DEPARTMENT OF THE ARMY

OFFICE OF ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
U.S. ARMY FORT MONMOUTH
P.O. 148
OCEANPORT, NEW JERSEY 07757

April 14, 2015

Ms. Linda Range
New Jersey Department of Environmental Protection
Case Manager
Bureau of Southern Field Operations
401 East State Street, 5th Floor
PO Box 407
Trenton, NJ 08625

Re: Underground Storage Tank within Parcel 77
Fort Monmouth, NJ

Attachments:

A. Site Layout Drawing of Parcel 77
B. UST 210 Report

Dear Ms. Range:

The U.S. Army Fort Monmouth (FTMM) has reviewed existing file information for the underground storage tank (UST) site at Fort Monmouth within Environmental Condition of Property (ECP) Parcel 77. The purpose of this submittal is to provide comprehensive documentation of the location and closure status of the UST identified within this parcel, which we believe will be useful for the future Phase II property transfer.

Parcel 77 includes the former fuel oil UST associated with the Building 210 Internal Test Facility building. The location of the UST is presented in Attachment A. The single UST identified within Parcel 77 has been removed; following is a summary of information regarding this UST:

Site Name	Registration ID	DICAR	Tank Size and Type	Product	Case Status
210	81533-8	94-1-25-0913-00	550 gal. steel	#2 FUEL OIL	Case Closed

In the above table, the term "Case Closed" has been used (consistent with previous FTMM procedures) to indicate the Army determined that no further sampling or remedial actions were warranted for this UST site. "Case Open" would indicate that the Army determined that ongoing monitoring, reporting or possibly even remedial action was warranted. In contrast, "No Further Action" has been reserved for NJDEP approval that no further sampling or remedial actions are warranted.

An investigation report was previously submitted to the NJDEP in 1996 that requested No Further Action for this site, but we have no record of an NJDEP response. Therefore, we are submitting the documentation for this UST as Attachment B, and we request a No Further Action

determination for this site. The information in Attachment B supports the conclusion that all UST contamination issues identified within Parcel 77 have been adequately addressed by previous environmental activities.

In summary, we request that NJDEP approve No Further Action for Parcel 77. Should you have any questions or require additional information, please contact me at (732) 380-7064 or by email at wanda.s.green2.civ@mail.mil.

Sincerely,

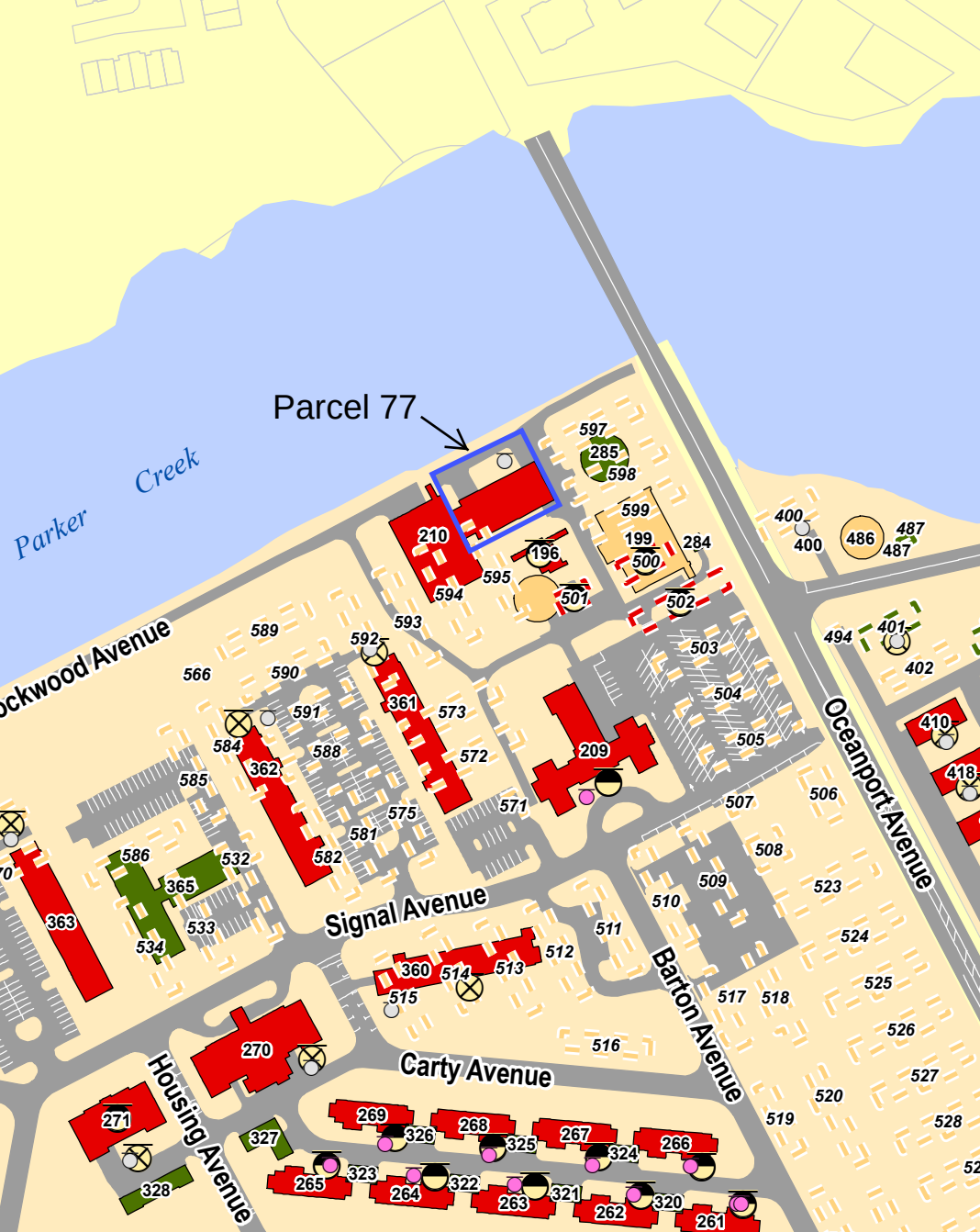
Wanda Green

Wanda Green
BRAC Environmental Coordinator

cc: Delight Balducci, HQDA ACSIM
Joseph Pearson, Calibre
James Moore, USACE
Cris Grill, Parsons

ATTACHMENT A

Site Layout Drawing of Parcel 77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ATTACHMENT B

UST 210 Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 210
Main Post Area

NJDEP UST Registration No. 081533-8
NJDEP Closure Approval No. C-93-2610

Volume 1 of 2
Text, Tables, Figures, and Appendices A through F

February 1996

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ENVIRONMENTAL TECHNOLOGIES CORPORATION

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 210

MAIN POST AREA
NJDEP UST REGISTRATION NO. 081533-8
CLOSURE APPROVAL NO. C-93-2610

FEBRUARY 1996

PROJECT NO.: 09-5004-01
CONTRACT NO.: DACA51-94-D-0014

PREPARED FOR:

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

PREPARED BY:

SMITH ENVIRONMENTAL TECHNOLOGIES CORPORATION
BROMLEY CORPORATE CENTER
THREE TERRI LANE
BURLINGTON, NEW JERSEY 08016

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ENVIRONMENTAL TECHNOLOGIES CORPORATION

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TABLE OF CONTENTS

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TABLE OF CONTENTS (CONTINUED)

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EXECUTIVE SUMMARY

UST Closure

On January 14, 1994, a steel underground storage tank (UST) was closed by removal in accordance with Closure Approval No. 081533-8 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, New Jersey Department of Environmental Protection (NJDEP) Registration No. 081533-8, was located immediately adjacent to Building 210 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 081533-8 was a 550-gallon No. 2 fuel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

Site Assessment - Soil

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*. Due to precipitation and temperatures below freezing, only visual soil screening could be performed. Following removal, the UST was inspected for corrosion holes. Although no corrosion holes were noted in the UST, potentially contaminated soils were observed along the south wall of the excavation.

On January 14, 1994, following removal of the UST, post-excavation soil samples A, B, C, D, and E were collected from a total of four (4) locations along the sidewalls of the UST excavation immediately above groundwater. Sample A was collected along the southern wall of the excavation, immediately below the former piping associated with the UST, which was approximately 10 feet. Groundwater was present at approximately 4.5 feet below ground surface (BGS). All samples were analyzed for total petroleum hydrocarbons (TPHC).

On January 19, 1994, approximately 10 cubic yards of potentially contaminated soils were removed from the southern portion of the excavation in the vicinity of sample A. A post-excavation soil sample designated as B0189 was then collected from the expanded portion of the excavation and was analyzed for volatile organic compounds with a forward library search for 15 tentatively identified compounds (VO+15).

Findings - Soil

All samples collected from the UST excavation and from below piping associated with the UST contained concentrations of contaminants below the corresponding NJDEP residential direct contact and impact to groundwater soil cleanup criteria (N.J.A.C. 7:26D and revisions dated February 3, 1994). Samples B, C, and D contained TPHC concentrations ranging from 15.9 mg/kg to 21.6 mg/kg. Sample A contained an elevated TPHC concentration of

3,440.0 mg/kg. Sample E was the duplicate of sample A but was not sampled properly. For this reason sample E and its results are not listed in any of the tables or figures.

Post-excavation soil sample B0189, collected on January 19, 1994, contained acetone at 0.62 mg/kg, methylene chloride at 0.22 mg/kg, total xylenes at 0.42 mg/kg, and 1,1,1-trichloroethane at 2.5 mg/kg. All of the detected VOCs were below the most stringent NJDEP soil cleanup criteria.

Based on the elevated TPHC concentration of 3,440.0 detected in sample A, a discharge was reported to the NJDEP by the DPW on January 25, 1994. Spill Case No. 94-1-25-0913-00 was assigned.

Site Restoration

Following removal of all potentially contaminated soils, and 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.

Site Assessment - Groundwater

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring well (MW-1) was installed at the Building 210 area on September 22, 1994 . It was installed approximately 24 feet north of the UST excavation in the assumed downgradient direction. It was screened in the 2- to 12- foot depth interval, across the water table, which is approximately 6 feet below grade surface.

On May 19, 1995 and June 13, 1995, MW-1 was sampled for volatile organic compounds (with xylene) plus 10 tentatively identified compounds, and semivolatile organic compounds plus 15 tentatively identified compounds. Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirement*.

Findings - Groundwater

The sample collected on May 19, 1995, contained a methylene chloride concentration of 2.2 micrograms per liter (ug/l). This result exceeded the Ground Water Quality Criteria (GWQC) for methylene chloride of 2.0 ug/l. All other groundwater analytical results from MW-1 contained non-detectable concentrations of contaminants. The trip blank and field blank collected for MW-1 on May 19, 1995 contained methylene chloride concentrations of 6.4 ug/l and 6.3 ug/l, respectively. The trip blank also contained a toluene concentration of 0.80 ug/l, and a 2-Chlorotoluene concentration of 0.60 ug/l. No other compounds were detected in the trip and field blanks.

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The sample collected on June 13, 1995, contained a methylene chloride concentration of 1.3 ug/l. All other groundwater analytical results from MW-1 contained non-detectable concentrations of contaminants. The trip blank and field blank collected for MW-1 on June 13, 1995 contained methylene chloride concentrations of 2.3 ug/l and 2.1 ug/l, respectively. No other compounds were detected in the trip and field blanks.

The depth to the water table was 6.52 feet below grade on May 19, 1995, and 7.01 feet below grade on June 13, 1995. No product or sheen was observed in MW-1 on either of the sampling dates.

Site Assessment Quality Assurance

The sampling and laboratory analyses conducted during the site assessments were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements*.

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with concentrations of TPHC or volatile organic compounds exceeding the NJDEP soil cleanup criteria do not remain in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on May 19, 1995, and on June 13, 1995, groundwater quality at the Building 206 UST closure site complies with the New Jersey Quality Criteria for volatile organic compounds and semivolatile organic compounds. The trace concentrations of methylene chloride detected during both sampling rounds is attributed to sampling and/or analytical interference, based on the detection of methylene chloride, a common source of laboratory interference, in the sampling blanks.

No further action is proposed in regard to the closure and site assessment of UST No. 081533-8 at Building 210.

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1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 081533-8, was closed at Building 210 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on January 14, 1994. Refer to site location map on Figure 1. This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on June 6, 1993. The plan was approved on July 12, 1993 and assigned TMS No. C-93-2610. The UST was a steel, 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 081533-8 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. CUTE Inc., the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 081533-8 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval and the signed certifications for UST No. 081533-8 are included in Appendices A and B, respectively.

Based on an inspection of the UST, field screening of subsurface soils and analytical results of collected soil samples, the DPW has concluded that an historical discharge was associated with the UST. On January 25, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 081533-8 and was assigned Spill Case No. 94-1-25-0913-00.

This UST Closure and Site Investigation Report has been prepared by Smith Environmental Technologies Corporation to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST) regulations. The applicable NJDEP-BUST 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. September 1990 and revisions dated November 1, 1991).

This report was prepared using information required 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 investigation, are presented in the final section of this report.

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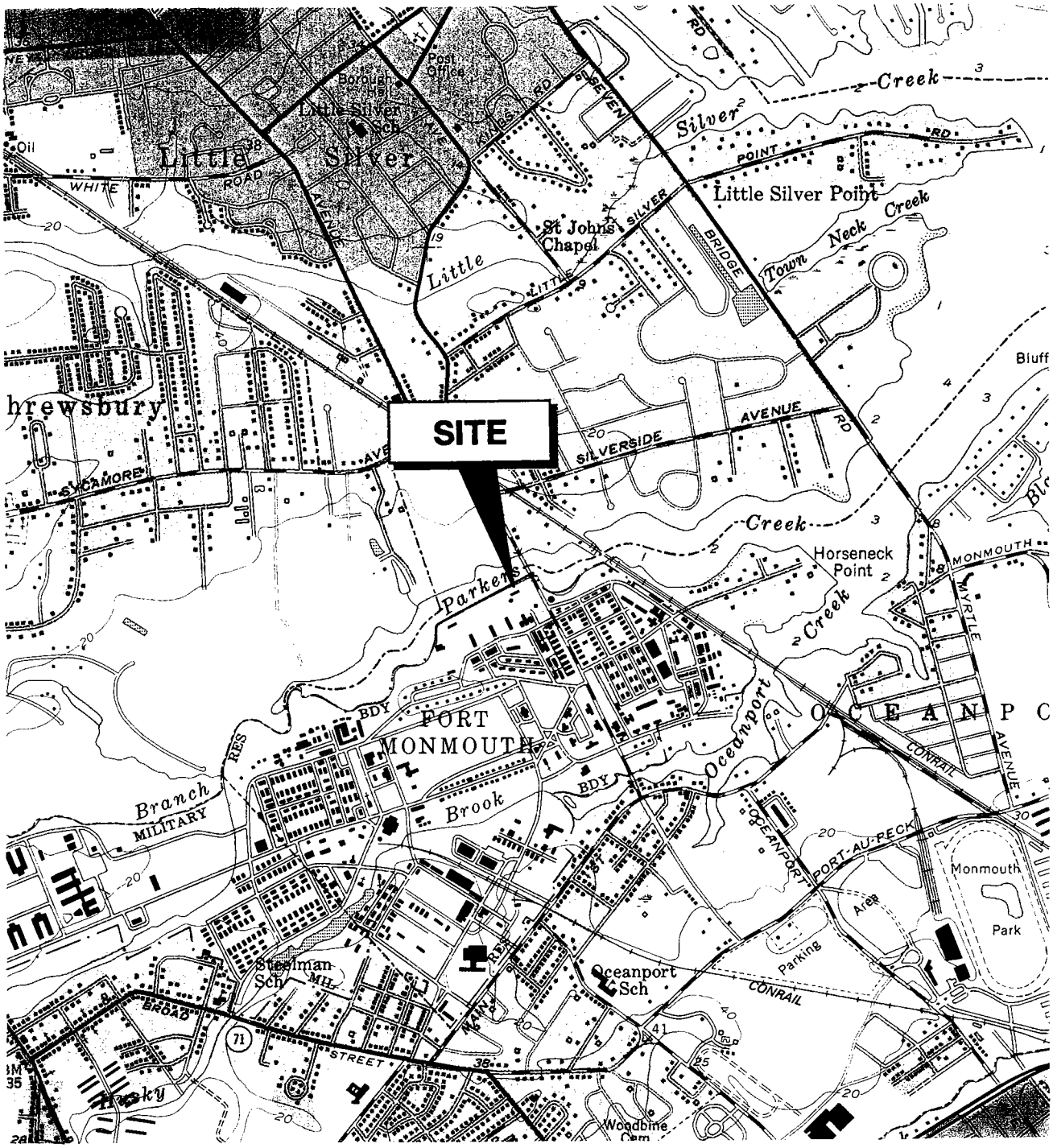
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



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NEW JERSEY
QUADRANGLE LOCATION

Source: U.S.G.S. Quadrangle Long Branch, N.J.

