United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 207
Main Post

NJDEP UST Registration No. 81533-5
NJDEP Closure Approval No. C-93-2615

NJDEP UST Registration No. 81533-211
Residential Non-Regulated
Spill Case No. 93-11-2-1004-28

August 1998

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 207

MAIN POST

NJDEP UST REGISTRATION NO. 81533-5
NJDEP CLOSURE APPROVAL NO. C-93-2615

NJDEP UST REGISTRATION NO. 81533-211
RESIDENTIAL NON-REGULATED

AUGUST 1998

PROJECT NO.: 09-5004-12
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:

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EXECUTIVE SUMMARY

On October 29, 1993 a fiberglass underground storage tank (UST) New Jersey Department of Environmental Protection Registration No. 81533-5 was closed by removal at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. UST No. 81533-5 was a 4,000-gallon No. 2 fuel oil UST. On November 1, 1993 a residential non-regulated UST, NJDEP Registration No. 81533-211, was closed by removal at U.S. Army Fort Monmouth. UST No. 81533-211 was a steel 3,000-gallon No. 2 fuel oil UST. Both USTs were located immediately adjacent to Building 207 in the Main Post area of U.S. Army, Fort Monmouth. The UST fill ports were located directly above each tank. The tank closures were performed by U.S.Army Base Operation Contractor, Cleaning Up the Environment Inc. (CUTE), under the direct supervision of the DPW.

The site assessments were 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*. Soils surrounding each tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, each UST was inspected for holes and punctures. No holes were observed in the fiberglass UST (No. 81533-5), however, several corrosion holes were noted in the steel UST No (81533-211). Evidence of potentially contaminated soils was observed in the excavation surrounding UST No. 81533-211 only.

On November 2, 1993, following removal of UST 81533-211, approximately 12 cubic yards of potentially contaminated soil were removed from the excavation. Eight post-excavation soil samples were collected along the sidewalls of the excavation, immediately above groundwater. The samples were analyzed for TPHC. The samples were collected at a depth of 4.5 feet below ground surface (bgs). Groundwater was present at approximately 5.0 feet bgs.

Based on an inspection of UST 81533-211, field screening of subsurface soils, and analytical results of collected soil samples, the Directorate of Public Works (DPW) has concluded that an historical discharge was associated with the UST. On November 2, 1993, a spill was reported to the NJDEP "Hotline" for UST No. 81533-211 and was assigned Spill Case No. 93-11-2-1004-28.

Seven soil samples were collected along the sidewalls of the excavation of UST and along the piping length of UST No. 81533-5, which ran approximately 85 feet from the excavation to Building 207. The samples were analyzed for TPHC.

The post-excavation soil samples collected from both UST excavations at Building 207 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994).

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 207 area on July 6, 1994. On November 9, 1994 and December 1, 1994, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identifies compounds (VOCs), methyl tertiary butyl ether, tertiary butyl alcohol, and semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements for Site Remediation.* Groundwater analytical results were either below the detection limit of in compliance with the New Jersey Groundwater Standards (GWQS). No product or sheen was observed in MW-1 on either of the sampling dates.

Based on the post-excavation soil sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on November 9, 1994 and December 1, 1994, groundwater quality at the Building 207 UST closure site complies with the New Jersey GWQS for VOCs and SVOCs.

No further action is proposed in regard to the closure and site assessment of UST Nos. 81533-5, and 211 at Building 207.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

Two (2) underground storage tanks (USTs), New Jersey Department of Environmental Protection (NJDEP) Registration Nos. 81533-5 and 81533-211, were closed at Building 207 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on October 29, 1993 and on November 1, 1993. 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 10, 1993. The plan was approved on June 12, 1993. UST No. 81533-5 was a 4,000 gallon fiberglass tank. UST No. 81533-211 was a 3,000-gallon steel tank. Both USTs contained No. 2 fuel oil.

Decommissioning activities for both USTs 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, the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST Nos. 81533-5 and 211 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval and signed certifications for the USTs are included in Appendices A and B, respectively.

