01/24/06
1004C GW	6004904	Aqueous	24-Jan-06 13:50	01/24/06

ANALYSIS:

FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, BN+15, TPHC, % SOLIDS

ENCLOSURE: CHAIN OF CUSTODY RESULTS

3-6-06

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

Chain of Custody Record

Project No: 06-34880 Analysis Parameters Comments: Location: 1004 Phone:)DERA ()OMA ()Other: (Former asT) Samplers Name / Company: Love / TVS Sample LIMS/Work Order # Sample Location Date Time Type bottles Remarks / Preservation Method 75-80 4452 7,5-8,0 2 1300 4453 75-80 4454 AQ 4 GW 1350 Relinquished by (signature): Received by (signature): Date/Time: Relinquished by (signature): Date/Time: Received by (signature): Relinquished by (signature): Received by (signature). Date/Time: Relinquished by (signature): Date/Time: Received by (signature): Remarks: VO +10 on 25% Z1000 BAN TPH Shared TRIP with 701 Report Type: ()Full, (QReduced, ()Standard, ()Screen / non-certified, ()EDD . Turnaround time: (L)Standard 3 wks, ()Rush Days, ()ASAP Verbal

SAMPLE RECEIPT FORM

Date Received:	1-0	24-06	Work Order	ID#: <u>(</u>	10049
Site/Proj. Name	Blog	4/004/15T	Cooler Temp	(°C):	4,00
Received By: (Print name)	J. (2	Shock the ann	Sign:	<u>[U</u>	yeur
	,	Check the app	ropriate box		/
Did the sample	-			_/	s□ no □ n/a
		n good condition?			i∐ no
		tody filled out correc		J⊿´yes	
		tody signed in the ap		☑ yes	_
•	_	with the chain of cus			□ no
		tainers/preservatives	-	, ,	:∐ no ,
	•	unt of sample supplie	ed? ,	•	□ no
	•	sent in VOA vials?			☑ no □ n/a
9. Were samples				•	no no
10. Were analyze	-imme	diately tests perform	within 15 minutes I	⊔ yesl	」no □ n/a
Fill out the following table for each sample bottle					
	-				
Lims ID	рH	Preservative	Sample ID	рН	Preservative
Lims ID		Preservative 9400	Sample ID	рН	Preservative
Lims ID (e0049/01		Preservative	Sample ID	рН	Preservative
Lims ID (20049/01		Preservative	Sample ID	рН	Preservative
Lims ID (IOO49/04		Preservative #UL	Sample ID	рН	Preservative
Lims ID (20049/01		Preservative ###	Sample ID	рН	Preservative
Lims ID (20049/01		Preservative	Sample ID	рН	Preservative
Lims ID (20049/01		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative ALL	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative ####	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	рН	Preservative
Lims ID		Preservative	Sample ID	pH	Preservative
(20049/01		Preservative	Sample ID	рН	Preservative
Lims ID GOOYAJ OL Comments:		Preservative	Sample ID	рН	Preservative
(20049/01		Preservative	Sample ID	рН	Preservative
(20049/01		Preservative	Sample ID	рН	Preservative

Former UST 1004 Sample Location GPS Positions

US State Plane 1983 New Jersey (NY East) 2900 NAD 1983 (Conus) Geoid 96 (Conus)

(In US Survey Feet)

Position	Northing (Y Coord.)	Easting (X Coord.)
1004E	538682.187	620421.066
1004C	538686.095	620417.356
1004W	538690.146	620413.518

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 SW-846 Method 8260 Gas Chromatographic Determination of Volatiles in Methanol

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. 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 moisture and concentration.

EPA Method 625 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.

NJDEP Method OQA-QAM-025 10/97 Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g) of soil is added to a 125-ml acid cleaned and solvent rinsed capped Erlenmeyer flask. 15g anhydrous Sodium Sulfate is added to dry the sample. Surrogate standard spiking solution is then added to the flask.