Project No. 00-5004-01

Figure 1
Site Location Map

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1.2 SITE DESCRIPTION

Building 210 is located in the northern portion of the Main Post area of Fort Monmouth as shown on Figure 1. UST No. 081533-8 was located north of Building 210. The USTs appurtenant piping ran approximately 10 feet south to the fill port area. The fill port area was located directly above the tank. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 210. 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 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. 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

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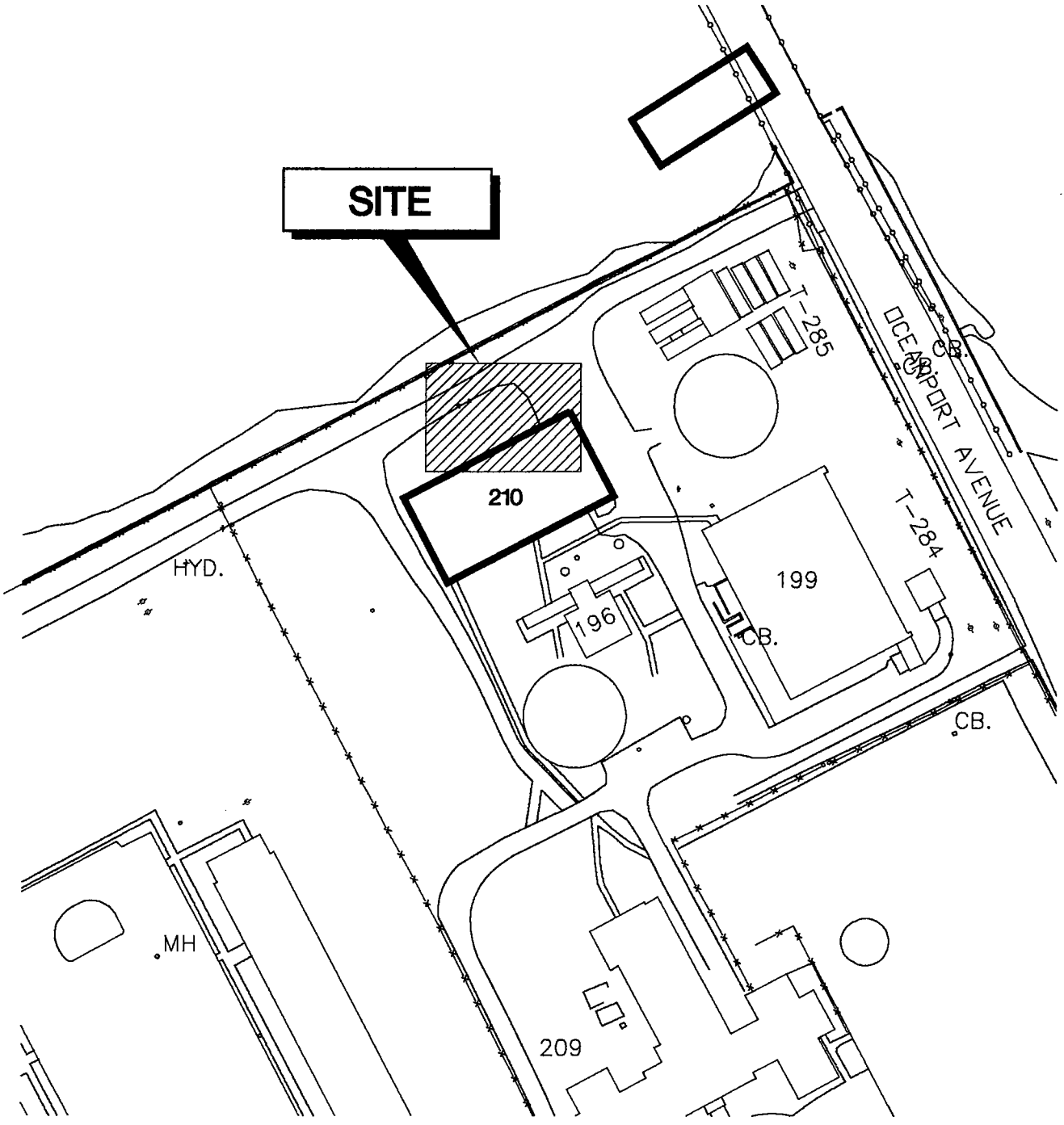
Department of Public Works
Fort Monmouth, New Jersey



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Source: BCM/Smith Environmental Technologies Corporation (002)

Project No. 09-5004-01

Figure 2
Building 210
Site Map

(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 ironoxide encrusted (Minard).

Hydrogeology

The water table aquifer at 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 at the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). The depth to the water table measured on September 22, 1994 in the Building 210 monitoring well MW-1, was approximately 6 feet below grade. 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 081533-8 is located approximately 500 feet miles Southeast of Parkers Creek, the nearest water body. The groundwater flow in the area of Building 081533-8 has been determined to be the west.

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 involve 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 (weather permitting) 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

- All underground obstructions (utilities, etc.) were marked out by the contractor performing the closure prior to excavation activities.
- 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 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 closure activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was excavated 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 30 gallons of liquid were transported by Freehold Cartage Inc., to Lionetti Oil Recovery Co. Inc., a NJDEP-

approved petroleum recycling and disposal facility located in Old Bridge, New Jersey. Refer to Appendix C for waste manifest (manifest No. NJA-1603206).

The UST was cleaned prior to removal from the excavation in accordance with NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for corrosion holes. No punctures or corrosion holes were observed during the inspection by the Sub-Surface Evaluator. Weather conditions permitted only visual soil screening. Apparent soil contamination was seen at the south end of the excavation, at the point nearest to Building 210.

Slight contamination was also noted in some of the standing water at the bottom of the excavation. Potentially contaminated soils were excavated and stockpiled.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The tank was transported by CUTE Inc., to Mazza and Sons Inc., for recycling in compliance with all applicable regulations and laws. Refer to Appendix D for UST disposal certificate.

The Subsurface Evaluator labeled the UST prior to transport with the following information:

- site of origin
- contact person
- NJDEP UST Facility ID number
- name of transporter/contact person
- destination site/contact person

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on visual observations, approximately 10 cubic yards of potentially contaminated soils were excavated from the south end and bottom of the excavation. 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 T-80 on Main Post for storage prior to ultimate disposal at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination were used as backfill following removal of the UST.

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2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All TPHC analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory. All VO+10 analyses were performed and reported by Twenty First Century Environmental Laboratory. Both laboratories are NJDEP-certified testing laboratories. 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-BUST document *"Interim Closure Requirements for Underground Storage Tank Systems"* (September 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Site Investigation Activities.

- Closure Contractor: Cleaning Up The Environment Inc. (CUTE)
  Contact Person: Nancy Williams
  Phone Number: (201)427-2881
  NJDEP Company Certification No.: 0200128

- Subsurface Evaluator: Dinkerrai M. Desai
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908)532-1475
  NJDEP Certification No.: E 0002266

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

- Analytical Laboratory: Twenty First Century Environmental
  Contact Person: Richard W. Lynch
  Phone Number: (609)467-9521
  NJDEP Company Certification No.: 08031

- Hazardous Waste Hauler: Freehold Cartage, Inc.
  Contact Person: Barry Olsen
  Phone Number: (908) 462-1001
  NJDEP Hazardous Waste Hauler No.: 2265

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 210, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	1/14/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	1/14/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	1/14/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	1/14/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B0189	1/19/94	Soil	Post-Excavation	VOCs	Polystyrene Scoop
MW-1	5/19/95	Aqueous	Groundwater	VOCs, BNCs	Teflon Bottom Bailer
MW-1	6/13/95	Aqueous	Groundwater	VOCs, BNCs	Teflon Bottom Bailer

*Note:

TPHC	Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)
VOCs	Volatile Organic Compounds plus 15 tentatively identified compounds (Method 8240:soil)
	Volatile Organic Compounds plus 10 tentatively identified compounds (Method 524.2:aqueous)
BNCs	Semivolatile Organic Compounds plus 15 tentatively identified compounds (Method 625:aqueous)

2.2 FIELD SCREENING/MONITORING

Due to precipitation and temperatures below freezing, soil screening was not performed. However, contamination was noted at the south end of the excavation and also in some of the standing water at the bottom of the excavation.

On January 16, 1994, approximately 10 cubic yards of potentially contaminated soils were excavated from the south end and bottom of the excavation and were stockpiled for disposal.

2.3 SOIL SAMPLING

On January 14, 1994, post-excavation soil samples A, B, C, D, and E were collected from a total of four (4) locations along the sidewalls of the UST excavation immediately above groundwater. Sample A was collected immediately below the former piping associated with the UST. Groundwater was present at approximately 4.5 feet below ground surface. Refer to soil sampling location map on Figure 3. All samples were analyzed for total petroleum hydrocarbons (TPHC).

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual.* A summary of sampling activities including parameters analyzed is provided on Table 1. The samples were collected using decontaminated stainless steel scoops. Following soil sampling activities, samples being analyzed for TPHC were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory, located in Fort Monmouth, New Jersey. The sample being analyzed for VO+15 was chilled and delivered to Twenty First Century Environmental, located in Bridgeport, New Jersey.

2.4 GROUNDWATER SAMPLING

2.4.1 Monitoring Well Installation

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring (MW-1) was installed at the Building 210 area on September 22, 1994. It was installed approximately 24 feet north of the UST excavation in the assumed downgradient direction. A monitoring well location map is provided on Figure 4. It was screened in the 2- to 12- foot depth interval, across the water table, which is approximately 6 feet below grade surface.

The well was constructed in accordance with the NJDEP's well construction protocols outlined in its May 1992 *Field Sampling Procedures Manual.* The NJDEP well drilling permit and a well construction log is presented in Appendix E.

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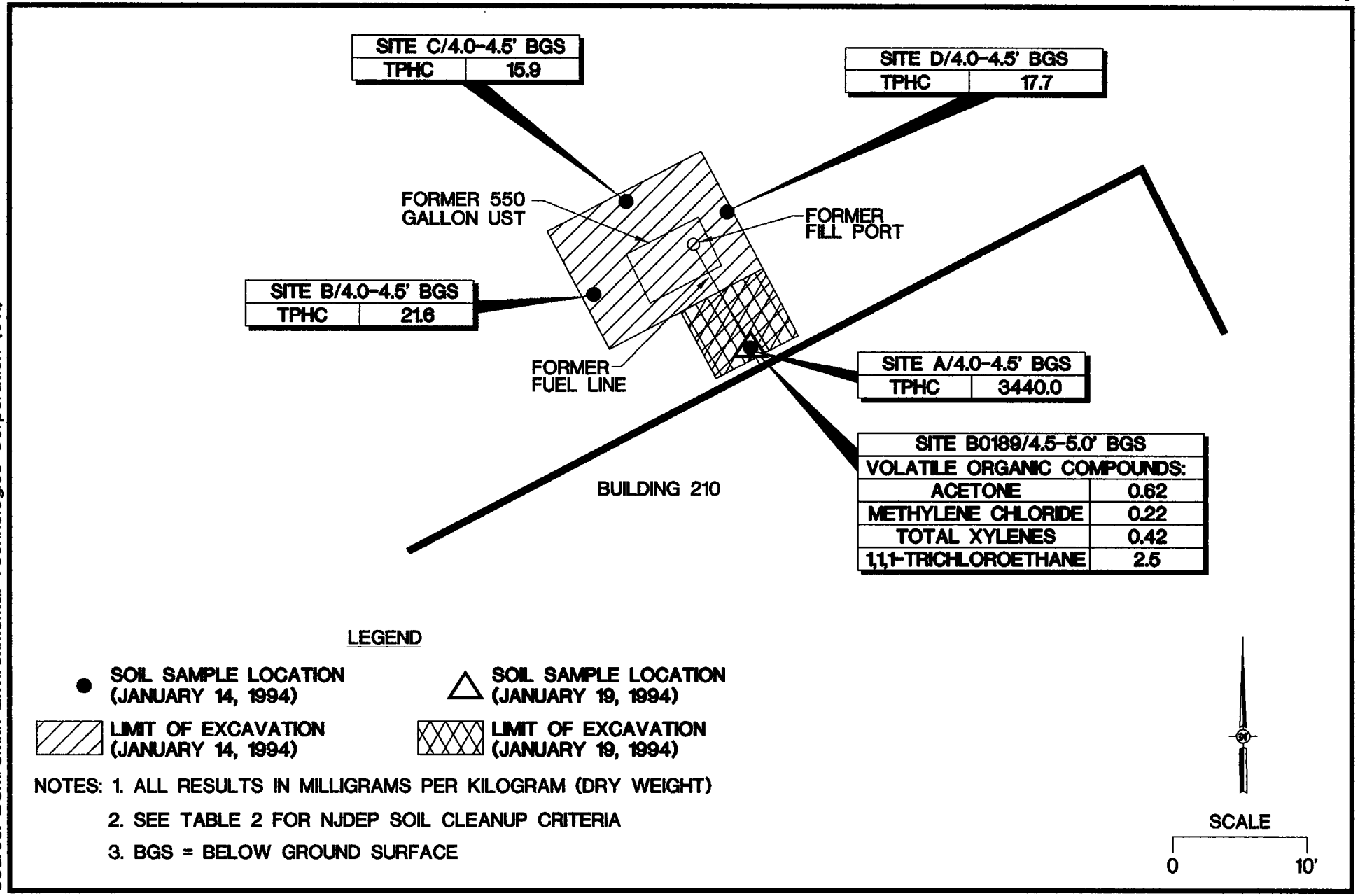
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: BCM/Smith Environmental Technologies Corporation (011)

Project No. 09-5004-01

Figure 3

Building 210
Soil Sampling Results

The well was constructed with 4-inch (ID) PVC riser and 0.020 slotted PVC well screen. A silica sand pack was installed in the annulus between the borehole wall and the screen. The sand pack was extended approximately 2 feet above the top of the screen. The sand pack above the well screen was graded down to a fine sand to minimize grout intrusion.

The borehole was tremie-grouted with bentonite-cement grout from the top of the sand pack to 6 inches bgs. The well was secured with a steel protective casing with a stickup that is approximately 3 feet above ground surface. The steel protective casing was set in place with concrete, which was placed in the remaining open borehole. The elevation of the well riser was surveyed to the nearest 0.01 feet by a New Jersey-licensed surveyor. The well permit number was marked on the well casing as required.

The monitoring well was developed using a submersible pump. The well was pumped for 1 hour or until silt free. All residual soils and liquids generated during monitoring well installation and development program were collected in New Jersey Department of Transportation-approved 55-gallon drums. The drums were placed in a designated secure location for waste characterization and offsite disposal.

2.4.2 Monitoring Well Sampling

On May 19, 1995 and on June 13, 1995, MW-1 was sampled for volatile organic compounds (with xylenes) plus 10 tentatively identified compounds and semivolatile organic compounds plus 15 tentatively identified compounds. Sampling and analysis were completed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements.*

Prior to sampling, the water level was measured to the nearest 0.01 feet, and the distance to the bottom of the well was be measured to the nearest 0.1 feet. The well was checked for floating product (light non-aqueous phase liquids). The well was then purged of three to five well volumes of standing water. Sample volume was then collected using a dedicated decontaminated Teflon bottom-fill bailer attached to PTFE (Teflon)-coated stainless steel.

SMITH

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 A, B, C, and D were collected from a total of four (4) locations on January 14, 1994 and analyzed for TPHC. (Sample E was the duplicate of sample A but was not sampled properly. For this reason sample E and its results are not listed in any of the tables or figures.). The post-excavation soil sample results were compared to the NJDEP residential direct contact and impact to groundwater soil cleanup criteria (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, and the soil sampling results are shown on Figure 3. The soil analytical data package is provided in Appendix F. The full data package, including associated quality control data, is on file at the U.S. Army Fort Monmouth, DPW.

All post-excavation soil samples collected on January 14, 1994 from the UST from below piping associated with the UST contained concentrations of contaminants below the NJDEP soil cleanup criteria of 10,000 mg/kg for total organic contaminants. The TPHC concentrations for samples B, C, and D ranged from 15.9 mg/kg to 21.6 mg/kg. Sample A contained an elevated TPHC concentration of 3,400 mg/kg. Based on the elevated TPHC concentrations detected in sample A, a discharge was reported to the NJDEP by the DPW on January 25, 1994 and was assigned Spill Case No. 94-1-25-0913-00.

On January 19, 1994, soil sample B0189 was collected from the location of sample A and analyzed for volatile organic compounds plus 15 tentatively identified compounds. Sample B0189 contained acetone at 0.62 mg/kg, methylene chloride at 0.22 mg/kg, total xylenes at 0.42 mg/kg, and 1,1,1-trichloroethane at 2.5 mg/kg. All of the detected VOCs were below the most stringent NJDEP residential direct contact or impact to groundwater soil cleanup criteria, which are listed in Table 2.