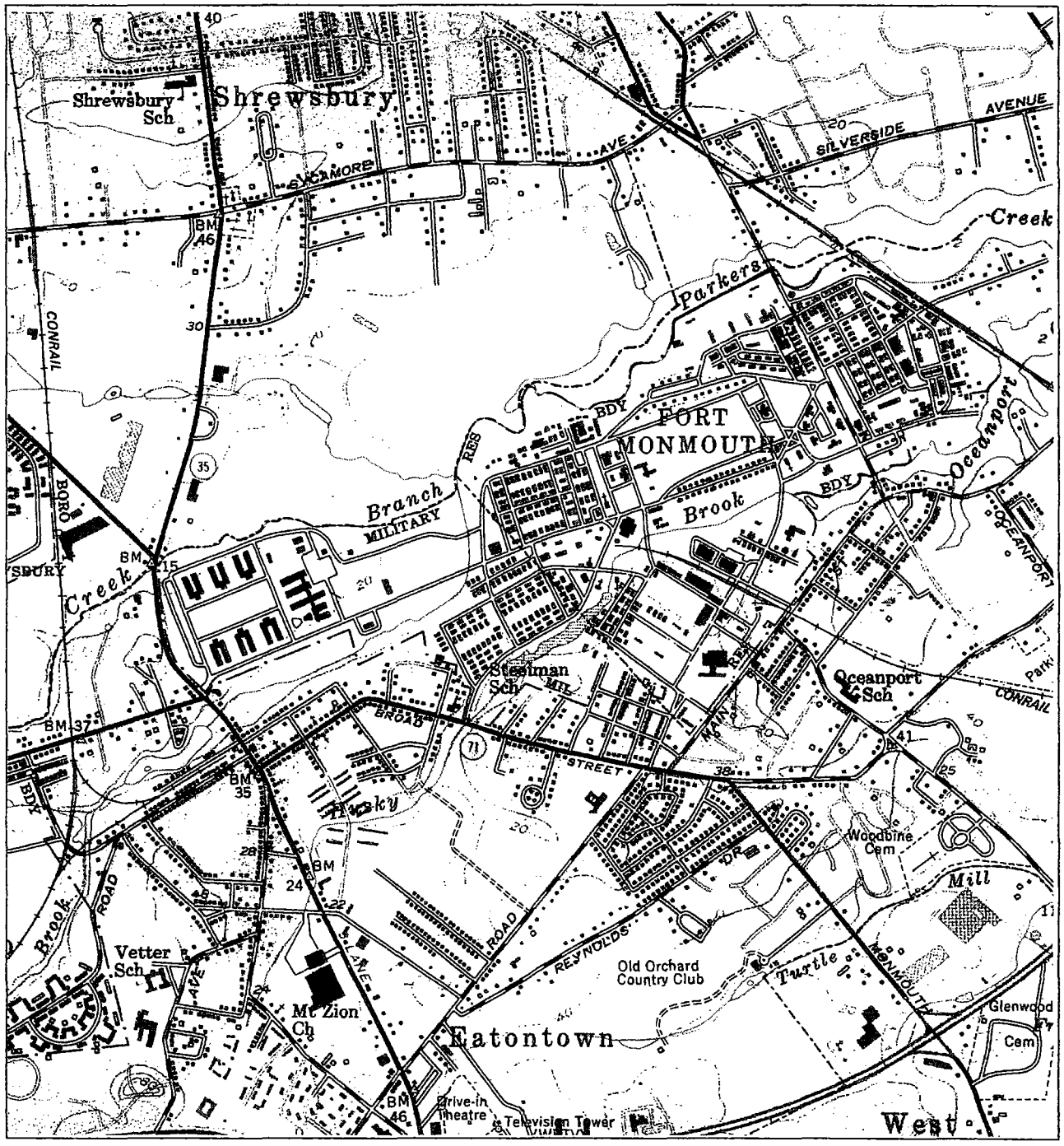
Based on an inspection of UST No. 81533-211, field screening of subsurface soils, and analytical results of collected soil samples, the DPW has concluded that an historical discharge was associated with the UST. On November 2, 1993, a spill was reported to the NJDEP "Hotline" for UST No. 81533-211 and was assigned Spill Case No. 93-11-2-1004-28.

This UST Closure and Site Investigation Report has been prepared by Smith Technology 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.