Twenty-five ml of Methylene Chloride is added to the flask and it is secured on an orbital shaker table. The agitation rate is set to 400 rpm and the sample is shaken for 30 minutes. The flask is removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25-ml 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 1-ml auto-sampler 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 moisture, sample weight and concentration.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 60049

Site: UST Bldg. 1004

•		
	Date	Hold Time
Date Sampled	01/24/06	NA
Receipt/Refrigeration	01/24/06	NA
Extractions		
1. BN 2. TPHC	01/27/06 01/26/06	7 days 14 days
Analyses		
1. VOA 2. BN 3. TPHC	02/03/06 01/30/06 01/30/06	14 days 40 days 40 days

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		Indicate Yes, No, N/A
1	. Chromatograms labeled/Compounds identified	
•	(Field samples and method blanks)	yes
2.	Retention times for chromatograms provided	<u> 465</u>
3.	GC/MS Tune Specifications	
	a. BFB Meet Criteria	UCS
	b. DFTPP Meet Criteria.	Yes
4.	GC/MS Tuning Frequency – Performed every 24 hours for 600	
	series and 12 hours for 8000 series	<u>yes</u>
5.	GC/MS Calibration - Initial Calibration performed before sample	
	analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	yes
6,	GC/MS Calibration requirements	,
	a. Calibration Check Compounds Meet Criteria	yes
	b. System Performance Check Compounds Meet Criteria	Yes
7.	Blank Contamination – If yes, List compounds and concentrations in each blank:	<u>NO</u>
	a. VOA Fraction	•
	b. B/N Fraction	
	c. Acid Fraction	
},	Surrogate Recoveries Meet Criteria	yes
	If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
	a. VOA Fraction	
	b. B/N Fraction	
	c. Acid Fraction VA	
	If not met, were the calculations checked and the results qualified as "estimated"?	
	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria	_NO_
	(If not met, list those compounds and their recoveries, which fall outside the acceptable range)	_
	a. VOA Fraction Various out See for M	·
	b. B/N Fraction Benzi Line Con	
	c. Acid Fraction	
	——————————————————————————————————————	

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

		Indicate Yes, No, N/A
10. Internal Standard Area/Retention Time Shift Meet (If not met, list those compounds, which fall outsi	yes	
a. VOA Fraction	·	
b. B/N Fraction		
c. Acid Fraction NA	<u> </u>	
11. Extraction Holding Time Met	•	yes
If not met, list the number of days exceeded for ea	ch sample:	*
12. Analysis Holding Time Met		yes
If not met, list the number of days exceeded for eac	h sample;	·
		•
Additional Comments:		•
aboratory Manager.	Date: 3~6~ 06	
	·	

TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

•		Indica Yes, N
Method Detection Limits Provided		yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank		<u>NO</u>
		•
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	,	<u> ye</u>
Duplicate Results Summary Meet Criteria	,	yes
IR Spectra submitted for standards, blanks and samples		NA
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted		yes
Analysis holding time met (If not met, list number of days exceeded for each sample)		<u> </u>

VOLATILE ORGANICS (AQUEOUS)

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY NJDEP CERTIFICATION # 13461

Definition of Qualifiers

- U: The compound was analyzed for but not detected.
- B: Indicates that the compound was found in the associated method blank as well as in the sample.
- J: Indicates an estimated value. This flag is used:
 - (1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
 - (2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.
- D: This flag is used to identify all compounds (target or TIC) that required a dilution.
- E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.
- N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

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

Data File Operator VB021618.D

Skelton

Date Acquired 3 Feb 2006 4:05 pm

Sample Name

MB 03Feb2006 MB 03Feb2006

Field ID Sample Multiplier

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifie
107028	Acrolein		1	not detected	5	2.01 ug/L	5.00 ug/L	
107131	Acrylonitrile	• .		not detected	5	1.23 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	5.70 ug/L	10.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	-70	0.21 ug/L	2.00 ug/L	1
108203	Di-isopropyl ether			not detected	20000	0.26 ug/L .	2.00 ug/L	
75718	Dichlorodifhuoromethane			not detected	1000	0.20 ug/L	2.00 ug/L	T
74-87-3	Chloromethane	- -		not detected	nle	0.24 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.23 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.26 ug/L	2.00 ug/L	
	Chloroethane			not detected	nle '	0,29 ug/L	2.00 ug/L	
75-00-3	Trichlorofluoromethane			not detected	2000	0.23 ug/L	2.00 ug/L	
75-69 <u>-4</u>	1.1-Dichloroethene			not detected	1	0.19 ug/L	2.00 ug/L	
75-35-4	Acetone			not detected	6000	0.36 ug/L	2.00 ug/L	<u> </u>
67-64-1	Carbon Disulfide			not detected	700	0.24 ug/L	2.00 ug/L	
75-15-0				not detected	3	0.21 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	100	0.24 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	50	0.24 ug/L	· 2.00 ug/L	
75-34-3	1,1-Dichloroethane		 _	not detected	7000	0.20 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	300	0,26 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	70	0.20 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.22 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	30	0.20 ug/L	2.00 ug/L	
71-55-6	1, 1, 1-Trichloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride	·		not detected	1	0.24 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	2	0.23 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	1 1	0.26 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected :	+	0.24 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1 1	0.22 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	nle	0.23 ug/L	2.00 ug/L	
110-75 <u>-8</u>	2-Chloroethyl vinyl ether			not detected	1	0.22 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.35 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	1000	0.35 ag/L	2.00 ug/L	
108-88-3	Toluene			not detected	1	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	3	0.28 ug/L	2.00 ug/L	· ·
79-00-5	1,1,2-Trichloroethane			not detected	1 1	0.20 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	nle	0.43 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	1	0.22 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane		<u> </u>	not detected	50	0.28 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	700	0.27 ug/L	2,00 ug/L	
100-41-4	Ethylbenzene			not detected	nle	0.43 ug/L	4.00 ug/L	
1330-20-7	m+p-Xylenes		·	not detected	nle nle	0.21 ug/L	2.00 ug/L	
95-47-6	o-Xylene			not detected	100	0.21 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	4	0.27 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	1	0.45 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	600	0.45 ug/L 0.36 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene				 	0.35 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.33 ug/L 0.45 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	O'42 (IS/P	Z,VV UBIL	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLB = No Limit Established