3.2 GROUNDWATER SAMPLING RESULTS

The sample collected on May 19, 1995, contained a methylene chloride concentration of 2.2 micrograms per liter (ug/l). This result exceeded the Ground Water Quality Criteria (GWQC) for methylene chloride of 2.0 ug/l. All other groundwater analytical results from MW-1 contained non-detectable concentrations of contaminants. The trip blank and field blank collected for MW-1 on May 19, 1995 contained methylene chloride concentrations of 6.4 ug/l and 6.3 ug/l, respectively. The trip blank also contained a toluene concentration of 0.80 ug/l, and a 2-Chlorotoluene concentration of 0.60 ug/l. No other compounds were detected in the trip and field blanks.

2.2 FIELD SCREENING/MONITORING

Due to precipitation and temperatures below freezing, soil screening was not performed. However, contamination was noted at the south end of the excavation and also in some of the standing water at the bottom of the excavation.

On January 16, 1994, approximately 10 cubic yards of potentially contaminated soils were excavated from the south end and bottom of the excavation and were stockpiled for disposal.

2.3 SOIL SAMPLING

On January 14, 1994, post-excavation soil samples A, B, C, D, and E were collected from a total of four (4) locations along the sidewalls of the UST excavation immediately above groundwater. Sample A was collected immediately below the former piping associated with the UST. Groundwater was present at approximately 4.5 feet below ground surface. Refer to soil sampling location map on Figure 3. All samples were analyzed for total petroleum hydrocarbons (TPHC).

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual.* A summary of sampling activities including parameters analyzed is provided on Table 1. The samples were collected using polystyrene scoops. Actual soil TPHC values may be higher than reported, due to sample utensil absorbency. If absorbency resulted in reducing the actual soil TPHC concentration by 50 %, the highest soil contaminant would have been 43.2 mg/kg, still below the applicable NJDEP soil cleanup standard for total organic contaminants of 10,000 mg/kg. Following soil sampling activities, samples being analyzed for TPHC were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory, located in Fort Monmouth, New Jersey. The sample being analyzed for VO+15 was chilled and delivered to Twenty First Century Environmental, located in Bridgeport, New Jersey.

2.4 GROUNDWATER SAMPLING

2.4.1 Monitoring Well Installation

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring (MW-1) was installed at the Building 210 area on September 22, 1994. It was installed approximately 24 feet north of the UST excavation in the assumed downgradient direction. A monitoring well location map is provided on Figure 4. It was screened in the 2- to 12- foot depth interval, across the water table, which is approximately 6 feet below grade surface.

The well was constructed in accordance with the NJDEP's well construction protocols outlined in its May 1992 *Field Sampling Procedures Manual.* The NJDEP well drilling permit and a well construction log is presented in Appendix E.

The well was constructed with 4-inch (ID) PVC riser and 0.020 slotted PVC well screen. A silica sand pack was installed in the annulus between the borehole wall and the screen. The sand pack was extended approximately 2 feet above the top of the screen. The sand pack above the well screen was graded down to a fine sand to minimize grout intrusion.

The borehole was tremie-grouted with bentonite-cement grout from the top of the sand pack to 6 inches bgs. The well was secured with a steel protective casing with a stickup that is approximately 3 feet above ground surface. The steel protective casing was set in place with concrete, which was placed in the remaining open borehole. The elevation of the well riser was surveyed to the nearest 0.01 feet by a New Jersey-licensed surveyor. The well permit number was marked on the well casing as required.

The monitoring well was developed using a submersible pump. The well was pumped for 1 hour or until silt free. All residual soils and liquids generated during monitoring well installation and development program were collected in New Jersey Department of Transportation-approved 55-gallon drums. The drums were placed in a designated secure location for waste characterization and offsite disposal.

2.4.2 Monitoring Well Sampling

On May 19, 1995 and on June 13, 1995, MW-1 was sampled for volatile organic compounds (with xylenes) plus 10 tentatively identified compounds and semivolatile organic compounds plus 15 tentatively identified compounds. Sampling and analysis were completed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements*.

Prior to sampling, the water level was measured to the nearest 0.01 feet, and the distance to the bottom of the well was be measured to the nearest 0.1 feet. The well was checked for floating product (light non-aqueous phase liquids). The well was then purged of three to five well volumes of standing water. Sample volume was then collected using a dedicated decontaminated Teflon bottom-fill bailer attached to PTFE (Teflon)-coated stainless steel.

SMITH

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 A, B, C, and D were collected from a total of four (4) locations on January 14, 1994 and analyzed for TPHC. (Sample E was the duplicate of sample A but was not sampled properly. For this reason sample E and its results are not listed in any of the tables or figures.). The post-excavation soil sample results were compared to the NJDEP residential direct contact and impact to groundwater soil cleanup criteria (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, and the soil sampling results are shown on Figure 3. The soil analytical data package is provided in Appendix F. The full data package, including associated quality control data, is on file at the U.S. Army Fort Monmouth, DPW.

All post-excavation soil samples collected on January 14, 1994 from the UST from below piping associated with the UST contained concentrations of contaminants below the NJDEP soil cleanup criteria of 10,000 mg/kg for total organic contaminants. The TPHC concentrations for samples B, C, and D ranged from 15.9 mg/kg to 21.6 mg/kg. Sample A contained an elevated TPHC concentration of 3,400 mg/kg. Based on the elevated TPHC concentrations detected in sample A, a discharge was reported to the NJDEP by the DPW on January 25, 1994 and was assigned Spill Case No. 94-1-25-0913-00.

On January 19, 1994, soil sample B0189 was collected from the location of sample A and analyzed for volatile organic compounds plus 15 tentatively identified compounds. Sample B0189 contained acetone at 0.62 mg/kg, methylene chloride at 0.22 mg/kg, total xylenes at 0.42 mg/kg, and 1,1,1-trichloroethane at 2.5 mg/kg. All of the detected VOCs were below the most stringent NJDEP residential direct contact or impact to groundwater soil cleanup criteria, which are listed in Table 2.

3.2 GROUNDWATER SAMPLING RESULTS

The sample collected on May 19, 1995, contained a methylene chloride concentration of 2.2 micrograms per liter (ug/l). This result exceeded the Ground Water Quality Criteria (GWQC) for methylene chloride of 2.0 ug/l. All other groundwater analytical results from MW-1 contained non-detectable concentrations of contaminants. The trip blank and field blank collected for MW-1 on May 19, 1995 contained methylene chloride concentrations of 6.4 ug/l and 6.3 ug/l, respectively. The trip blank also contained a toluene concentration of 0.80 ug/l, and a 2-Chlorotoluene concentration of 0.60 ug/l. No other compounds were detected in the trip and field blanks.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 210
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A/4.0-4.5'	1370.1	1-14-94	1-18-94	Total Solid	--	--	84%	--	--
				TPHC	20.0	yes	3,440.0	10,000	--
B/4.0-4.5'	1370.2	1-14-94	1-18-94	Total Solid	--	--	89%	--	--
				TPHC	3.3	yes	21.6	10,000	--
C/4.0-4.5'	1370.3	1-14-94	1-18-94	Total Solid	--	--	86%	--	--
				TPHC	3.3	yes	15.9	10,000	--
D/4.0-4.5'	1370.4	1-14-94	1-18-94	Total Solid	--	--	85%	--	--
				TPHC	3.3	yes	17.7	10,000	--

Note:

* Cleanup criteria for total organics
-- Not applicable / does not exceed criteria
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 210, MAIN POST, SITE A
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
B0189/ 4.5-5.0'	01-19-94	01-24-94	Acrolein	7.4	--	ND	--	--
			Acrylonitrile	7.4	--	ND	1/1	--
			Chloromethane	1.5	--	ND	520/10	--
			Bromomethane	1.5	--	ND	79/1	--
			Vinyl Chloride	1.5	--	ND	2/10	--
			Chloroethane	1.5	--	ND	--	--
			Acetone	1.5	--	0.62 J	1,000/100	--
			1,1-Dichloroethene	0.74	--	ND	8/10	--
			Carbon Disulfide	1.5	--	ND	--	--
			Methylene Chloride	0.74	--	0.22 JB	49/1	--
			1,2-Dichloroethene (trans)	0.74	--	ND	1,000/50	--
			1,1-Dichloroethane	0.74	--	ND	570/10	--
			Vinyl Acetate	0.74	--	ND	--	--
			2-Butanone	1.5	--	ND	1,000/50	--
			Chloroform	0.74	--	ND	19/1	--
			1,1,1-Trichloroethane	0.74	--	2.5	210/50	--
			Carbon Tetrachloride	0.74	--	ND	2/1	--
			1,2-Dichloroethane	0.74	--	ND	6/1	--
			Benzene	0.74	--	ND	3/1	--
			Trichloroethene	0.74	--	ND	23/1	--
			1,2-Dichloropropane	0.74	--	ND	10	--
			Bromodichloromethane	0.74	--	ND	11/1	--
			2-Chloroethylvinylether	1.5	--	ND	--	--
			2-Hexanone	1.5	--	ND	--	--
			trans-1,3-Dichloropropene	0.74	--	ND	4/1	--
			Toluene	0.74	--	ND	1,000/500	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 210, MAIN POST, SITE A
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
B0189/ 4.5-5.0'	01-19-94	01-24-94	cis-1,3-Dichloropropene	0.74	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.74	--	ND	34/1	--
			1,1,2-Trichloroethane	0.74	--	ND	22/1	--
			4-Methyl-2-pentanone	1.5	--	ND	1,000/100	--
			Tetrachloroethene	0.74	--	ND	4/1 **	--
			Dibromochloromethane	0.74	--	ND	110/1	--
			Chlorobenzene	0.74	--	ND	37/1	--
			Ethylbenzene	0.74	--	ND	1,000/100	--
			Xylenes (Total)	0.74	--	0.42 J	410/10	--
			Styrene	0.74	--	ND	--	--
			Bromoform	0.74	--	ND	86/1	--
			m-Dichlorobenzene	0.74	--	ND	--	--
			p-Dichlorobenzene	0.74	--	ND	--	--
			o-Dichlorobenzene	0.74	--	ND	--	--
			Methyl Tertiary Butyl Ether	1.5	--	ND	--	--
			Tertiary Butyl Alcohol	7.4	--	ND	--	--

Note:

* Residential Direct Contact / Impact to Groundwater

** The tetrachloroethene results were compared to the soil cleanup criteria for tetrachloroethylene; tetrachloroethene is a synonym for tetrachloroethylene

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 210, MAIN POST, SITE A
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
B0189/ 4.5-5.0'	01-19-94	01-24-94	Cyclohexane,1,1,3-trimethyl-	--	--	3.6	--	--
			Cyclohexane,1,2,4-trimethyl-	--	--	3.8	--	--
			Octane,3-methyl-	--	--	2.3	--	--
			Cyclohexane,1-ethyl-4-methyl-cis	--	--	2.6	--	--
			2-Hexene,3,4,4-trimethyl-	--	--	6.2	--	--
			Cyclohexane,propyl	--	--	7.5	--	--
			Cyclohexane,1-methyl-3-propyl-	--	--	3.6	--	--
			Benzene,1-methyl-4-propyl-	--	--	5.1	--	--
			Cyclohexane,(2-methylpropyl)	--	--	8.0	--	--
			Benzene,1,3-diethyl-	--	--	6.8	--	--
			Naphthalene,decahydro-	--	--	14.0	--	--
			Cyclopentane,2-isopropyl-1,3-dimethyl-	--	--	2.6	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 210, MAIN POST, SITE A
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
B0189/ 4.5-5.0'	01-19-94	01-24-94	Benzene,2-ethyl-1,3-dimethyl-	--	--	12.0	--	--
			1H-Indene,2,3-dihydro-1-methyl	--	--	11.0	--	--
			Benzamide,2-methyl-	--	--	9.9	--	--
			Benzene,1,2,3,5-tetramethyl-	--	--	6.5	--	--
			Benzene,(1-ethylpropyl)-	--	--	12.0	--	--
			Benzene,(1,1-dimethyl-2-propenyl)-	--	--	3.7	--	--
			Benzene,(1-methyl-1-propenyl)-	--	--	5.8	--	--
			Total TICS	--	--	127.0	10,000	--

Note:

* Cleanup criteria for total organic compounds
-- Not applicable / does not exceed criteria

The sample collected on June 13, 1995, contained a methylene chloride concentration of 1.3 ug/l. All other groundwater analytical results from MW-1 contained non-detectable concentrations of contaminants. The trip blank and field blank collected for MW-1 on June 13, 1995 contained methylene chloride concentrations of 2.3 ug/l and 2.1 ug/l, respectively. No other compounds were detected in the trip and field blanks.

The depth to the water table was 6.52 feet below grade on May 19, 1995, and 7.01 feet below grade on June 13, 1995. No product or sheen was observed in MW-1 on either of the sampling dates. The groundwater sampling results are listed in Table 3 and shown on Figure 4. The laboratory documentation is in Appendix G.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 210 were below the proposed NJDEP soil cleanup criteria for total organic contaminants (Samples A, B, C, D, and E).

Based on the post-excavation soil sampling results, soils with concentrations of contaminants exceeding the NJDEP soil cleanup criteria do not remain in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on May 19, 1995, and on June 13, 1995, groundwater quality at the Building 210 UST site complies with the New Jersey Groundwater Quality Criteria for VOCs and BNCs. The trace concentrations of methylene chloride detected during both sampling rounds is attributed to sampling and/or analytical interference, based on the detection of methylene chloride, a common source of laboratory interference, in the sampling blanks.

No further action is proposed in regard to the closure and site assessment of UST No. 081533-8 at Building 210.

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/02/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			Methylene Chloride	0.50	--	2.2 B	2	yes
			1,2-Dichloroethene (trans)	0.50	--	ND	100*	--
			1,1-Dichloroethene	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1-Dichloropropene	0.50	--	ND	--	--
			1,2-Dichloroethane	0.50	--	ND	2	--
			1,1,1-Trichloroethane	0.50	--	ND	30	--
			Dibromomethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			Bromodichloromethane	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			cis-1,3-Dichloropropene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	--	--
			Trichloroethene	0.50	--	ND	1	--
			Dibromochloromethane	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/02/95	1,1,2-Trichloroethane	0.50	--	ND	3	--
			Benzene	0.50	--	ND	1	--
			trans-1,3-Dichloropropene	0.50	--	ND	NA	--
			Bromoform	0.50	--	ND	4	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	10	--
			Tetrachloroethene	0.50	--	ND	1*	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	2	--
			Toluene	0.50	--	ND	1,000	--
			1,2-Dibromoethane	0.50	--	ND	--	--
			Chlorobenzene	0.50	--	ND	4	--
			Ethylbenzene	0.50	--	ND	700	--
			Xylenes (Total)	0.50	--	ND	40	--
			Styrene	0.50	--	ND	100	--
			Isopropylbenzene	0.50	--	ND	--	--
			Bromobenzene	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	0.50	--	ND	--	--
			4-Chlorotoluene	0.50	--	ND	--	--
			1,3,5-Trimethylbenzene	0.50	--	ND	--	--
			tert-Butylbenzene	0.50	--	ND	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	0.50	--	ND	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			1,4-Dichlorobenzene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/03/95	4-Isopropyltoluene	0.50	--	ND	--	--
			1,2-Dichlorobenzene	0.50	--	ND	600	--
			n-Butylbenzene	0.50	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.50	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.50	--	ND	9	--
			Hexachlorobutadiene	0.50	--	ND	1	--
			Naphthalene	0.50	--	ND	--	--
			1,2,3-Trichlorobenzene	0.50	--	ND	--	--

Notes:

* The tetrachloroethene, 1,2-Dichloroethene(trans), 1,1-Dichloroethene, and cis-1,2-Dichloroethene results were compared to the GWQC for their respective synonym (tetrachlororethylene, 1,2-Dichloroethylene(trans), 1,1-Dichloroethylene, and cis-1,2-Dichloroethylene).