ENGINEERS
A Division of ARC

Department of Public Works
Fort Monmouth, New Jersey



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NEW JERSEY
QUADRANGLE LOCATION

Source: Long Branch, New Jersey Quadrangle

Project No. 09-5004-14

Figure 1
Site Location Map

1.2 SITE DESCRIPTION

Building 207 is located in the northeast portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST Nos. 81533-5, and 211 were located west of Building 207. Appurtenant piping for UST No. 51833-5 ran approximately 85 feet east from the excavation to Building 207. Appurtenant piping for UST No. 81533-211 ran approximately 15 feet east from the excavation to Building 207. The fill port areas for the USTs were located directly above each 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 207. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, 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

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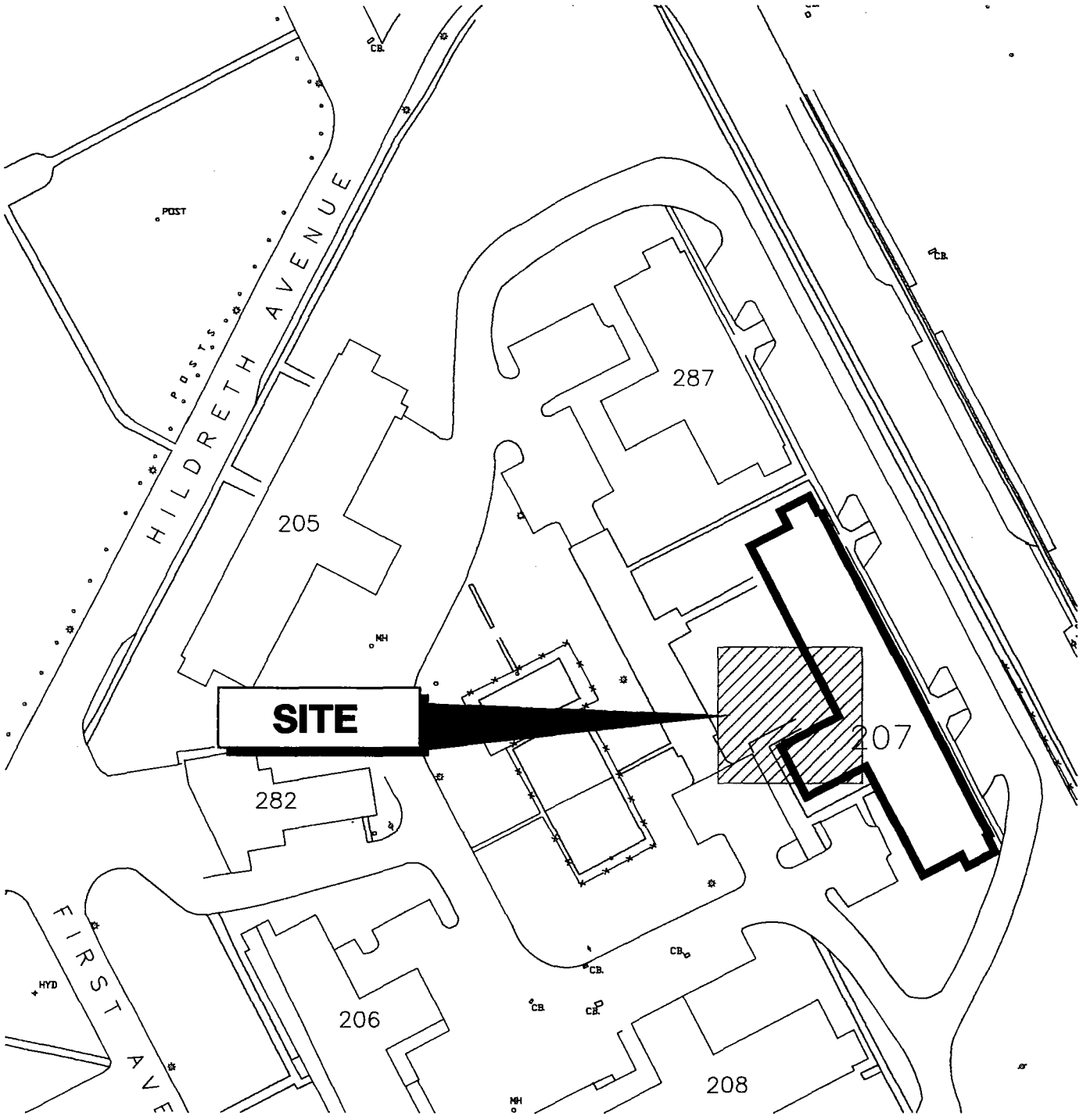
Department of Public Works
Fort Monmouth, New Jersey



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Source: Smith Technology Corporation (155)

Project No. 09-5004-12

Figure 2
Building 207
Site Map

(Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey, medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

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

Hydrogeology

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

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

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

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 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 and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose each UST and associated piping. All free product present in the piping was drained into the USTs, and the USTs were purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in each UST to allow for proper cleaning. The USTs were completely emptied of all liquids prior to removal from the ground. Approximately 4,000 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifests (NJA-1706503, NJA-1706505, NJA-1706534 and FCI-G17449).