R,T. = Retention Time

R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FI	IEL	.D	ID
----	-----	----	----

MB 03Feb2006

Lab Name:	FMETL				NJDEP	#: <u>13461</u>		_	
Project:	06-3488	06-34880 Case No.: 6004			Location: 701 SDG			DG No.: US	Γ
· Matrix: (soil/v	vater)	WATE	3			Lab Sample	iD:	MB 03Feb20	06
Sample wt/vo	ol:	5.0	(g/ml)	ML	_	Lab File ID:		VB0 21618.D	1
Level: (low/m	ned)	LOW			•	Date Receiv	ved:	1/23/2006	<u> </u>
% Moisture: r	not dec.				i	Date Analyz	ed:	2/3/2006	
GC Column:	RTX50	02. ID:	0.25 (mn	n)	į i	Dilution Fac	tor:	1.0	<u>.</u>
Soil Extract Volume: (uL)				Soil Aliquot Volume:					
Number TICs	found:	4		-	ICENTR . or ug/K	ATION UNI		· · · · · · · · · · · · · · · · · · ·	·
		00110	OLINIO SLABAI			RT		T. CONC.	Q
CAS NO.		COMP	IMAN DNUC	=		וח		I. CONC.	<u> </u>

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1_	unknown	12.51	34	J
2.	unknown	20.58	4	J
3.	unknown	24.39	15	J
4.	unknown	25.77	5	· J