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

(NA) Not available for this constituent

GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/03/95	NO TICS FOUND	--	--	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/03/95	N-Nitrosodiethylamine	2	--	ND	20	--
			bis(2 chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)Ether	5	--	ND	300	--
			N-Nitroso-Di-n-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)Methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	--	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalene	1	--	ND	--	--
			Dimethyl Phthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenlyether	3	--	ND	--	--
			N-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine	6	--	ND	0.04	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/03/95	Anthracene	2	--	ND	2,000	--
			Di-n-butylphthalate	5	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	100	--
			Benzo(a)Anthracene	2	--	ND	NA	--
			3,3-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	4	--	ND	30	--
			Di-n-Octyl Phthalate	2	--	ND	100	--
			Benzo(b)Fluoranthene	1	--	ND	NA	--
			Benzo(k)Fluoranthene	2	--	ND	NA	--
			Benzo(a)Pyrene	2	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	NA	--
			Dibenzo(a,h)anthracene	3	--	ND	NA	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/19/95	6/03/95	Unknown	--	--	4.0 J	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST TRIP BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/19/95	6/02/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	6.4 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/19/95	6/02/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.50	--	0.80
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.50	--	0.60
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/19/95	6/02/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/19/95	6/02/95	NO TICS FOUND	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/02/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	6.3 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/02/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.50	--	ND
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.50	--	ND
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/02/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/02/95	NO TICS FOUND	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/03/95	N-Nitrosodiethylamine	2	--	ND
			bis(2 chloroethyl)Ether	1	--	ND
			1,3-Dichlorobenzene	2	--	ND
			1,4-Dichlorobenzene	1	--	ND
			1,2-Dichlorobenzene	2	--	ND
			bis(2-chloroisopropyl)Ether	5	--	ND
			N-Nitroso-Di-n-propylamine	2	--	ND
			Hexachloroethane	1	--	ND
			Nitrobenzene	2	--	ND
			Isophorone	1	--	ND
			bis(2-Chloroethoxy)Methane	3	--	ND
			1,2,4-Trichlorobenzene	2	--	ND
			Naphthalene	2	--	ND
			Hexachlorobutadiene	2	--	ND
			Hexachlorocyclopentadiene	12	--	ND
			2-Chloronaphthalene	1	--	ND
			Dimethyl Phthalate	1	--	ND
			Acenaphthylene	5	--	ND
			2,6-Dinitrotoluene	2	--	ND
			Acenaphthene	3	--	ND
			2,4-Dinitrotoluene	3	--	ND
			Diethylphthalate	1	--	ND
			Fluorene	3	--	ND
			4-Chlorophenyl-phenlyether	3	--	ND
			N-Nitrosodiphenylamine	6	--	ND
			1,2-Diphenylhydrazine	6	--	ND
			4-Bromophenyl-phenylether	2	--	ND
			Hexachlorobenzene	2	--	ND
			Phenanthrene	2	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/03/95	Anthracene	2	--	ND
			Di-n-butylphthalate	5	--	ND
			Fluoranthene	1	--	ND
			Benzidine	1	--	ND
			Pyrene	2	--	ND
			Butylbenzylphthalate	9	--	ND
			Benzo(a)Anthracene	2	--	ND
			3,3-Dichlorobenzidine	15	--	ND
			Chrysene	2	--	ND
			bis(2-Ethylhexyl)Phthalate	4	--	ND
			Di-n-Octyl Phthalate	2	--	ND
			Benzo(b)Fluoranthene	1	--	ND
			Benzo(k)Fluoranthene	2	--	ND
			Benzo(a)Pyrene	2	--	ND
			Indeno(1,2,3-cd)pyrene	2	--	ND
			Dibenzo(a,h)anthracene	3	--	ND
			Benzo(g,h,i)perylene	2	--	ND

Notes:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/19/95	6/02/95	Unknown	--	--	7.0 J

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/22/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			Methylene Chloride	0.50	--	1.3 B	2	--
			1,2-Dichloroethene (trans)	0.50	--	ND	100*	--
			1,1-Dichloroethene	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1-Dichloropropene	0.50	--	ND	--	--
			1,2-Dichloroethane	0.50	--	ND	2	--
			1,1,1-Trichloroethane	0.50	--	ND	30	--
			Dibromomethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			Bromodichloromethane	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			cis-1,3-Dichloropropene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	--	--
			Trichloroethene	0.50	--	ND	1	--
			Dibromochloromethane	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/22/95	1,1,2-Trichloroethane	0.50	--	ND	3	--
			Benzene	0.50	--	ND	1	--
			trans-1,3-Dichloropropene	0.50	--	ND	NA	--
			Bromoform	0.50	--	ND	4	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	10	--
			Tetrachloroethene	0.50	--	ND	1*	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	2	--
			Toluene	0.50	--	ND	1,000	--
			1,2-Dibromoethane	0.50	--	ND	--	--
			Chlorobenzene	0.50	--	ND	4	--
			Ethylbenzene	0.50	--	ND	700	--
			Xylenes (Total)	0.50	--	ND	40	--
			Styrene	0.50	--	ND	100	--
			Isopropylbenzene	0.50	--	ND	--	--
			Bromobenzene	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	0.50	--	ND	--	--
			4-Chlorotoluene	0.50	--	ND	--	--
			1,3,5-Trimethylbenzene	0.50	--	ND	--	--
			tert-Butylbenzene	0.50	--	ND	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	0.50	--	ND	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			1,4-Dichlorobenzene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/22/95	4-Isopropyltoluene	0.50	--	ND	--	--
			1,2-Dichlorobenzene	0.50	--	ND	600	--
			n-Butylbenzene	0.50	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.50	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.50	--	ND	9	--
			Hexachlorobutadiene	0.50	--	ND	1	--
			Naphthalene	0.50	--	ND	--	--
			1,2,3-Trichlorobenzene	0.50	--	ND	--	--

Notes:

* The tetrachloroethene, 1,2-Dichloroethene(trans), 1,1-Dichloroethene, and cis-1,2-Dichloroethene results were compared to the GWQC for their respective synonym (tetrachlororethylene, 1,2-Dichloroethylene(trans), 1,1-Dichloroethylene, and cis-1,2-Dichloroethylene).

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

(NA) Not available for this constituent

GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/22/95	Unknown	--	--	1.0 J	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/26/95	N-Nitrosodiethylamine	2	--	ND	20	--
			bis(2 chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)Ether	5	--	ND	300	--
			N-Nitroso-Di-n-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)Methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	--	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalene	1	--	ND	--	--
			Dimethyl Phthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenlyether	3	--	ND	--	--
			N-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine	6	--	ND	0.04	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/26/95	Anthracene	2	--	ND	2,000	--
			Di-n-butylphthalate	5	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	100	--
			Benzo(a)Anthracene	2	--	ND	NA	--
			3,3-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	4	--	ND	30	--
			Di-n-Octyl Phthalate	2	--	ND	100	--
			Benzo(b)Fluoranthene	1	--	ND	NA	--
			Benzo(k)Fluoranthene	2	--	ND	NA	--
			Benzo(a)Pyrene	2	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	NA	--
			Dibenzo(a,h)anthracene	3	--	ND	NA	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/26/95	NO TICS FOUND	--	--	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	6/13/95	6/21/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	2.3 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	6/13/95	6/21/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.80	--	ND
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.60	--	ND
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	6/13/95	6/21/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	6/13/95	6/21/95	NO TICS FOUND	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/21/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	2.1 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/21/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.50	--	ND
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.50	--	ND
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/21/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/21/95	NO TICS FOUND	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/26/95	N-Nitrosodiethylamine	2	--	ND
			bis(2 chloroethyl)Ether	1	--	ND
			1,3-Dichlorobenzene	2	--	ND
			1,4-Dichlorobenzene	1	--	ND
			1,2-Dichlorobenzene	2	--	ND
			bis(2-chloroisopropyl)Ether	5	--	ND
			N-Nitroso-Di-n-propylamine	2	--	ND
			Hexachloroethane	1	--	ND
			Nitrobenzene	2	--	ND
			Isophorone	1	--	ND
			bis(2-Chloroethoxy)Methane	3	--	ND
			1,2,4-Trichlorobenzene	2	--	ND
			Naphthalene	2	--	ND
			Hexachlorobutadiene	2	--	ND
			Hexachlorocyclopentadiene	12	--	ND
			2-Chloronaphthalene	1	--	ND
			Dimethyl Phthalate	1	--	ND
			Acenaphthylene	5	--	ND
			2,6-Dinitrotoluene	2	--	ND
			Acenaphthene	3	--	ND
			2,4-Dinitrotoluene	3	--	ND
			Diethylphthalate	1	--	ND
			Fluorene	3	--	ND
			4-Chlorophenyl-phenlyether	3	--	ND
			N-Nitrosodiphenylamine	6	--	ND
			1,2-Diphenylhydrazine	6	--	ND
			4-Bromophenyl-phenylether	2	--	ND
			Hexachlorobenzene	2	--	ND
			Phenanthrene	2	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/26/95	Anthracene	2	--	ND
			Di-n-butylphthalate	5	--	ND
			Fluoranthene	1	--	ND
			Benzidine	1	--	ND
			Pyrene	2	--	ND
			Butylbenzylphthalate	9	--	ND
			Benzo(a)Anthracene	2	--	ND
			3,3-Dichlorobenzidine	15	--	ND
			Chrysene	2	--	ND
			bis(2-Ethylhexyl)Phthaiate	4	--	ND
			Di-n-Octyl Phthalate	2	--	ND
			Benzo(b)Fluoranthene	1	--	ND
			Benzo(k)Fluoranthene	2	--	ND
			Benzo(a)Pyrene	2	--	ND
			Indeno(1,2,3-cd)pyrene	2	--	ND
			Dibenzo(a,h)anthracene	3	--	ND
			Benzo(g,h,i)perylene	2	--	ND

Notes:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 210, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/13/95	6/21/95	NO TICS FOUND	--	--	--

Note:

-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
GWQC Groundwater Quality Criteria

SMITH

APPENDIX A

NJDEP BUST CLOSURE APPROVAL

UNDERGROUND STORAGE TANK SYSTEM
CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF UNDERGROUND STORAGE TANKS
CN-029, TRENTON, NJ 08625-0029

TMS # C-93-2610

UST # 0081515
0081533 CA

US Army Fort Monmouth
DEH Bldg. 167
Ft. Monmouth, NJ

Monmouth

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C. 7:14B-1 et. seq.:

Removal of: one 550 gallon #2 diesel UST(s) and appurtenant piping.
SITE ASSESSMENT: Soil samples will be taken every five (5) feet along the center line of each tank and one (1) soil sample for every 15 feet along all associated piping. Two (2) additional samples will be taken from around the tank and biased to the areas of highest field screened readings. Samples will be analyzed for TPHC. If sample results are greater than 1,000ppm than samples will be analyzed for VO+10.

ON-SITE MANAGER: C. Appleby TELEPHONE: 908-532-1475

OWNER: TELEPHONE:

EFFECTIVE DATE: JUL 12 1993

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTION AT ALL TIMES.

Fred DeCamp

KEVIN F. KRATINA, BUREAU CHIEF
BUREAU OF UNDERGROUND STORAGE TANKS

UST011 GREEN-APPLICANT COPY-APPLICANT COPY-LCO COPY-TMS COPY-R&R

SMITH

APPENDIX B

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST)
CLOSURE CERTIFICATION

BUILDING NO. 210

NJDEP UST REGISTRATION NO. 81533-8

DATE TANK REMOVED Jan. 14, 1994

IJO / CONTRACT NUMBER 93-1017

I CERTIFY UNDER PENALTY OF LAW THAT TANK DECOMMISSIONING ACTIVITIES WERE PERFORMED IN COMPLIANCE WITH NJAC 7:14B-9.2(b)3. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE, INACCURATE, OR INCOMPLETE INFORMATION, INCLUDING FINES AND/OR IMPRISONMENT.

NAME (Print or Type) John Lonergan

SIGNATURE

NJDEP UST CLOSURE CERTIFICATE NO. 0003248

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc.

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 2/20/95

UST-014
2/91

FOR STATE USE ONLY

UST # _____
Date Rec'd _____
TMS # _____
Staff _____

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 029
Trenton, NJ 08625-0029
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

Under the provisions of the Underground Storage of Hazardous Substances Act in accordance with N.J.A.C. 7:14B

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- *Please print legibly or type.*
- *Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for UST's, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.*
- *Return one original of the form and all required attachments to the above address.*
- *Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.*
- *Explain any "No" or "N/A" response on a separate sheet.*

Date of Submission _____

Bldg. 210

081533-8
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

U.S. Army, Fort Monmouth, New Jersey
Directorate of Engineering and Housing, Building 167
Fort Monmouth, New Jersey County Monmouth
Telephone No. (908) 532-1475

OWNER'S NAME AND ADDRESS, if different from above

_____
_____
_____

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? X Yes ___ No If Yes, Case No. 94-1-25-0913-00
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) No. 2 fuel oil

C. Have any vapor hazards been mitigated? ___ Yes ___ No X N/A

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. C-93-2610

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated.

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification, and disposal location.

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

   a. North arrow and scale
   b. The locations of the ground water monitoring wells
   c. Location and depth of each soil sample and boring
   d. All major surface and sub-surface structures and utilities
   e. Approximate property boundaries
   f. All existing or closed underground storage tank systems, including appurtenant piping
   g. A cross-sectional view indicating depth of tank, stratigraphy and location of water table
   h. Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? X Yes ___ No ___ N/A

2. Were soil borings taken at the tank system closure site as prescribed? ___ Yes ___ No X N A

3. Attach the analytical results in tabular form and include the following information about each sample:
   a. Customer sample number (keyed to the site map)
   b. The depth of the soil sample
   c. Soil boring logs
   d. Method detection limit of the method used
   e. QA/QC Information as required

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed 1

2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:

   a. Site diagram number for each well installed
   b. Depth of ground water surface
   c. Depth of screened interval
   d. Method detection limit of the method used
   e. Well logs
   f. Well permit numbers
   g. QA/QC information as required

V. SOIL CONTAMINATION

A. Was soil contamination found? X Yes ___ No
If "Yes", please answer Question B-E
If "No", please answer Question B

B. The highest soil contamination still remaining in the ground has been determined to be:
1. 0.42 ppb total BTEX, 14.0 ppb total non-targeted VOC
2. N/A ppb total B/N, N/A ppb total non-targeted B/N
3. 21.6 ppm TPHC
4. N/A ppb _____ (for non-petroleum substance)
(See Table 2 for other parameters)

C. Remediation of free product contaminated soils

1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface ___ Yes X No
2. Free product contaminated soils are suspected to exist below the water table ___ Yes X No
3. Free product contaminated soils are suspected to exist off the property boundaries. ___ Yes X No

D. Was the vertical and horizontal extent of contamination determined? ___ Yes ___ No X N/A

E. Does soil contamination intersect ground water? ___ Yes X No ___ N/A

VI. GROUND WATER CONTAMINATION

A. Was ground water contamination found? ___ Yes X No
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.

B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:
(See Table 3 for other parameters)
1. ND ppb total BTEX, ND ppb total non-targeted VOC
2. ND ppb total B/N, ND ppb total non-targeted B/N
3. N/A ppb total MTBE, N/A ppb total TBA
4. N/A ppb _____ (for non-petroleum substance)
5. greatest thickness of separate phase product found N/A
6. separate phase product has been delineated ___ Yes ___ No X N/A

C. Result(s) of well search

1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. ___ Yes ___ No X N/A

2. The number of these wells identified is N/A.

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is N/A feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is N/A feet from the source and its screening begins at a depth of N/A feet.

2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is N/A feet below grade. This well is located N/A feet from the source.

3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is N/A feet from the source. This well is N/A feet deep and screening begins at a depth of N/A feet.

E. A plan for separate phase product recovery has been included. ___ Yes ___ No X N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well.
___ Yes ___ No X N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ___ Yes ___ No X N/A

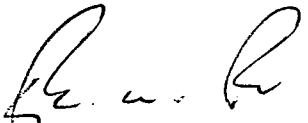
2. The plume is suspected to continue off the property at concentrations greater than MCLs.
___ Yes ___ No X N/A

3. Off property access (circle one): is being sought has been approved has been denied
N/A

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) &9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number.

"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Dinkerrai M. Desai SIGNATURE 

COMPANY NAME U.S. Army, Fort Monmouth DATE 11/1/95
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION NJDEP CERTIFICATION NUMBER E0002266

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)1i].

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

NAME (Print or Type) James Ott SIGNATURE James Ott

COMPANY NAME U.S. Army, Fort Monmouth DATE 2/14/96

B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)2i]:

1. For a corporation, by a principal executive officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

SMITH

APPENDIX C

WASTE MANIFEST

Bldg. 210 ALL
File Copy

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 | Manifest Document No. 00015 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: US Army Communications Electronics Command, c/o James Shirghio, Bldg 2504, ATTN: SELFM-DL-EM-MS Fort Monmouth, NJ 07703 Main Post

4. Generator's Phone (908) 532-6223

A. State Manifest Document Number: NJA 1603206

B. State Generator's ID: Bldg 209-210 Main Post

5. Transporter 1 Company Name: Freehold Cartage Inc. | 6. US EPA ID Number: NJD054112611614 | C. State Transporter's ID: USDOE 5 2265

7. Transporter 2 Company Name | 8. US EPA ID Number | D. Transporter's Phone (908) 462-1001

E. State Trans. ID

9. Designated Facility Name and Site Address: Lionetti Oil Recovery Co., Inc. Runyon & Cheesequake Rds. Old Bridge, NJ 08857 | 10. US EPA ID Number: NJD084040464 | F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908) 721-0900

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X Petroleum Oil NOS Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III	001	TT	XX684	G	X722
b. X Petroleum Oil NOS Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III	001	TT	XX330	G	X722
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. T,L Petroleum Oil 80% Water 20%

b. T,L Petroleum Oil 80% Water 20%

c.

d.

K. Handling Codes for Wastes Listed Above

a. | b. | c. | d.

15. Special Handling Instructions and Additional Information

Not EPA regulated, regulated as hazardous waste in NJ
24 hour Emergency Response # 201-427-2881
NJ Decal# 5542 Placards NA-1993 ERG# 27

Bldg 209 UST # 81533-7 C-93-2611
Bldg 210 UST # 81533-8 C-93-2610

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Joseph M. Fallon | Signature: Joseph M. Fallon | Month Day Year: 02 07 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: David S. Smith | Signature: David S. Smith | Month Day Year: 02 07 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month Day Year

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

MAZZA & SONS, INC.

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

NO. _____

DATE 18 Feb 94

TK 210
Fort Manmouth

Customer's Name Cutt Inc

Address _____

Make of Autos

Tires

Tank

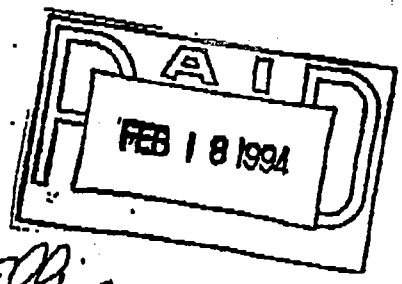
Price:

35740 LB G

39340 LB G

3600

	Weight	Price
Cast Iron		
Steel		
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators	5	
Battery	1	
TOTAL AMOUNT:		



Weigher Don Ellis Customer _____

SMITH

APPENDIX E

NJDEP WELL PERMITS AND WELL CONSTRUCTION LOGS

MONITORING WELL CERTIFICATION-FORM B-LOCAT CERTIFICATION

Name of Permittee: U.S. ARMY
Name of Facility: FORT MONMOUTH
Location: MONMOUTH COUNTY, NJ
~~NJPDES~~ Number: 94-1-25-0913-00
Dear

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 29-31792-
This number must be permanently affixed to the well casing.

Longitude (to nearest second): West 74°02'15.02"

Latitude (to nearest second): North 40°19'16.02"

Elevation of Top of Inner Casing (cap off) (one-hundredth of a foot): 10.82

Elevation of ground level (1/100th ft.) 8.58

Source of elevation datum (benchmark, nail, etc.) and year. (If an alternate datum has been approved by the Department, identify here, assume datum of 100', and give approximated actual elevation.) Source: MON. FM-5

☒ 1927 ☐ 1983

Elev.:

Owners Well Number (As shown on application or plans): BLDG 210 MW-1

Elevations are to be determined by double run, three wire leveling methods using balanced sights, commencing from a well marked and described point. This beginning point shall either be derived from Federal or State benchmarks if not more than 1000 feet from the site or from an alternate datum approved by the Department. Tolerances should meet third order standards, which are 0.05 ft x $(\text{miles})^{1/2}$. For sections less than 0.1 mile, let miles = 0.1.

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Wayne W. Burgett
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

WAYNE W. BURGETT
PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

SEAL

31654
PROFESSIONAL LAND SURVEYOR'S LICENSE #

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 31792
Atlas Sheet Coordinates ____ : ____ : 634

OWNER IDENTIFICATION - Owner US ARMY FORT MONMOUTH
Address SELM-IW-MV
City FORT MONMOUTH State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Bldg 210 MW-1
County MONMOUTH Municipality OCEANPORT BORO Lot No. ____ Block No. ____
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9, 22, 94
Regulatory Program Requiring Well NJT Case I.D. # 04-1-25-0913-20

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ____ Tele. # ____

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☑ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface 3 ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	2'	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	12'	4	20 slot PVC
Tail Piece				
Gravel Pack	1'	12'		#2 Morie Sand
Annular Seal/Grout	6"	1'		Bentonite Portland
Method of Grouting	Tremie			

Static water level after drilling 6 ft.
Water level was measured using tape
Well was developed for 1 hours at 10 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method auger
Drilling Fluid J Type of Rig B80
Name of Driller Michael E. Beck
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 14721
Name of Drilling Company ____

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6" Grassy area, top soil
6"-2' Light brown, fine sand + silts
2'-3' Light brown, medium sand
3'-7' Med. brown, med. sand w/ silts
7'-12' Med. brown, silty sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 10/13/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

SERIAL # 41171

DWR-133M (10/93)

Mail to

DEPE
Bureau Water Allocation
CN426
Trenton, NJ 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

Permit No. 931792

COORD #: 38 39

Owner US Army Fort Monmouth
Address SELFM-PW-EV
Fort Monmouth, NJ 07703
Name of Facility Building 210
Address Main Post
Fort Monmouth, NJ

Driller Tyree Organization, Ltd.
Address 1350 US Hwy 130
Burlington, NJ 08016

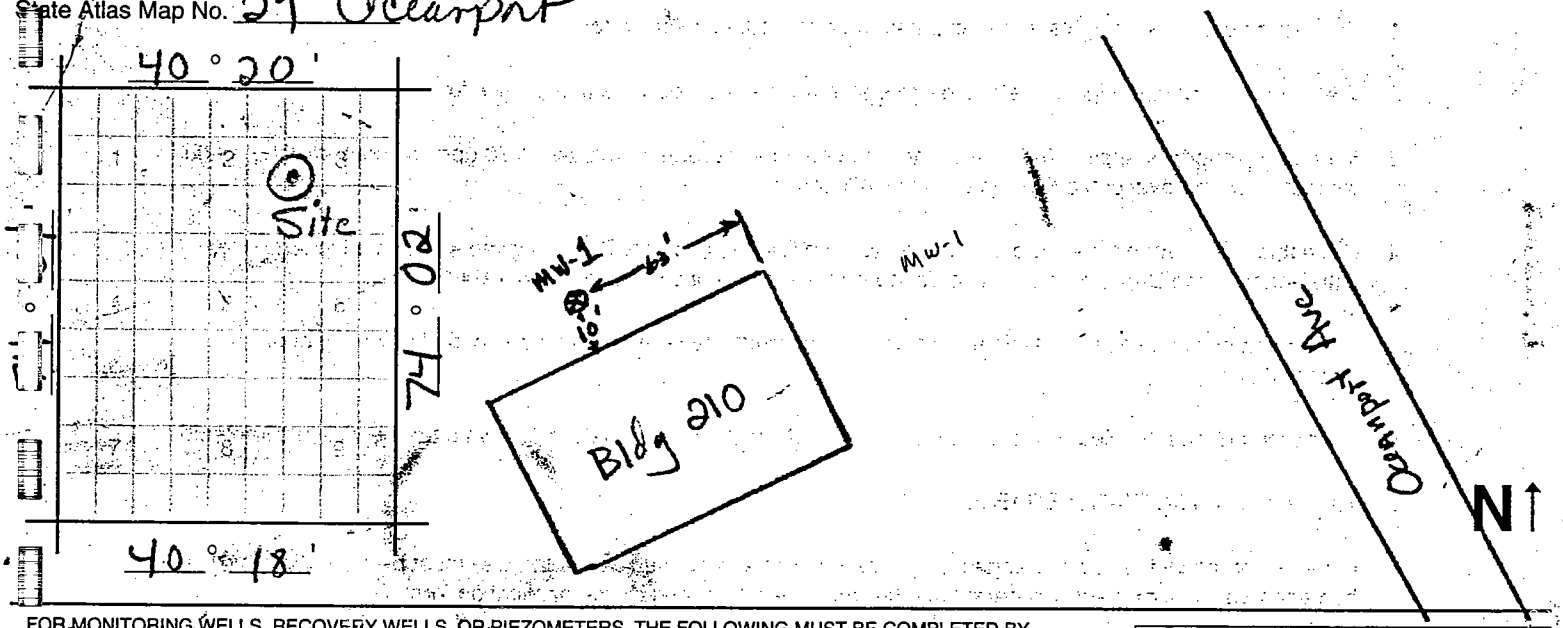
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	15 Feet
# of Wells Applied for (max. 10)	1	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	Monitoring	If Yes, give pump capacity	N/A GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
		~~Fort Monmouth~~	Monmouth

State Atlas Map No. 29 Oceanport

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____

CASE I.D. Number
94-1-25-0913-00
(Site Bldg 210)

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
AUG 3 1994
BUREAU OF WATER ALLOCATION

FOR D.E.P.E. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☐ For monitoring purposes only
☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 7-25-94

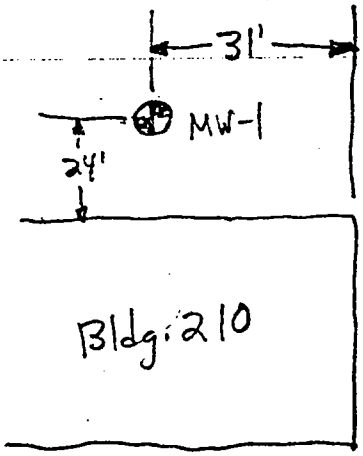
Signature of Driller _____ License # 1421

Signature of Owner _____ SELFM-PW-EV

FIELD LOG OF BORING

SHEET 1 OF 2

LOCATION OF BORING:



Ocean Port Ave

PROJECT: US Army Ft. Monmouth	BORING NO: MW-1
	TOTAL DEPTH: 12'
JOB NO:	LOGGED BY: E. Fye
PROJ. MGR.: Capritti	EDITED BY:
DRILLING CONTRACTOR: Tyree	
DRILL RIG TYPE: B 80	
DRILLERS NAME: M. Beck	
SAMPLING METHODS: SS	
HAMMER WT.: 140 lbs.	DROP:
STARTED, TIME: 11:00 AM	DATE:
COMPLETED, TIME: 2:00	DATE:
BORING DEPTH (ft): 12	
CASING DEPTH (ft): 2	
WATER DEPTH (ft): 6'2"	
TIME:	
DATE: 10/3/94	
BACKFILLED, TIME: 12:05 PM	DATE: 9/22/94 BY: Tyree
SURFACE ELEV:	DATUM:
CONDITIONS:	

SAMPLE DEPTH	SAMPLER TYPE	BLOWS / 6 IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min./ft.)	PID READING (ppm)	ODOR (Y / N ?)	GRAPHIC WELL CONST.	DEPTH IN FEET	GRAPHIC LOG	
												Grassy area, top soil
									Casing w/ 3' stick up bentonite	1	SM	Light brown, fine sand + silts
2-4'	SS	3	6	20			<1	N		2	SP	Light brown, medium sand
		2	6							3		Medium brown, medium sand with
		3	6									silts; wet at approx. 4'
		2	6				<1	N		4		
										5	SM	
									Screen Morie sand	6		
										7		Medium brown, silty sands
										8	SM	
										9		
										10		No samples were collected.

FIELD LOG OF BORING (CONTINUED)

SHEET 2 OF 2

DEPTH	TYPE	BLOWS	DRIVEN	REC'VD	COND.	D. RATE	PID	ODOR	GR.WELL	DEPTH	GRAPHIC LOG
									Screen / Sand	11	SM
										12	
										13	
										4	
										5	
										6	
										7	
										8	
										9	
										0	
										1	
										2	
										3	
										4	
										5	
										6	
										7	
										8	

PROJECT: | NO: | BORING NO: MW-1

No Samples Taken

TYREE ENVIRONMENTAL TECHNOLOGIES

SMITH

APPENDIX F

SOIL ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

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

Client: U.S. Army
DEH, SELFM-EH-EV
Bldg. 167
Ft. Monmouth, NJ 07703

Lab. ID #: 1370.1-.5
Sample Rec'd: 01/14/94
Analysis Start: 01/18/94
Analysis Comp: 01/18/94

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: Sonc.

NJDEPE UST Reg.#: **81533-08**
TMS #:
NJDEPE Case #:
Location #: **210**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1370.1	Near Foundation (A) hNu=NA +	84	3440.	20.
1370.2	Center West Wall (B) hNu=NA +	89	21.6	3.3
1370.3	Center North Wall (C) hNu=NA +	86	15.9	3.3
1370.4	Under Piping E.Wall (D) hNu=NA +	85	17.7	3.3
1370.5 *	Dupe. of A - E hNu=NA +	88	90.4	3.3
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
+ = Temp. and Weather Conditions prohibited hNu use.
1370.2 Dup.= 93% 1370.2 Spike=120%, 1370.2 Spike Dup.=123%, RPD=19%

Brian K. McKee
Laboratory Director

* E is the Duplicate of A
IGNORE (1370.1)
A is correct (Lab ID 1370.1)

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

Client: U.S. Army
DEH, SELFM-EH-EV
Bldg. 167
Ft. Monmouth, NJ 07703

Lab. ID #: 1370.1-.5
Sample Rec'd: 01/14/94
Analysis Start: 01/18/94
Analysis Comp: 01/18/94

Analysis: Munsel

Lab ID#	Soil Color
1370.1	2.5Y 4/3 Olive Brown
1370.2	2.5Y 5/6 Light Olive Brown
1370.3	2.5Y 5/6 Light Olive Brown
1370.4	2.5Y 5/6 Light Olive Brown
1370.5	2.5Y 4/4 Olive Brown

Brian K. McKee
Laboratory Director

1/18/94 3:52 PM

SERV-AIR, INC.
An E-SYSTEMS Company

P.O. #:

Chain of Custody

Project #:

Customer:

Phone:

Sampler: Rodikovsky

Site Name: B209 550 gal
UST# 00815338

Date / Time

Analysis Parameters: T P H C

Start:

Finish:

Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	T	P	H	C	Remarks
1370.1	1/14	1400	A near foundation	So.1	1				X	WJ = WA
1370.2		1410	B Cent. West Wall		1				X	
1370.3		1413	C Cent North Wall		1				X	
1370.4		1415	D Underfiping E Wall		1				X	
1370.5		1418	E Dup of A		1				X	

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
Rodikovsky	1-14-94 / 1500		

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

FT. MONMOUTH OFFICE
E-SYSTEMS, INC. • P. O. BOX 369, BUILDING 1209 • FT. MONMOUTH, NEW JERSEY 07703-5000 • (201) 544-0995

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank	✓	
2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)		✓
3. IR Spectra submitted for standards, blanks, & samples		✓
4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	N/A	
5. Extraction holding time met. (If not met, list number of days exceeded for each sample)		✓
6. Analysis holding time met. (If not met,list number of days exceeded for each sample)		✓

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.

Brian K. McKee
Laboratory Manager

Jan. 18, 1994 1152
Bldg. 209 Sarah J. Fitzhardt

Blank	0 MV
20.75	95 MV
81.5	193 MV
163	396 MV
1370.1	348
1370.2	11 MV
1370.2 Dup	10 MV
1370.2 Spk	108
1370.2 Dup Spk	111 MV
1370.3	7 MV
1370.4	8 MV
1370.5	55 MV

618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489 • 609-467-9521

E-SYSTEMS, INC./SERV-AIR

PROJECT: U.S. ARMY-FORT MONMOUTH BLDG 210

ANALYSIS NO:	CLIENT ID:
B 0189	1370.1

DATE RECEIVED: JANUARY 20, 1994

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

Richard W. Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	___	✓
2. GC/MS Tune Specifications		
a. BFB Meet Criteria	___	✓
b. DFTPP Meet Criteria	___	N/A
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.	___	✓
4. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	___	✓
5. GC/MS Calibration Requirements		
a. Calibration Check Compounds	___	✓
b. System Performance Check Compounds	___	✓

6. Blank Contamination - If yes, list compounds and concentrations in each blank:

a. VOA Fraction None - Extraction Blank: Methyl Below MDL
b. B/N Fraction _____
c. Acid Fraction _____

7. Surrogate Recoveries Meet Criteria	___	✓

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"?	___	N/A
8. Matrix Spike/ Matrix Spike Duplicate Recoveries Meet Criteria	___	✓

(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 _____

9. Internal Standard Area/Retention Time Shift Meet Criteria	___	✓

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

	No	Yes
10. Extraction Holding Time Met	___	✓
If not met, list number of days exceeded for each sample: _____		
11. Analysis Holding Time Met	___	✓
If not met, list number of days exceeded for each sample: _____		

Additional Comments: No T.B. or F.B. submitted for this Sample

Laboratory Manager: B. McKee Date: 2/10/94

TABLE OF CONTENTS

NARRATIVE

There were no problems encountered during the analysis of this sample (B0189). All analysis were completed within proper hold times.