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

Data File Operator Date Acquired VB021623.D

Skelton

3 Feb 2006 7:24 pm

Sample Name Field ID

6004806 Trip Blank

Sample Multiplier

107128	2.01 ug/L .23 ug/L .70 ug/L .21 ug/L .26 ug/L .20 ug/L .24 ug/L .23 ug/L .26 ug/L .23 ug/L .29 ug/L .29 ug/L .23 ug/L .24 ug/L .25 ug/L .27 ug/L .28 ug/L .29 ug/L .29 ug/L .29 ug/L .21 ug/L .22 ug/L	5.00 ug/L 5.00 ug/L 10.00 ug/L 2.00 ug/L	
107131	3.70 ug/L 3.21 ug/L 3.20 ug/L 3.24 ug/L 3.23 ug/L 3.29 ug/L 3.29 ug/L 3.29 ug/L 3.36 ug/L 3.40 ug/L 3.40 ug/L 3.40 ug/L 3.40 ug/L 3.40 ug/L 3.40 ug/L	10.00 ug/L 2.00 ug/L	
75650 tert-Butyl alcohol not detected 100 5	21 ug/L .26 ug/L .20 ug/L .24 ug/L .23 ug/L .26 ug/L .29 ug/L .23 ug/L .19 ug/L .36 ug/L .24 ug/L	2.00 ug/L	•
1634044 Methyl-tert-Butyl ether not detected 70 0.0	21 ug/L .26 ug/L .20 ug/L .24 ug/L .23 ug/L .26 ug/L .29 ug/L .23 ug/L .19 ug/L .36 ug/L .24 ug/L	2.00 ug/L	·
108203 Di-isopropyl ether not detected 20000 D.	.26 ug/L .20 ug/L .24 ug/L .23 ug/L .26 ug/L .29 ug/L .29 ug/L .19 ug/L .36 ug/L .24 ug/L	2.00 ug/L	
108203 Di-Isopropy Canal 108203 Di-Is	.20 ug/L .24 ug/L .23 ug/L .26 ug/L .29 ug/L .29 ug/L .19 ug/L .36 ug/L .34 ug/L	2.00 ug/L	
Total	.24 ug/L .23 ug/L .26 ug/L .29 ug/L .23 ug/L .19 ug/L .36 ug/L .24 ug/L	2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L	
1	.23 ug/L .26 ug/L .29 ug/L .23 ug/L .19 ug/L .36 ug/L .24 ug/L	2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L	
75-01-4	26 ug/L 29 ug/L 23 ug/L 19 ug/L 36 ug/L 24 ug/L	2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L	
74-83-9 Bronnomentale	29 ug/L 23 ug/L 19 ug/L 36 ug/L 24 ug/L	2.00 ug/L 2.00 ug/L 2.00 ug/L 2.00 ug/L	
75-09-4 Trichlorofluoromethane not detected 2000 0. 75-35-4 I,1-Dichloromethane not detected 1 0. 67-64-1 Acetone not detected 6000 0. 75-15-0 Carbon Disulfide not detected 700 0. 75-09-2 Methylene Chloride not detected 3 0. 156-60-5 trans-1,2-Dichloroethene not detected 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100 0. 100	23 ug/L 19 ug/L 36 ug/L 24 ug/L	2.00 ug/L 2.00 ug/L 2.00 ug/L	
175-09-4 Inchloroentenance 1	19 ug/L 36 ug/L 24 ug/L	2.00 ug/L 2.00 ug/L	
15-3-5-4 13-10-conference not detected 6000 0.5	36 ug/L 24 ug/L	2.00 ug/L	
156-60-5	24 ug/L		ı
75-15-0 Carbon Distinue			
156-60-5	21 ug/L		
156-60-5 trans-1,2-Dictarolement	1	2.00 ug/L	
not detected to 0.	24 ug/L	2.00 ug/L	
73-34-3 1,1-Dichidroctuate 1	24 ug/L	2.00 ug/L	
1: 108-05-4 Vinyl Acetate	20 ug/L	2.00 ug/L	
78-93-3 2-Butanone not detected 300 0.2	26 ug/L	2.00 ug/L	
156-59-2 cis-1.2-Dichloroethene not detected 70 0.2	20 ug/L	2.00 ug/L	
67-66-3 Chloroform not detected 70 0.2	22. ug/L	2.00 ug/L	
71-55-6 1,1,1-Trichloroethane not detected 30 0.2	20 ug/L	2.00 ug/L	
56-23-5 Carbon Tetrachloride not detected 1 0.2	24 ug/L	2.00 ug/L	
71-43-2 Benzene not detected 1 0.2	24 ug/L	2.00 ug/L	
107-06-2 [,2-Dickloroethane not detected 2 0.2	23 ug/L	2.00 ug/L	
79-01-6 Trichloroethene not detected 1 0.2	26 ug/L	2.00 ug/L	
78-87-5 1,2-Dichloropropane not detected 1 0.2	24 ug/L	2.00 ug/L	
75-27-4 Bromodichloromethane not detected 1 0.2	22 ug/L	2.00 ug/L	
	23 ug/L	2.00 ug/L	
" 10061-01-5 cis-1,3-Dichloropropene not detected 1 0.2	22 úg/L	2.00 ug/L	
108-10-1 4-Methyl-2-Pentanone not detected tile 0.3	35 ug/L	2.00 ug/L	
108-88-3 Toluene not detected 1000 0.2	26 ug/L	2.00 ug/L	
10061-02-6 trans-1,3-Dichloropropene not detected 1 0.2	25 ug/L	2.00 ug/L	
79-00-5 1,1,2-Trichloroethane not detected 3 0.2	28 tig/L	2.00 ug/L	
127-18-4 Tetrachloroethene not detected 1 0.2	20 ug/L	2.00 ug/L	
591-78-6 2-Hexanone not detected nle 0.4	3 ug/L	2.00 ug/L	
124-48-1 Dibromochloromethane not detected 1 0.2	2 ug/L	2.00 ug/L	
108-90-7 Chlorobenzene not detected 50 0.2	8 ug/L	2.00 ug/L	
100-41-4 Ethylbenzene not detected 700 0.2	7 ug/L	2.00 ug/L	
	3 ug/L	4.00 ug/L	
33U-2U-7 IIII-U-AVERES 1	1 ug/L	2.00 ug/L	
7 95-47-6 0-Ayene	1 ug/L	2.00 ug/L	
100-42-5 Styrene	7 ug/L	2.00 ug/L	
75-23-2 Bromojota	5 ug/L	2.00 ug/L	
79-34-3 1,1,2,2- letracinoroculane	6 ug/L	2.00 ug/L	
541-73-1 I,3-Dichiorobelizere	5 ug/L	2.00 ug/L	
100-40-7 1,4-Dichoroberacus	5 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank

B = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

MDL = Method Detection Limit

NLE = No Limit Established

R.T. = Retention Time

R.L. = Reporting Limit

2/28/2006 1:52 PM

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

F	EL	.D	ID	:

Lab Name:	FMETL	<u>_</u>		NJDEF	⊃#:	13461		Trip	Blank
Project:	06-348	380	Case No.: 600	048 Loca	atior	: <u>701</u>	SD	G No.: <u>U</u>	ST
Matrix: (soil/v	water)	WATER	<u> </u>		Lab	Sampl	e ID: 6	004806	
Sample wt/vo	ol:	5.0	(g/ml) <u>M</u> l	<u> </u>	Lab	File ID	: <u>v</u>	B021623.	.D
Level: (low/m	ned)	LOW			Dat	e Recei	ved: 1	/23/2006	
% Moisture: r	not dec.		,		Date	e Analyz	zed: <u>2</u> /	/3/2006	
GC Column:	RTX5	02. ID:	0.25 (mm)		Dilu	tion Fac	tor: 1.	.0	
Soil Extract V	olume:		(uL)	•	Soil	Aliquot	Volume	e:	(uL)
Number TICs	found:	0		CONCENTR (ug/L or ug/k		ON UNI		·	
CAS NO.		COMPO	OUND NAME			RT	EST.	CONC.	Q

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

Data File Operator Date Acquired VB021624.D

Skelton

3 Feb 2006 8:05 pm

Sample Name

6004904 1004C-GW

Field ID Sample Multiplier

		73 M		D14	Regulatory Level (ug/l)*	MDL	RL	Onelia
CAS#	Compound Name	R.T.	Response	Result		2.01 ug/L	5.00 ug/L	Qualifie
107028	Acrolein		<u> </u>	not detected	5	1.23 ug/L	5.00 ug/L	 -
107131	Acrylonitrile			not detected	5			
75650	tert-Butyl alcohol		20770	not detected	100	5.70 ug/L	10.00 ug/L	
1634044	Methyl-tert-Butyl ether	12.84	28779	0.75 ug/L	70	0.21 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.26 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	_1000	0.20 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	nle	0.24 ug/L	2.00 ug/L	├
75-01-4	Vinyl Chloride			not detected	1	0.23 ug/L	2.00 ug/L	
· 74-83-9	Bromomethane			not detected	10	0.26 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	0.29 ug/L	2.00 ug/L	ļ
- 75-69-4	Trichlorofluoromethane			not detected	2000	0.23 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1 1	0.19 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	6000	0.36 ug/L	2.00 ug/L	<u> </u>
75-15-0	Carbon Disulfide			not detected	700	.0.24 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.21 ug/L	2.00 ug/L	<u> </u>
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.24 ug/L	2.00 ug/L	
75-34-3	1.1-Dichloroethane			not detected	50	0.24 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.26 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.20 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	70	0.22 ug/L	2.00 ug/L.	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.20 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.24 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.24 ug/L	2.00 ug/L	
107-06-2	1.2-Dickloroethane			not detected	2	0.23 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.26 ug/L	· 2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.24 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether	 ,		not detected	nle	0.23 ug/L	2.00 ug/L	
10061-01-5	cis-1.3-Dichloropropene		· · · · · · · · · · · · · · · · · · ·	not detected	1	0.22 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.35 ug/L	2.00 ug/L	
108-10-1	Toluene			not detected	1000	0.26 ug/L	2.00 ug/L	
10061-02-6	trans-1;3-Dichloropropene			not detected	1	0.25 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.28 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1 1	0.20 ug/L	2.00 ug/L	
591-78-6	2-Hexanone	·		not detected	nie	0.43 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.28 ug/L	2.00 ug/L	
				not detected	700	0.27 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	nle	0.43 ug/L	4.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.21 ug/L	2.00 ug/L	
95-47-6	o-Xylene	<u>[</u>		not detected	100	0.21 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	4	0.27 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	+ ; +	0.45 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	600	0.45 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	75	0.35 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene				600	0.45 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene	1		not detected	1 600	0.43 ug/L	2,00 tg/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 07Nov2005