~~B0189 DHT~~

B0189

SERV-AIR, INC.
An E-SYSTEMS Company

P.O. #: U.S.T. TANK Removal

Chain of Custody 0002

Project #:	Sampler: George Rochkovsky	Date / Time 1/19/94 1335	Analysis Parameters	Start:
Customer: Serv-Air, Inc	Site Name: U.S. Army Base Fort Monmouth			Finish:
Phone: (908) 532-4359				Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	VOA +15	Remarks
137001	1/14/94	1400	A-Near Foundation Bldg. ~~259~~ 210	Soil	1 (4oz.)	X	To cold for hNu
			UST# 0081533-8				

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Relinquished By (signature) Sarah J. Hubbard	Date / Time 1/19/93 1400	Received for Lab by (signature): Federal Express	Date / Time 1/19/94 1402

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

FT. MONMOUTH OFFICE

Purgeables

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/ Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240/8260 from SW-846.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 1/20/94

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles 1/24/94
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor
Review & Approval Jeffrey G Martin

INORGANICS

1. Metals NA
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

Section Supervisor
Review & Approval NA

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Symes

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

RESULT SUMMARY

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	B0189	DILUTION FACTOR	125.00
CLIENT ID	A-NEAR FOUNDATION BLDG 210	COMMENTS	HNU NA
DATA FILE	>A4850	DATE ANALYZED	01/24/94

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	7400	2-Chloroethylvinylether	ND	1500
Acrylonitrile	ND	7400	2-Hexanone	ND	1500
Chloromethane	ND	1500	trans-1,3-Dichloropropene	ND	740
Bromomethane	ND	1500	Toluene	ND	740
Vinyl Chloride	ND	1500	cis-1,3-Dichloropropene	ND	740
Chloroethane	ND	1500	1,1,2,2-Tetrachloroethane	ND	740
Acetone	620 J	1500	1,1,2-Trichloroethane	ND	740
1,1-Dichloroethene	ND	740	4-Methyl-2-pentanone	ND	1500
Carbon Disulfide	ND	1500	Tetrachloroethene	ND	740
Methylene Chloride	220 JB	740	Dibromochloromethane	ND	740
1,2-Dichloroethene(trans)	ND	740	Chlorobenzene	ND	740
1,1-Dichloroethane	ND	740	Ethylbenzene	ND	740
Vinyl Acetate	ND	740	m&p-Xylenes	420 J	740
2-Butanone	ND	1500	o-Xylene	ND	740
Chloroform	ND	740	Styrene	ND	740
1,1,1-Trichloroethane	2500	740	Bromoform	ND	740
Carbon Tetrachloride	ND	740	m-Dichlorobenzene	ND	740
1,2-Dichloroethane	ND	740	p-Dichlorobenzene	ND	740
Benzene	ND	740	o-Dichlorobenzene	ND	740
Trichloroethene	ND	740	Methyl Tertiary Butyl Ether	ND	1500
1,2-Dichloropropane	ND	740	Tertiary Butyl Alcohol	ND	7400
Bromodichloromethane	ND	740			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	105	81 - 117	OK
Bromofluorobenzene	101	74 - 121	OK

Percent Solid of 84.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

A NEAR FOUND.

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 210

Matrix: (soil/water) SOIL

Lab Sample ID: B0189

Sample wt/vol: .04 (g/mL) g

Lab File ID: >A4850

Level: MED

Date Received: 01/20/94

% Moisture: 16

Date Analyzed 01/24/94

Column: CAP

Dilution Factor: 125

Number TICs Found 19

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	3073663	Cyclohexane, 1,1,3-trimethyl- (8CI9CI)	16.08	3600
2	7667609	Cyclohexane, 1,2,4-trimethyl-, (1.alpha.,2.b	16.45	3800
3	2216333	Octane, 3-methyl- (8CI9CI)	16.66	2300
4	4926787	Cyclohexane, 1-ethyl-4-methyl-, cis- (8CI9CI	17.40	2600
5	53941198	2-Hexene, 3,4,4-trimethyl- (9CI)	17.97	6200
6	1678928	Cyclohexane, propyl- (8CI9CI)	18.51	7500
7	4291809	Cyclohexane, 1-methyl-3-propyl- (8CI9CI)	19.76	3600
8	1074551	Benzene, 1-methyl-4-propyl- (9CI)	20.81	5100
9	1678984	Cyclohexane, (2-methylpropyl)- (9CI)	20.95	8000
10	141935	Benzene, 1,3-diethyl- (9CI)	21.63	6800
11	91178	Naphthalene, decahydro- (8CI9CI)	21.89	14000
12	32281859	Cyclopentane, 2-isopropyl-1,3-dimethyl- (8CI	22.40	2600
13	2870044	Benzene, 2-ethyl-1,3-dimethyl- (9CI)	22.52	12000
14	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	22.77	11000
15	527855	Benzamide, 2-methyl- (9CI)	23.10	9900
16	527537	Benzene, 1,2,3,5-tetramethyl- (8CI9CI)	23.27	6500
17	1196583	Benzene, (1-ethylpropyl)- (8CI9CI)	23.50	12000
18	18321363	Benzene, (1,1-dimethyl-2-propenyl)- (9CI)	23.81	3700
19	767997	Benzene, (1-methyl-1-propenyl)-, (Z)- (9CI)	23.90	5800

DATA PACKAGE

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	B0189	DILUTION FACTOR	125.00
CLIENT ID	A-NEAR FOUNDATION BLDG 210	COMMENTS	HNU NA
DATA FILE	>A4850	DATE ANALYZED	01/24/94

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Vinyl Chloride	ND	1500	cis-1,3-Dichloropropene	ND	740
Chloroethane	ND	1500	1,1,2,2-Tetrachloroethane	ND	740
Acetone	620 J	1500	1,1,2-Trichloroethane	ND	740
1,1-Dichloroethene	ND	740	4-Methyl-2-pentanone	ND	1500
Carbon Disulfide	ND	1500	Tetrachloroethene	ND	740
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1,2-Dichloroethene(trans)	ND	740	Chlorobenzene	ND	740
1,1-Dichloroethane	ND	740	Ethylbenzene	ND	740
Vinyl Acetate	ND	740	m&p-Xylenes	420 J	740
2-Butanone	ND	1500	o-Xylene	ND	740
Chloroform	ND	740	Styrene	ND	740
1,1,1-Trichloroethane	2500	740	Bromoform	ND	740
Carbon Tetrachloride	ND	740	m-Dichlorobenzene	ND	740
1,2-Dichloroethane	ND	740	p-Dichlorobenzene	ND	740
Benzene	ND	740	o-Dichlorobenzene	ND	740
Trichloroethene	ND	740	Methyl Tertiary Butyl Ether	ND	1500
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SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	105	81 - 117	OK
Bromofluorobenzene	101	74 - 121	OK

Percent Solid of 84.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

A NEAR FOUND.

Client Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 210

Matrix: (soil/water) SOIL Lab Sample ID: B0189

Sample wt/vol: .04 (g/mL) g Lab File ID: >A4850

Level: MED Date Received: 01/20/94

% Moisture: 16 Date Analyzed 01/24/94

Column: CAP Dilution Factor: 125

Number TICs Found 19 CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	3073663	Cyclohexane, 1,1,3-trimethyl- (8CI9CI)	16.08	3600
2	7667609	Cyclohexane, 1,2,4-trimethyl-, (1.alpha.,2.b	16.45	3800
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4	4926787	Cyclohexane, 1-ethyl-4-methyl-, cis- (8CI9CI	17.40	2600
5	53941198	2-Hexene, 3,4,4-trimethyl- (9CI)	17.97	6200
6	1678928	Cyclohexane, propyl- (8CI9CI)	18.51	7500
7	4291809	Cyclohexane, 1-methyl-3-propyl- (8CI9CI)	19.76	3600
8	1074551	Benzene, 1-methyl-4-propyl- (9CI)	20.81	5100
9	1678984	Cyclohexane, (2-methylpropyl)- (9CI)	20.95	8000
10	141935	Benzene, 1,3-diethyl- (9CI)	21.63	6800
11	91178	Naphthalene, decahydro- (8CI9CI)	21.89	14000
12	32281859	Cyclopentane, 2-isopropyl-1,3-dimethyl- (8CI	22.40	2600
13	2870044	Benzene, 2-ethyl-1,3-dimethyl- (9CI)	22.52	12000
14	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	22.77	11000
15	527855	Benzamide, 2-methyl- (9CI)	23.10	9900
16	527537	Benzene, 1,2,3,5-tetramethyl- (8CI9CI)	23.27	6500
17	1196583	Benzene, (1-ethylpropyl)- (8CI9CI)	23.50	12000
18	18321363	Benzene, (1,1-dimethyl-2-propenyl)- (9CI)	23.81	3700
19	767997	Benzene, (1-methyl-1-propenyl)-, (Z)- (9CI)	23.90	5800

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 210
Main Post Area

NJDEP UST Registration No. 081533-8
NJDEP Closure Approval No. C-93-2610

Volume 2 of 2
Appendix G

February 1996

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

SMITH

APPENDIX G

GROUNDWATER ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

EMSL

nvironmental
laterials
sbestos

New Jersey

Corporate Office &
Main Laboratory
308 Haddon Avenue
Westmont, NJ 08108
(609) 858-4800

Cherry Street
Westmont, NJ 08108
(609) 858-9573

1050 Stelton Road
Scotch Plains, NJ 08854
(908) 981-0550

New York

1008 Stonehenge Lane
Garden Place, NY 11514
(516) 997-7251

Georgia

1600 Roswell Street, SE
Suite One
Smyrna, GA 30080
(404) 333-6066

Florida

1878 Adams Avenue
Melbourne, FL 32935
(407) 253-4224

Michigan

2150 S. Wagner Road
Ann Arbor, MI 48103
(313) 668-6810

California

1720 S. Amphlett Boulevard
Suite 130
San Mateo, CA 94402
(415) 570-5401

ANALYTICAL DATA REPORT
FOR
U.S. ARMY, FORT MONMOUTH
SELFM-PW-EV
Building 173
Fort Monmouth, NJ 07703

PROJECT : **94125091300**

EMSL Project: # 9508318

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1835.1 Bldg. 210, MW1-2931792	95-23342	Aqueous	5/19/95 @ 1042	5/22/95
Trip Blank	95-23340	Aqueous	5/19/95 @ 0615	5/22/95
Field Blank	95-23341	Aqueous	5/19/95 @ 1533	5/22/95

Laboratory Name: EMSL ANALYTICAL, INC.

Certification No.:
NJDEP No. 04653
PADER No. 68-367
NY-ELAP No. 10896

Supervisor/Manager Signature: Paul Laraia

Printed Name: Paul V. Laraia

Date: 06-27-95

EMSL

TABLE OF CONTENTS

EMSL

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 06/26/95
Project Number: 09508318
Lab ID: 95-0023342
Date Collected: 05/19/95 10:42
Collected By: Client
Date Received: 05/22/95 07:00

ttention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth NJ 07703

Client Project: 94125091300

Client Designation: Bldg.210 MW1-2931792

	Conc.	Unit
RGANIC		
Semi-Volatiles		
BN by 625 with Library Search	see attached	ug/l
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9523342B

Bldg 210 MIL-2931782

05

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523342B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7813.D

Level: (low/med) _____ Date Received: 5/22/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-nitrosodimethylamine	2	U
111-44-4	bis(2-Chloroethyl)ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	2	U
108-60-1	bis(2-chloroisopropyl)ether	5	U
621-64-7	N-Nitroso-Di-n-propylamine	2	U
67-72-1	Hexachloroethane	1	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	1	U
111-91-1	bis(2-Chloroethoxy)methane	3	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
87-68-3	Hexachlorobutadiene	2	U
77-47-4	Hexachlorocyclopentadiene	12	U
91-58-7	2-Chloronaphthalene	1	U
131-11-3	Dimethylphthalate	1	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	2	U
83-32-9	Acenaphthene	3	U
121-14-2	2,4-Dinitrotoluene	3	U
84-66-2	Diethylphthalate	1	U
86-73-7	Fluorene	3	U
7005-72-3	4-Chlorophenyl-phenylether	3	U
86-30-6	n-Nitrosodiphenylamine	6	U
122-66-7	1,2-Diphenylhydrazine(as azo)	6	U
101-55-3	4-Bromophenyl-phenylether	2	U
118-74-1	Hexachlorobenzene	2	U
85-01-08	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	1	U
92-87-5	Benzidine	1	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9523342B

Bldg 210 MW1-29-1792

06

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523342B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7813.D

Level: (low/med) _____ Date Received: 5/22/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
129-00-0	Pyrene	2	U
85-68-7	Butylbenzylphthalate	9	U
56-55-3	Benzo[a]anthracene	2	U
91-94-1	3,3'-Dichlorobenzidine	15	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	U
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo[b]fluoranthene	1	U
207-08-9	Benzo[k]fluoranthene	2	U
50-32-8	Benzo[a]pyrene	2	U
193-39-5	Indeno[1,2,3-cd]pyrene	2	U
53-70-3	Dibenz[a,h]anthracene	3	U
191-24-2	Benzo[g,h,i]perylene	2	U

US ARMY [illegible]

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9523342B
Bldg 216 MW1-393182

07

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9523342B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B7813.D

Level: (low/med) Date Received: 5/22/95

% Moisture: 0 decanted: (Y/N) N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	Unknown	29.86	4	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

US Army Ft. Monmouth N.J. 08

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETL # 1835.1

Bldg 210 MW1-295792

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523342
Lab File ID: C8333.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

CAS NO.	COMPOUND		COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	2.2	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US ARMY Ft. Monmouth N.J.

09

1A

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA 524.2

FMETL # 1835,1

Bldg 210 MW1-293/792

Lab Name: EMSL ANALYTICAL

Matrix (soil/water): WATER

Sample wt/vol: 25 mL

Level (low/med): LOW

% Moisture: not dec.: NA

GC Column: DB-624 x 75m ID: 0.53mm

Soil Extract Volume: NA

Lab Sample ID: 9523342

Lab File ID: C8333.D

Date Received: 05/22/95

Date Analyzed: 06/02/95

Dilution Factor: 1

Soil Aliquot Volume: NA

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

CAS NO.	COMPOUND		COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT

U= Not Detected

BLDG.#: 210 MW#: 1 NJDEPE WELL ID # 2931792 10

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 5-19-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #:

SAMPLERS NAMES: Tom Baxter Susan Palilonis

WEATHER CONDITIONS: Cool, breezy, damp

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 15.07 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____ FT

LENGTH OF SCREENED SECTION: ____ FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 6.52 FT

ELEVATION OF GW PRIOR TO PURGING: ____.___ FT

THICKNESS OF LNAPL PRIOR TO PURGING : ____.___ FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 5.4 PPM 917 am DO 3.7 ppm.

pH: 6.62 TEMP: 59.1 F, SPECIFIC CONDUCTIVITY: ~~[illegible]~~ 413 µs/cm

DEPTH OF WELL: ____.___ FT

HEIGHT OF WATER: ____.____ FT

EVACUATED GAL. H2O: 17 GAL (8.55 X .65 X 3 = 16.6725

PURGING START TIME: 924 END TIME: 1020

PURGE METHOD: (FLOW RATE OF <0.5 GPM TO >5.0 GPM) Pump

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 17 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 8.71 FT

DISSOLVED OXYGEN: 3.5 ppm pH: 5.87 TEMP: 56.1 °F

SPECIFIC CONDUCTIVITY: 356 µs/cm

SAMPLING METHOD: DEDICATED, DECONTAMINATED (IAW NJDEP FSPM 1992) TEFLON® BAILER

START TIME OF SAMPLING: 1036 END TIME: 1042

DISSOLVED OXYGEN: 4.0 ppm pH: 6.45 TEMP: 57.0 °F

SPECIFIC CONDUCTIVITY: 326 µs/cm

COMMENTS: on site 825 am *Restricted area Referred to site 95 next to Construction site slow recharge clear no odor

check [illegible] site

EMSL

Date of Report: 06/26/95
Project Number: 09508317
Lab ID: 95-0023340
Date Collected: 05/19/95 16:31
Collected By: Client
Date Received: 05/22/95 07:00

Attention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth NJ 07703

Client Project: 94518093636

Client Designation: Trip Blank

	Conc.	Unit
ORGANIC		
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l

US ARMY Ft. Monmouth N.J.

1A

VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETL #1835,2
BLG.210
TRIP BLANK

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523340
Lab File ID: C8331.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	6.4	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis 1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.80	
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

J= Not Detected

US Army Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETC #1835,2
Bldg. 210
TRIP BLANK

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523340
Lab File ID: C8331.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.60	
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Bldg. 210
9523341B
Field Blank

15

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523341B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7812.D

Level: (low/med) _____ Date Received: 5/22/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-nitrosodimethylamine	2	U
111-44-4	bis(2-Chloroethyl)ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	2	U
108-60-1	bis(2-chloroisopropyl)ether	5	U
621-64-7	N-Nitroso-Di-n-propylamine	2	U
67-72-1	Hexachloroethane	1	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	1	U
111-91-1	bis(2-Chloroethoxy)methane	3	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
87-68-3	Hexachlorobutadiene	2	U
77-47-4	Hexachlorocyclopentadiene	12	U
91-58-7	2-Chloronaphthalene	1	U
131-11-3	Dimethylphthalate	1	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	2	U
83-32-9	Acenaphthene	3	U
121-14-2	2,4-Dinitrotoluene	3	U
84-66-2	Diethylphthalate	1	U
86-73-7	Fluorene	3	U
7005-72-3	4-Chlorophenyl-phenylether	3	U
86-30-6	n-Nitrosodiphenylamine	6	U
122-66-7	1,2-Diphenylhydrazine(as azo)	6	U
101-55-3	4-Bromophenyl-phenylether	2	U
118-74-1	Hexachlorobenzene	2	U
85-01-08	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	1	U
92-87-5	Benzidine	1	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
Bldg 210
9523341B
Field Blank

16

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523341B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7812.D

Level: (low/med) _____ Date Received: 5/22/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
129-00-0	Pyrene	2	U
85-68-7	Butylbenzylphthalate	9	U
56-55-3	Benzo[a]anthracene	2	U
91-94-1	3,3'-Dichlorobenzidine	15	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	U
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo[b]fluoranthene	1	U
207-08-9	Benzo[k]fluoranthene	2	U
50-32-8	Benzo[a]pyrene	2	U
193-39-5	Indeno[1,2,3-cd]pyrene	2	U
53-70-3	Dibenz[a,h]anthracene	3	U
191-24-2	Benzo[g,h,i]perylene	2	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
Bldg 210
9523341B
Field Blank

17

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523341B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B7812.D

Level: (low/med) _____ Date Received: 5/22/95

% Moisture: 0 decanted: (Y/N) N Date Extracted: 5/26/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/3/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	Unknown	29.88	7	J
2.				
3.				
4.				
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28.				
29.				
30.				

US Army Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETC #1835,3
Bldg 210
Field Blank

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523341
Lab File ID: C8332.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	6.3	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US Army Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FM ETL #1835.2
Bldg 210
Field Blank

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523341
Lab File ID: C8332.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

EMSL

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, 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 be included in one section of the data package and in the main body of the report.

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name, address & date of report.	X
2.	Table of Contents	X
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	X
4.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s.	X
5.	Document bound, paginated and legible.	X
6.	Chain of Custody	X
7.	Methodology Summary	X
8.	Laboratory Chronicle and Holding Time Check.	X
9.	Results submitted on a dry weight basis (if applicable).	X
10	Method Detection Limits.	X
11	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEP CLP.	X
12	Non-Conformance Summary	X

Paul Tarais

Laboratory Manager or Environmental Consultant's Signature

06-27-95

Date

EMSL

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. Checklist which must be attached to the Summary

The following information must be reported in the Closure Plan Implementation Summary for all laboratory analyses performed in the compliance with the site assessment requirements:

Page #		
1	1.	Name and address of the facility.
1	2.	Name of the laboratory performing the sample analysis.
1	3.	NJDEP certification number assigned to the laboratory pursuant to N.J.A.C. 7:18.
1	4.	Laboratory sample identification number.
1	5.	Customer sample identification number corresponding to the laboratory sample identification.
1	6.	Sample Location (also on the site diagram).
1	7.	Matrix of the sample analyzed (i.e., water or sediments; including soil, sediment, and sludges). All sediment results must be reported on a dry weight basis.
28-29	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
30	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
3-19	12.	Sample results and corresponding units for each parameter.

EMSL

CHAIN OF CUSTODY AND PRESERVATION CHECKLIST

U.S. ARMY FORT MONMOUTH

C1508318

P.O. #: IJO # 95-0091 / SAI

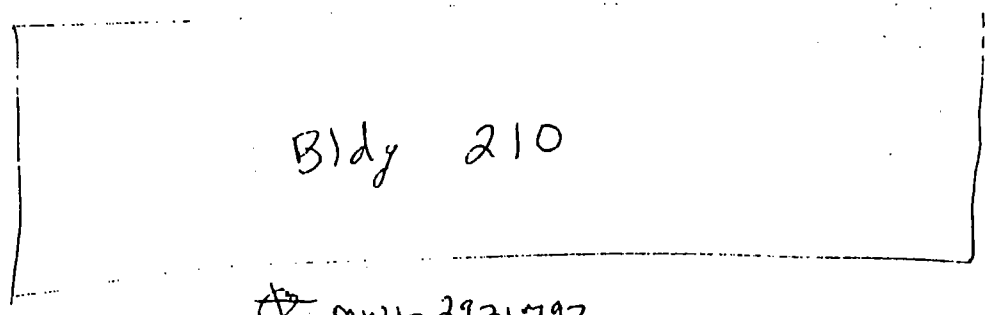
Chain of Custody

Project #: 941250913.00	Sampler: EMSL (Baxter)	Date / Time 5/19/95 | 1042	Analysis Parameters
Customer: Barns Appleby SELFM-AS-E.V.	Site Name: Bldg 210 MW Sampling		Start: — Finish: —
Phone: 908-532-6224			Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	VOA 524.2	BNAs (with 625)	Xylene & Chlorobenzene	Remarks
1835:1	5/19/95 1042	Bldg 210 mw1-2931792	Aq.	5	X	X	23348	Samples Kept < 4°C
1835:2	5/19/95 615 am	Trip Blank	Aq.	3	X		23340	
1835:3	5/19/95 1533	Field Blank	Aq	5	X	X	23341	

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
	5/19/95 | 1705		EMSL
Relinquished By (signature)	Date / Time	Received For Lab by (signature):	Date / Time
	5/19/95 | 19:25		5/22 | 07:00

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



water.

To be completed upon sample receipt

[illegible]

Place an X in box if okay.
Record actual pH if outside
acceptable range
Record temperature of cool blank
Circle YES if samples are cooled.
Record corrective action in remarks.

			pH ≤ 2									>9	≥ 12	deg C	SAMPLES	
NH3	TKN	TOX	VOA*	PHENOL	TOC	PHC	O&G	METALS	HARD	TPO4	NO2&3	SO2	TCN	TEMP	EMSL #	REMARKS
H2SO4	H2SO4	H2SO4	HCL	H2SO4	H2SO4	H2SO4	H2SO4	HNO3	HNO3	H2SO4	H2SO4	NaOH ZNAC	NaOH			
			X											4	233[illegible]	

25

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-23340 to 95-23342 PROJECT NO. 9508318

SAMPLE/CONTAINERS ______ PARAMETERS ______

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
5/26/95		BN Extraction Prep	Charles Bartolone	Charles Bartolone

INTERNAL CUSTODY

Project #: 9508318

Lab ID #'s: 95-23340 to 95-2334

Analyst

	Name (please print)	Signature	Date
1. Base/Neutrals	Scott Van Etten	SVE	6/3/95
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals:			
Flame			
Furnace			
ICP			
7. Volatiles:			
GC			
GC/MS	Scott Kessler	S. Kessler	6/2/95
8. TOC			
9. TOX			
10. Phenols (Total)			
11. Cyanide (Total)			
12. TPH -IR			
13. Mercury			
14. Other			
15. Other			
16. Other			

EMSL

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

This is a purge and trap gas chromatograph/mass spectrometer (GC/MS) method. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer.

An HP5890/5970 GC/MS was used with a capiullary column (DB-624 0.53 mn ID).

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

EPA Method 625 - This is a gas chromatograph/mass spectrometer (GC/MS) method applicable to the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. Reference is Federal Register, Vol. 40, No. 136, July, 1988.

An HP5890/5970B GC/MS is used with a DB-5 fused silica capillary column.

If tentatively identified compounds are requested, a computer program analyzes the non-priority pollutant/HSL/TCL compounds with standard mass spectra found in the latest version of the NIH/NBS/EPA mass spectral library.

Method detection limits are as stated.

EMSL

LABORATORY CHRONICLE

Lab ID: **95-23340 to 95-23342**

Client: **U.S. Army, Fort Monmouth**

	I DATE	II	Hold Time
Date Sampled	**5/19/95**		
Receipt/Refrigeration	**5/22/95**		
Extractions			
1. Semivolatile Organics	**5/26/95**		**7 days**
Analyses			
1. Volatile Organics	**6/2/95**		**14 days**
2. Semivolatile Organics	**6/3/95**		**40 days**

QC Supervisor
Review & Approval

(Signature) Paul Tonas for

(Printed Name) Peter B. Panton

(Date) 06-27-95

NOTE: If fractions are re-extracted and re-analyzed because the initial endeavors failed to meet the required Quality Control Criteria, the dates of re-extraction and/or re-analysis will be entered in Column II Additionally.

EMSL

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2. GC/MS Tune Specifications		
a. BFB Meet Criteria		X
b. DFTPP Meet Criteria		X
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.		X
4, GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of. sample analysis for 600 series and 12 hours for 8000 series.		X
5. GC/MS Calibration - Initial Requirements		
a. Calibration Check Compounds		X
b. System Performance Check Compounds		X
6. Blank Contamination - If yes, list compounds and concentrations in each blank:		X
a. VOA Fraction **Methylene Chloride 4.7 ppb.**		
b. B/N Fraction		
c. Acid Fraction		
7. Surrogate Recoveries Meet Criteria		X
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"?		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	X	
a. VOA Fraction **Methylene Chloride MS/MSD 69%/70%; Xylene (para & meta) MS 65% RPD 32; Xylene (ortho) MS 70% RPD 30; Styrene MS/MSD 21%/39% RPD 62; 1,1,2,2-Tetrachloroethane MS/MSD 122%/124%.**		
b. B/N Fraction		
c. Acid Fraction		
9. Internal Standard Area/Retention Time Shift Meet Criteria		X

EMSL

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT, cont.

		No	Yes
10.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
11.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

12. Definitions:
U=Not Detected. J=Detected, but below report detection limit.
B=Compound found in blank. E=Estimated concentration. NA=Not Applicable

Additional Comments:

Laboratory Manager Paul Fonaig Date: 06-27-95

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523342 Thwl-2931792
Lab File ID: C8333.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	2.2	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9523342 MW1-293/792
Lab File ID: C8333.D
Date Received: 05/22/95
Date Analyzed: 06/02/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

9523342V
MCW1-293192

Lab Name: EMSL ANALYTICAL Contract: _____

Project No. _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9523342V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8333.D

Level: (low/med) LOW Date Received: 5/22/95

% Moisture: not dec. NA Date Analyzed: 6/2/95

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
2.				
3.				
4.				
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30.				

New Jersey Department of Environmental Protection
Division of Water Resources
Bureau of Underground Storage Tanks
CN-029, Trenton, New Jersey 08625

LABORATORY AUTHENTICATION STATEMENT

I certify under penalty of law, where applicable, this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18, 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analyses. I have personally examined and am familiar with the information contained in this report, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, complete, and meets the standards specified in N.J.A.C. 7:18, 40 CFR Part 136, and/or SW 846. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Paul Faraia

Laboratory Manager (as defined in N.J.A.C. 7:18)

EMSL ANALYTICAL, INC.

Asbestos - Lead - Environmental - Materials

EMSL

Jersey

Corporate Office &
M[illegible] Laboratory
10[illegible] [illegible]addon Avenue
Westmont, NJ 08108
(609) 858-4800

3 [illegible]per Street
W[illegible]mont, NJ 08108
(609) 858-4800

10[illegible] Stelton Road
Pi[illegible]taway, NJ 08854
(9[illegible]) 981-0550

New York

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Empire State Bldg.
Suite 1524
N[illegible] York, NY 10118
([illegible]) 290-0051

208 Stonehenge Lane
Carle Place, NY 11514
([illegible]) 997-7251

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[illegible]te 130
[illegible] Mateo, CA 94402
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[illegible]lorida

[illegible]78 Adams Avenue
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(407) 253-4224

[illegible]eorgia

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[illegible]nn Arbor, MI 48103
(313) 668-6810

North Carolina

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Greensboro, NC 27409
(910) 297-1487

Texas

2501 Central Parkway
Suite C-13
Houston, TX 77092
(713) 686-3635

ANALYTICAL DATA REPORT
FOR
U.S. ARMY, FORT MONMOUTH
SELFM-PW-EV
Building 173
Fort Monmouth, NJ 07703

PROJECT : **#94125091300**

EMSL Project: # 95063936

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1861.1, Trip Blank	**95-26426**	**Aqueous**	**6/13/95 @ 0605**	**6/13/95**
1861.2, Field Blank	**95-26427**	**Aqueous**	**6/13/95 @ 1535**	**6/13/95**
1864.1, MW1-2931792, Bldg. #210	**95-26433**	**Aqueous**	**6/13/95 @ 1315**	**6/13/95**

Laboratory Name	EMSL ANALYTICAL, INC.
Certification No.	NJDEP No. 04653 PADER No. 68-367 NY-ELAP No. 10896
Supervisor/Manager Signature	Paul Laraia
Printed Name	Paul V. Laraia
Date	07-17-95

REPORT NARRATIVE

All initial runs for the Ft. Monmouth P.O. #IJO #95-0091/SAI were analyzed within hold. The samples were taken by EMSL between the dates of 5/18/95 thru 5/25/95.

There was a problem with the water used for the field and trip blanks. On certain days the field crew used DI water from the incorrect system resulting in low level contamination of Toluene, 2-Chlorotoluene and sometimes Chlorobenzene. However the resultant concentrations of these compounds were very low and the samples accompanying these field and trip blanks did not show these compounds to be present.

EMSL

TABLE OF CONTENTS

EMSL

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 07/17/95
Project Number: 95063933
Lab ID: 95-0026426
Date Collected: 06/13/95 06:05
Collected By: Client
Date Received: 06/13/95 18:50

Attention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth NJ 07703

Client Project: 931021191016

Client Designation: Bldg #206,Trip Blank

	Conc.	Unit
ORGANIC		
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l

Ft. Monmouth NJ
U.S. Army
TRIP BLANK

FMETL# 1861.1

005

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9526426
Lab File ID: C8623.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	2.3	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U) Not Detected

Monmouth NJ FMETL# 1861.1
U.S. Army
TRIP BLANK

006

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9526426
Lab File ID: C8623.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U = Not Detected

Monmouth NJ
Army
2R BLANK

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. 007
9526426V

Lab Name: EMSL ANALYTICAL Contract: _____

Project No. _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9526426V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8623.D

Level: (low/med) LOW Date Received: 6/13/95

% Moisture: not dec. NA Date Analyzed: 6/21/95

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
2.				
3.				
4.				
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30.				

EMSL

Date of Report: 07/17/95
Project Number: 95063933
Lab ID: 95-0026427
Date Collected: 06/13/95 15:35
Collected By: Client
Date Received: 06/13/95 18:50

Attention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth NJ 07703

Client Project: 931021191016

Client Designation: Bldg #206,Field Blank

	Conc.	Unit
ORGANIC		
Semi-Volatiles		
BN by 625 with Library Search	see attached	ug/l
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l

Monmouth NJ FMETL# 1861.2
U.S. Army
Field Blank

009

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9526427
Lab File ID: C8624.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	2.1	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene (total)	.50	U

U) Not Detected

Monmouth NJ FMETH# 1861.2

S. Army

FIELD BLANK

1A

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA 524.2

Lab Name: EMSL ANALYTICAL
Matrix (soil/water): WATER
Sample wt/vol: 25 mL
Level (low/med): LOW
% Moisture: not dec.: NA
GC Column: DB-624 x 75m ID: 0.53mm
Soil Extract Volume: NA

Lab Sample ID: 9526427
Lab File ID: C8624.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

Army Klamath NS
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FINCH 1861.2 - 1E

SAMPLE NO.