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 R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:	
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		, _ , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	111122 301111	~ .			40040	- OW
Lab Name:	FMETL	<u> </u>	•	NJDEP	#:	13461		1004C	-GW
Project:	06-348	80	Case No.: 6004	19 Loca	tior	n: 1004	_ s	DG No.: US	T
Matrix: (soil/	water)	WATE	<u>R</u>		Lab	Sample	e ID:	6004904	
Sample wt/ve	ol:	5.0	(g/ml) <u>ML</u>		Lat	File ID:		VB021624.)
Level: (low/r	ned)	LOW			Dat	te Recei	ved:	1/24/2006	
% Moisture:	not dec.				Dat	e Analyz	ed:	2/3/2006	
GC Column:	RTX5	02. ID:	0.25 (mm)		Dilu	ition Fac	tor:	1.0	
Soil Extract \	/olume:		(uL)	• ;	Soil	l Aliquot	Volu	me:	(uL)
Number TICs	s found:	0		CONCENTR (ug/L or ug/K	-				
CAS NO.		COMP	OUND NAME			RT	ES	T. CONC.	Q

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

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

Data File Name

BNA11471.D

Sample Name

MB-012706-01

Operator

BPatel

Misc Info

MB-012706-01

Date Acquired

30-Jan-06

Sample Multiplier

	•				Regulatory Level				
CAS#	Name	R.T.	Response	Result	(ug/L)*	MDL	RL	Qualifiers	
110-86-1	Pyridine			not detected	NLE	1.13	10.00 ug/L		
62-75-9	N-nitroso-dimethylamine			not detected	0.8	0.60	10.00 ug/L		
62-53-3	Aniline			not detected	6	2.38	10.00 ug/L		
111-44-4	bis(2-Chloroethyl)ether			not detected	7	0.71	10.00 ug/L		
541-73-1	1.3-Dichlorobenzene			not detected	600	1.02	10.00 ug/L		
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00 ug/L	}	
100-51-6	Benzyl alcohol			not detected	2000	0.66	10.00 ug/L		
95-50-1	1,2-Dichlorobenzene			not detected	600	. 0.96	10.00 ug/L		
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00 ug/L		
621-64-7	n-Nitroso-di-n-propylamine			not detected	10	0.76	10.00 ug/L		
67-72-1	Hexachloroethane			not detected	. 7	0.96	10.00 ug/L		
98-95-3	Nitrobenzene			not detected	6	0.86	10.00 ug/L		
78-59-1	Isophorone			not detected.	40	0.76	10.00 ug/L		
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00 ug/L		
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00 ug/L		
91-20-3	Naphthalene			not detected	300	0.76	10.00 ug/L		
106-47-8	4-Chloroaniline			not detected	30	1.37	10.00 ug/L		
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00 ug/L	ļ., <u>.</u>	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00 ug/L		
77-47-4	Hexachlorocyclopentadiene		• .	not detected	40	0.92	10.00 ug/L		
91-58-7	2-Chloronaphthalene			not detected	600	0.72	10.00 ug/L		
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00 ug/L		
131-11-3	Dimethylphthalate		·	not detected	NLE	0.78	10.00 ug/L		
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00 ug/L		
606-20-2	2,6-Dinitrotoluene	<u> </u>	·	not detected	10	0.71	10.00 ug/L		
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00 ug/L		
83-32-9	Acenaphthene	<u> </u>		not detected	400	0.73	10.00 ug/L		
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00 ug/L		
121-14-2	2,4-Dinitrotoluene	ļ		not detected	10	0.81	10.00 ug/L		
84-66-2	Diethylphthalate			not detected	6000	0.96	10.00 ug/L		
86-73-7	Fluorene			not detected	300	0.71	10.00 ug/L		
7005-72-3	4-Chlorophenyl-phenylether		,	not detected	NLE	0.73	10.00 ug/L	.	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00 ug/L		
86-30-6	n-Nitrosodiphenylamine			not detected	10	0.62	10.00 ug/L		
103-33-3	Azobenzene		·	not detected	NLE	0.72	10.00 ug/L		
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00 ug/L		
118-74-1	Hexachlorobenzene	<u> </u>		not detected	0.02	0.95	10.00 ug/L		
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00 ug/L		
120-12-7	Anthracene			not detected	2000	0.76	10.00 ug/L		
84-74-2	Di-n-butylphthalate			not detected	700	0.92	10.00 ug/L		
206-44-0	Fluoranthene			not detected	300	0.82	10.00 ug/L		

Page 1 of 2

Semi-Volatile Analysis Report Page 2

Data File Name

BNA11471.D

Sample Name

MB-012706-01

Operator

BPatel

Misc Info

MB-012706-01

Date Acquired

30-Jan-06

Sample Multiplier

CAS#	Name	R.T.	Response	Result	(ug/L)*	MDL	RL	Qualifiers
92-87-5	Benzidine			not detected	20	0.98	10.00 t	ıg/L
129-00-0	Pyrene			not detected	200	0.79	10.00 u	ıg/L
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00 ນ	g/L
56-55-3	Benzo[a]anthracene		·	not detected	0.1	0.82	10.00 u	g/L
91-94-1	3,3'-Dichlorobenzidine			not detected	30	1.31	10.00 u	g/L
218-01-9	Chrysene			not detected	5	0.77	10.00 u	g/L
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	3	1.28	10.00 u	g/L
117-84-0	Di-n-octylphthalate	-		not detected	100	1.02	10.00 u	g/L
205-99-2	Benzo[b]fluoranthene			not detected	0.2	0.98	10.00 u	g/L
207-08-9	Benzo[k]fluoranthene			not detected	0.5	0.92	10.00 ս	g/L
50-32-8	Benzo[a]pyrene			not detected	0.1	0.71	10.00 մ	g/L
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.2	0.76	10.00 ս	g/L
53-70-3	Dibenz[a,h]anthracene			not detected	0.3	0.76	10.00 ս	g/L
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	10.00 u	g/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

MDL= Method Detection Limit NLE= No Limit Established

R.T.=Retention Time

RL=Reporting Limit. The values between the MDL and RL are considered estimated.

Page 2 of 2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-012706-01 Lab Code 13461 Lab Name: **FMETL** Location: 1004 SDG No.: 06-34880 Case No.: 60049 Project: Lab Sample ID: MB-012706-01 Matrix: (soil/water) WATER Lab File ID: BNA11471.D 1000 (g/ml) ML Sample wt/vol: LOW Date Received: 1/24/2006 Level: (low/med) Date Extracted: 1/27/2006 decanted: (Y/N) N · % Moisture: Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/30/2006 Dilution Factor: 1.0 Injection Volume: 1.0 (uL) GPC Cleanup: (Y/N) N pH: **CONCENTRATION UNITS:** (ug/L or ug/Kg) UG/L Number TICs found: COMPOUND NAME RT EST. CONC. Q CAS NUMBER

Semi-Volatile Analysis Report

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

Data File Name

BNA11479.D

Sample Name

6004904

Operator

BPatel

Misc Info

1004C-GW

Date Acquired

30-Jan-06

Sample Multiplier 1

CH OIL					Regulatory Level (ug/L)*				
CAS#	Name	R.T.	Response	Result		MDL	RL	1	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13		ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	0.8	0.60	· · · · · · · · · · · · · · · · · · ·	ug/L	
62-53-3	Aniline	1		not detected	6	2.38		ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	7	0.71	10.00	$\overline{}$	ļ.,
541-73-1	1,3-Dichlorobenzene	1 1		not detected	600	1.02	10.00	ug/L	ļ
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L	
100-51-6	Benzyl alcohol	1 1		not detected	2000	0.66	10.00	ug/L	<u> </u>
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L	<u> </u>
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	10	0.76	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	7	0.96	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	6	0.86	10.00	ug/L	
78-59-1	Isophorone		<u></u>	not detected	40	0.76	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L	
91-20-3	Naphthalene			not detected	300	0.76	10.00	ug/L	
106-47-8	4-Chloroaniline	<u>i i</u>	·	not detected	30	1.37	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L	
91-57-6	2-Methylnaphthalene	<u> </u>		not detected	NLE	1.01	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	40	0.92	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	600	0.72	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L	-
131-11-3	Dimethylphthalate			not detected	NLE	0.78	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	10	0.71	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L	
83-32-9	Acenaphthene	i		not detected	400	0.73	10.00	ug/L	-
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L	
121-14-2	2.4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	6000	0.96	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00		
86-30-6	n-Nitrosodiphenylamine			not detected	10	0.62	10.00 t		`
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	-	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00 ı		
118-74-1	Hexachlorobenzene .			not detected	0.02	0.95	10.00 t		
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00 t		
120-12-7	Anthracene	 		not detected	2000	0.76	10.00 t		
	Di-n-butylphthalate	 -		not detected	700	0.92	10.00 t		
84-74-2 206-44-0	Fluoranthene	 -		not detected	300	0.92	10.00 t		