9526427V

011

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EMSL ANALYTICAL Contract: _____

Project No. _____ Site: _____ Location: _____ Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9526427V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8624.D

Level: (low/med) LOW Date Received: 6/13/95

% Moisture: not dec. NA Date Analyzed: 6/21/95

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

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

Concentration Units:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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SAMPLE NO. 012

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

9526427B

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG# 216 NJDEP#

Matrix: (soil/water) WATER Lab Sample ID: 9526427B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8025.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N): N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-nitrosodimethylamine	2	U
111-44-4	bis(2-Chloroethyl)ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	2	U
108-60-1	bis(2-chloroisopropyl)ether	5	U
621-64-7	N-Nitroso-Di-n-propylamine	2	U
67-72-1	Hexachloroethane	1	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	1	U
111-91-1	bis(2-Chloroethoxy)methane	3	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
87-68-3	Hexachlorobutadiene	2	U
77-47-4	Hexachlorocyclopentadiene	12	U
91-58-7	2-Chloronaphthalene	1	U
131-11-3	Dimethylphthalate	1	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	2	U
83-32-9	Acenaphthene	3	U
121-14-2	2,4-Dinitrotoluene	3	U
84-66-2	Diethylphthalate	1	U
86-73-7	Fluorene	3	U
7005-72-3	4-Chlorophenyl-phenylether	3	U
86-30-6	n-Nitrosodiphenylamine	6	U
122-66-7	1,2-Diphenylhydrazine(as azo	6	U
101-55-3	4-Bromophenyl-phenylether	2	U
118-74-1	Hexachlorobenzene	2	U
85-01-08	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	1	U
92-87-5	Benzidine	1	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

SAMPLE NO. 013

9526427B

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG# 286 NJDEP#

Matrix: (soil/water) WATER Lab Sample ID: 9526427B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8025.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N): N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
129-00-0	Pyrene	2	U
85-68-7	Butylbenzylphthalate	9	U
56-55-3	Benzo[a]anthracene	2	U
91-94-1	3,3'-Dichlorobenzidine	5	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	U
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo[b]fluoranthene	1	U
207-08-9	Benzo[k]fluoranthene	2	U
50-32-8	Benzo[a]pyrene	2	U
193-39-5	Indeno[1,2,3-cd]pyrene	2	U
53-70-3	Dibenz[a,h]anthracene	3	U
191-24-2	Benzo[g,h,i]perylene	2	U

FORT MONMOUTH NJ 1F

SAMPLE NO. 014

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

9526427B

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG# 226 NJDEP#

Matrix: (soil/water) WATER Lab Sample ID: 9526427B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B8025.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N) N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	NONE FOUND			
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EMSL

Attention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth, NJ 07703

Project #: 95063936
Date Received: 06/13/95 18:50

The following results are for BN by 625 with Library Search

Lab #	Conc.	Unit	Client Designation
95 0026433	;see attached	ug/l	Bldg.210,MW1-2931792

The following results are for Volatiles by 524.2 w/ Library Search

Lab #	Conc.	Unit	Client Designation
95 0026433	;see attached	ug/l	Bldg.210,MW1-2931792

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1864.1 016

Lab Name: EMSL ANALYTICAL Contract: U.S. ARMY

Project No.: FT. MONMOUTH NJ Bldg#: 210 NJDEP MW#: 1-293/792

Matrix: (soil/water) WATER Lab Sample ID: 9526433

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8639.D

Level: (low/med) LOW Date Received: 6/13/95

% Moisture: not dec. NA Date Analyzed: 6/22/95

GC Column: DB-624 x 75m ID: 0.53 (mm) Dilution Factor: 1.0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	1.3	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1864.1

017

Lab Name: EMSL ANALYTICAL Contract: U.S. ARMY

Project No.: FT. MONMOUTH NJ Bldg#: 210 NJDEP MW#: 1 -293179Z

Matrix: (soil/water) WATER Lab Sample ID: 9526433

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8639.D

Level: (low/med) LOW Date Received: 6/13/95

% Moisture: not dec. NA Date Analyzed: 6/22/95

GC Column: DB-624 x 75m ID: 0.53 (mm) Dilution Factor: 1.0

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene (total)	.50	U
100-42-1	Styrene	.50	U
75-25-2	Bromoform	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FMETL# 1864.1

013

Lab Name: EMSL ANALYTICAL Contract: U.S. ARMY

Project No. FT. MONMOUTH NJ Bldg# 210 NJDEP MW#: 1 -293792

Matrix: (soil/water) WATER Lab Sample ID: 9526433V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8639.D

Level: (low/med) LOW Date Received: 6/13/95

% Moisture: not dec. NA Date Analyzed: 6/22/95

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.65	1	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

SAMPLE NO. 019

9526433B

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1864.1 Site: BLDG# 210 NJDEP# MW-293792 #210

Matrix: (soil/water) WATER Lab Sample ID: 9526433B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8031.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N): N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-nitrosodimethylamine	2	U
111-44-4	bis(2-Chloroethyl)ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	2	U
108-60-1	bis(2-chloroisopropyl)ether	5	U
621-64-7	N-Nitroso-Di-n-propylamine	2	U
67-72-1	Hexachloroethane	1	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	1	U
111-91-1	bis(2-Chloroethoxy)methane	3	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
87-68-3	Hexachlorobutadiene	2	U
77-47-4	Hexachlorocyclopentadiene	12	U
91-58-7	2-Chloronaphthalene	1	U
131-11-3	Dimethylphthalate	1	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	2	U
83-32-9	Acenaphthene	3	U
121-14-2	2,4-Dinitrotoluene	3	U
84-66-2	Diethylphthalate	1	U
86-73-7	Fluorene	3	U
7005-72-3	4-Chlorophenyl-phenylether	3	U
86-30-6	n-Nitrosodiphenylamine	6	U
122-66-7	1,2-Diphenylhydrazine(as azo)	6	U
101-55-3	4-Bromophenyl-phenylether	2	U
118-74-1	Hexachlorobenzene	2	U
85-01-08	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	1	U
92-87-5	Benzidine	1	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

SAMPLE NO. 9526433B 020

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1864.1 Site: BLDG# 210 NJDEP# MEI-2931792 #210

Matrix: (soil/water) WATER Lab Sample ID: 9526433B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8031.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N): N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
129-00-0	Pyrene	2	U
85-68-7	Butylbenzylphthalate	9	U
56-55-3	Benzo[a]anthracene	2	U
91-94-1	3,3'-Dichlorobenzidine	15	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	U
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo[b]fluoranthene	1	U
207-08-9	Benzo[k]fluoranthene	2	U
50-32-8	Benzo[a]pyrene	2	U
193-39-5	Indeno[1,2,3-cd]pyrene	2	U
53-70-3	Dibenz[a,h]anthracene	3	U
191-24-2	Benzo[g,h,i]perylene	2	U

FORT MONMOUTH NJ

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526433B 021

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1864.1 Site: BLDG# 210 NJDEP# NJ-2931792 #210

Matrix: (soil/water) WATER Lab Sample ID: 9526433B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B8031.D

Level: (low/med) Date Received: 6/13/95

% Moisture: decanted: (Y/N) N Date Extracted: 6/19/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/26/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	NONE FOUND			
2.				
3.				
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BLDG.#: 210 MW#: 1 NJDEPE WELL ID # 2931792

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 6-13-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #: 04653

SAMPLERS NAMES: Susan Palilonis, Tim Baxter

WEATHER CONDITIONS: Cool, overcast

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 14.92 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____FT

LENGTH OF SCREENED SECTION: _____FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 7.01 FT 0.7 in. from screen

ELEVATION OF GW PRIOR TO PURGING: _____.___FT

THICKNESS OF LNAPL PRIOR TO PURGING : ____.8 FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 21 PPM 12:01 pm none detected D.O. 1.3 ppm

(1) pH: 6.08 TEMP: 16.5 °C, SPECIFIC CONDUCTIVITY: 401 µs/cm

DEPTH OF WELL: ____.___FT

HEIGHT OF WATER: ____.____FT

EVACUATED GAL. H2O: 16 GAL (7.91 X .65 X 3 = 15.4245

PURGING START TIME: 1206 END TIME: 1306

PURGE METHOD: (FLOW RATE OF <0.5 GPM TO >5.0 GPM) Pump

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 16 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 10.64 FT

(2) DISSOLVED OXYGEN: 2.0 ppm pH: 6.09 TEMP: 16.9 °C

SPECIFIC CONDUCTIVITY: 420 µs/cm

SAMPLING METHOD: DEDICATED, DECONTAMINATED (IAW NJDEP FSPM 1992) TEFLON® BAILER

START TIME OF SAMPLING: 1310 END TIME: 1315

(3) DISSOLVED OXYGEN: 2.1 pH: 6.06 TEMP: 16.6 °C

SPECIFIC CONDUCTIVITY: 376

Color none ODOR none

COMMENTS: on site 1153 slow recharge

EMSL

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, 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 be included in one section of the data package and in the main body of the report.

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name, address & date of report.	X
2.	Table of Contents	X
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	X
4.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s.	X
5.	Document bound, paginated and legible.	X
6.	Chain of Custody	X
7.	Methodology Summary	X
8.	Laboratory Chronicle and Holding Time Check.	X
9.	Results submitted on a dry weight basis (if applicable).	X
10	Method Detection Limits.	X
11	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEP CLP.	X
12	Non-Conformance Summary	X

Paul Farag

Laboratory Manager or Environmental Consultant's Signature

07-17-95

Date

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QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. Checklist which must be attached to the Summary

The following information must be reported in the Closure Plan Implementation Summary for all laboratory analyses performed in the compliance with the site assessment requirements:

Page #		
1	1.	Name and address of the facility.
1	2.	Name of the laboratory performing the sample analysis.
1	3.	NJDEP certification number assigned to the laboratory pursuant to N.J.A.C. 7:18.
1	4.	Laboratory sample identification number.
1	5.	Customer sample identification number corresponding to the laboratory sample identification.
1	6.	Sample Location (also on the site diagram).
1	7.	Matrix of the sample analyzed (i.e., water or sediments; including soil, sediment, and sludges). All sediment results must be reported on a dry weight basis.
29-30	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
31	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
3-21	12.	Sample results and corresponding units for each parameter.

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CHAIN OF CUSTODY

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-2627, 95-2633

PROJECT NO. 93063936

SAMPLE/CONTAINERS

PARAMETERS

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
6/19/95		BN Extraction Prep.	Charles Bartolone	SV for CB

INTERNAL CUSTODY

Project #: 95063936

Lab ID #'s: 95-26433, 95-26426
95-26427

Analyst

	Name (please print)	Signature	Date
1. Base/Neutrals	Scott Van Etten	SV	6/26/95
2. Acids			
3. Volatiles (GC)			
4. Volatiles (GC/MS)	Scott Kessler	S.K.	6/22/95
5. Base Neutrals/Acids			
6. Gasoline			

FORT MONMOUTH

95063936

P.O. #: I50 # 95-0091 / SAI

Chain of Custody

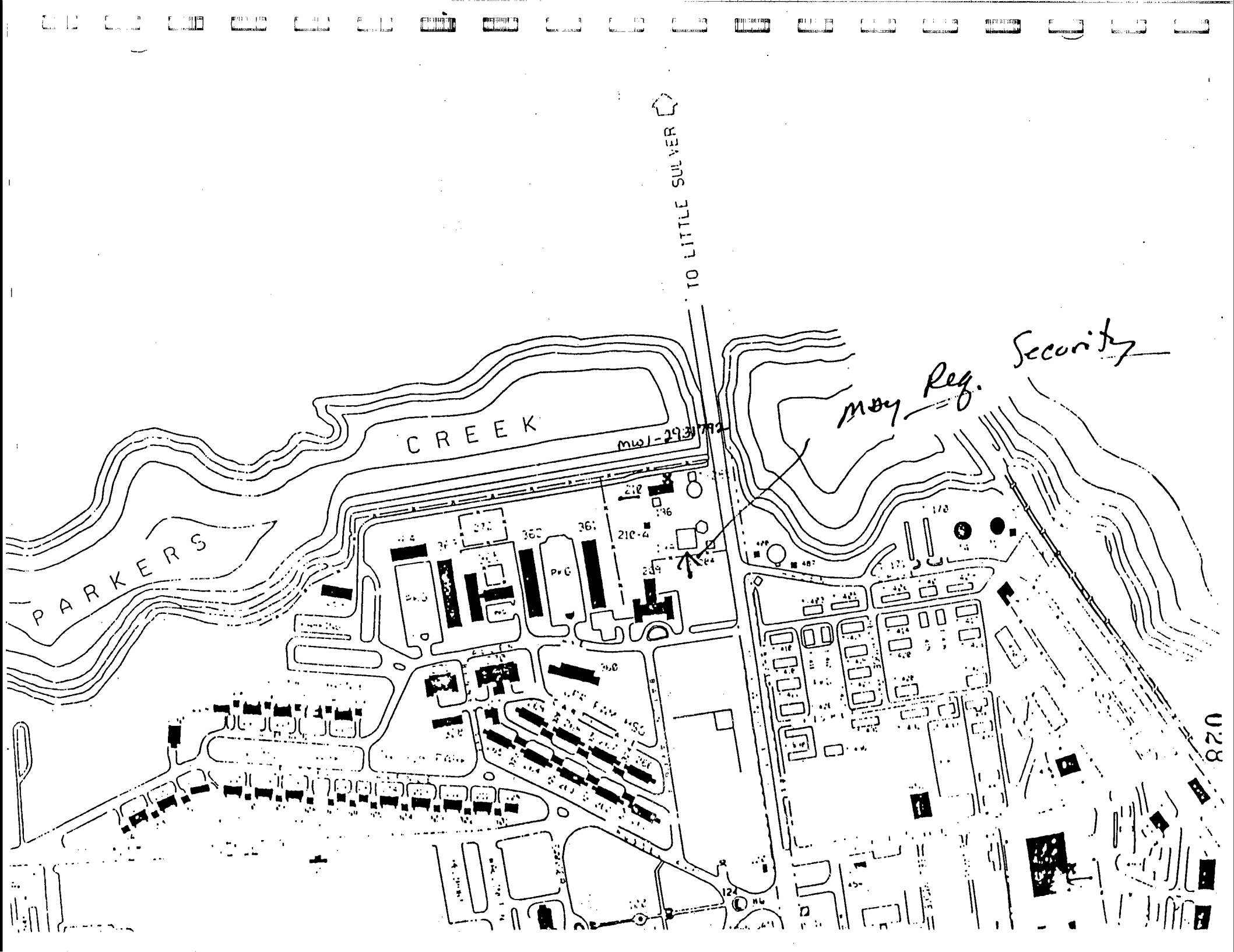
Project #: 941250913 00	Sampler: EMSL (Baxter)	Date / Time 6/13/95	Start:
Customer: Charles Appleby SELFM-RO-EV	Site Name: Bldg #210 MW Sampling	Analysis Parameters	Finish:
Phone: 908-532-6224			

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	VOA 524.2 + Library	BN 625 + Library	meth 601				Preservation Method / Remarks
1861.1	6/13	0650	TRIP Blank	aq.	3	X			26426			Samples Kept at 4 °C
1861.2	↓	1535	Field Blank	aq.	6	X	X		26427			
1864.1	↓	1315	Bldg. #210 MW1-2931792	aq.	6	X	X		26433			

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
X	6-13-95 1535	X	E.M.S.L.
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	6-13-95 1850		

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

Enviornmental Laboratory


TO LITTLE SULVER
CREEK
PARKERS
MW1-29
May Reg.
Security
U28

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

This is a purge and trap gas chromatograph/mass spectrometer (GC/MS) method. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer.

An HP5890/5970 GC/MS was used with a capiullary column (DB-624 0.53 mn ID).

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

EPA Method 625 - This is a gas chromatograph/mass spectrometer (GC/MS) method applicable to the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. Reference is Federal Register, Vol. 40, No. 136, July, 1988.

An HP5890/5970B GC/MS is used with a DB-5 fused silica capillary column.

If tentatively identified compounds are requested, a computer program analyzes the non-priority pollutant/HSL/TCL compounds with standard mass spectra found in the latest version of the NIH/NBS/EPA mass spectral library.

Method detection limits are as stated.

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LABORATORY CHRONICLE

Lab ID: **95-26426, 95-26427, 95-26433**

Client: **U.S. Army, Fort Monmouth**

	I DATE	II	Hold Time
Date Sampled	**6/13/95**		
Receipt/Refrigeration	**6/13/95**		
Extractions			
1. Semivolatile Organics, aqueous	**6/19/95**		**7 days**
Analyses			
1. Volatile Organics, aqueous	**6/21, 22/95**		**14 days**
2. Semivolatile Organics, aqueous	**6/26/95**		**40 days**

QC Supervisor
Review & Approval

(Signature) Peter B. Panton

(Printed Name) Peter B. Panton

(Date) 07/18/95

NOTE: If fractions are re-extracted and re-analyzed because the initial endeavors failed to meet the required Quality Control Criteria, the dates of re-extraction and/or re-analysis will be entered in Column II Additionally.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria		X
	b. DFTPP Meet Criteria		X
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.		X
4,	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of. sample analysis for 600 series and 12 hours for 8000 series.		X
5.	GC/MS Calibration - Initial Requirements		
	a. Calibration Check Compounds		X
	b. System Performance Check Compounds		X
6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		X
	a. VOA Fraction **Methylene Chloride 1.5-2.0 ppb.**		
	b. B/N Fraction		
	c. Acid Fraction		
7.	Surrogate Recoveries Meet Criteria		X
	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"?		
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	X	
	a. VOA Fraction **Methylene Chloride 73% and 77%.**		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Area/Retention Time Shift Meet Criteria		X

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GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT, cont.

		No	Yes
10.	Extraction Holding Time Met		X

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

		No	Yes
11.	Analysis Holding Time Met		X

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

12. Definitions:
U=Not Detected. J=Detected, but below report detection limit.
B=Compound found in blank. E=Estimated concentration. NA=Not Applicable

Additional Comments:

Laboratory Manager Paul Faraig Date: 07-17-95

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GC/MS VOLATILE ORGANIC DATA PACKAGE

New Jersey Department of Environmental Protection
Division of Water Resources
Bureau of Underground Storage Tanks
CN-029, Trenton, New Jersey 08625

LABORATORY AUTHENTICATION STATEMENT

I certify under penalty of law, where applicable, this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18, 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analyses. I have personally examined and am familiar with the information contained in this report, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, complete, and meets the standards specified in N.J.A.C. 7:18, 40 CFR Part 136, and/or SW 846. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Paul Tarara

Laboratory Manager (as defined in N.J.A.C. 7:18)