Semi-Volatile Analysis Report Page 2

Data File Name

BNA11479.D

Operator

BPatel

Date Acquired 30-Jan-06

Sample Name

6004904

Misc Info

1004C-GW

Sample Multiplier

Regulatory

CAS# Name		R.T. Respo		e Result		MDL	RL	Qualifiers	
92-87-5	Benzidine			not detected	20	0.98	10.00 ug/I	,	
129-00-0	Pyrene		<u>_</u>	not detected	200	0.79	10.00 ug/I	,	
85-68-7	Butylbenzylphthalate		·	not detected	100	0.86	10.00 ug/I	,	
56-55-3	Benzo[a]anthracene			not detected	0.1	0.82	10.00 ug/I	,	
91-94-1	3,3'-Dichlorobenzidine			not detected	30	1.31	10.00 ug/L	,	
218-01-9	Chrysene			not detected	5	0.77	10.00 ug/L	,	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	3	1.28	10.00 ug/I		
117-84-0	Di-n-octylphthalate	·		not detected	100	1.02	10.00 ug/L		
205-99-2	Benzo[b]fluoranthene			not detected	0.2	0.98	10.00 ug/L		
207-08-9	Benzo[k]fluoranthene			not detected	0.5	0.92	10.00 ug/L		
50-32-8	Benzo[a]pyrene			not detected	0.1	0.71	10.00 ug/L	<u> </u>	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.2	0.76	_10.00 ug/L	<u> </u>	
53-70-3	Dibenz[a,h]anthracene			not detected	0.3	0.76	10.00 ug/L		
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	_10.00 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

MDL= Method Detection Limit

NLE= No Limit Established

R.T.=Retention Time

RL= Reporting Limit. The values between the MDL and RL are considered estimated.

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

					•			l 1004C	:-GW
Lab Name:	FMETL			l	ab Co	de <u>13461</u>			
Project:	06-3488	30	Case No.: <u>60049</u>		Loca	ation: 1004	<u> </u>	DG No.:	
Matrix: (soil/	water)	WATER	<u> </u>			Lab Samp	le ID:	6004904	
Sample wt/ve	ol:	1000	(g/ml) <u>ML</u>			Lab File II):	BNA11479.	D
Level: (low/r	med)	LOW	<u>.</u>			Date Rece	ived:	1/24/2006	
% Moisture:		d	ecanted: (Y/N)	N		Date Extra	cted:	1/27/2006	·
Concentrated	d Extract	Volume:	1000 (uL)			Date Analy	/zed:	1/30/2006	
Injection Volu	ume: <u>1.0</u>) (uL)				Dilution Fa	ctor:	1.0	
GPC Cleanu	p: (Y/N)	N	pH:			;	,		
				C	ONCE	NTRATION	I UNI	ΓS:	
Number TICs found: 0					g/L or	ug/Kg)	UG/I		
CAS NUMB	BFR	COMPO	OUND NAME			RT	ES	T. CONC.	Q.

TPHC

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

Client:

U.S. Army

Project #:

60049

DPW. SELFM-PW-EV

Location:

1004

Bldg. 173

UST Reg. #:

06-34880

Ft. Monmouth, NJ 07703

Analysis:

OQA-QAM-025

Date Received:

24-Jan-06

Matrix:

Soil

Date Extracted:

26-Jan-06

Inst. ID. :

GC TPHC INST. #1

Extraction Method :

Shake

Column Type :

RTX-5, 0.32mm ID, 30M

Analysis Complete :

30-Jan-06

Injection Volume :

1uL

Analyst:

B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
6004901	1004W	1.00	15.36	76.83	82	424	ND
6004902	1004C	1.00	15.07	77.25	83	429	ND
6004903	1004E	1.00	15.05	83.90	76	396	ND
						,	
						· · · · · · · · · · · · · · · · · · ·	
METHOD BLANK	MB-012606-01	1.00	15.00	100.00	64	333	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

Note: The TPHC result between the MDL and RL are considered an estimated value

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 data 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.	<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.	<u> </u>
9.	Results submitted on a dry weight basis.	
10.	Method Detection Limits submitted.	<u></u>
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	~

Laboratory Manager or Environmental Consultant's Signature Date: ちょくしょ

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

3-6-06

Laboratory Manager