The USTs were cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the USTs were removed from the excavation, they were staged on polyethylene sheeting and examined for holes. Several corrosion holes were observed during the inspection of UST 81533-211 by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Evidence of contamination was observed. No holes were observed during the inspection of UST No. 81533-5 and no evidence of contaminated soil was observed surrounding the tank.

Soil screening was also performed along the piping associated with the USTs. No contamination was noted anywhere along the piping lengths.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The steel tank was transported by CUTE to Mazza and Sons Inc. for disposal in compliance with all applicable regulations and laws. The fiberglass tank was transported by CUTE to Fort Monmouth Reclamation Center for recycling. See Appendix D for the UST Disposal Certificates.

The removal contractor labeled each 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 76 cubic yards of potentially contaminated soils were excavated from the UST excavations. 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 a designated site 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 USTs.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. The TPHC analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory. The VOC, SVOC, and lead analyses were performed and reported by Twenty First Century Environmental Laboratory. Both laboratories are NJDEP-certified testing laboratories. 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 he 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)
  Closure Supervisor: John Lonergan
  Phone Number: (201)427-2881
  NJDEP Certification No.: 3248

- Subsurface Evaluator: Charles M. Appleby
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908) 532-6224
  NJDEP Certification No.: 2056

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

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

- Hazardous Waste Hauler: Freehold Cartage Inc.
  Contact Person: Barry Olsen
  Phone Number: (908)721-0900
  NJDEP Hazardous Waste Hauler No.: 2265

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Additional soils were removed from the excavation surrounding UST No. 81533-211 until no evidence of contamination remained.

2.3 SOIL SAMPLING

On November 2, 1993, following removal of UST No. 81533-211, approximately 12 cubic yards of potentially contaminated soil were removed from the excavation. Post-excavation soil samples A, B, C, D, E, and F were collected from a total of six (6) sample locations along the sidewalls of the excavation, immediately above groundwater. The samples were collected at a depth of 4.5 feet below ground surface (bgs). Groundwater was present at approximately 5.0 feet bgs.

On November 8, 1993, an additional soil sample (D-2) was collected from the area of the highest TPHC concentration within the excavation for UST 211. The sample was analyzed for volatile organic compounds plus 15 tentatively identified compounds (VOCs), semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs), and lead. Soils along the south sidewall of the UST excavation, which exhibited an elevated TPHC concentration, could not be excavated further due to the presence of utility lines.

Samples A, B, C, and D were collected along the sidewalls of the excavation for UST No. 81533-5 on November 8, 1993. Samples E, F, and G were collected along the piping length of UST No. 81533-5, which ran approximately 85 feet from the excavation to Building 207. The samples were analyzed for TPHC.

On November 19, 1993, following the removal of the piping associated with UST No. 81533-211, approximately 24 cubic yards of potentially contaminated soil were removed from the eastern edge of the excavation to Building 207. Samples were not collected. On November 23, 1993, an additional 40 cubic yards were excavated along the east sidewall of the excavation due to elevated TPHC concentrations. Samples G and H were collected from the expanded portion of the excavation and were analyzed for 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 in Table 1. The post-excavation soil 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 remaining in the excavation would have been 2,340.0 mg/kg, still below the applicable NJDEP soil cleanup standard for total

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
207A:					
A	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G	11/8/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
207B:					
A	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	11/2/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D-2	11/8/93	Soil	Post-Excavation	VOCs, SVOCs, Pb	Polystyrene Scoop
G	11/23/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	11/23/93	Soil	Post-Excavation	TPHC	Polystyrene Scoop
MW-1	11/9/94	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Fill Bailer
MW-1	12/1/94	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Fill Bailer

*Note:

TPHC: Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)

VOCs: Volatile Organic Compounds calibrated for xylene plus 15 tentatively identified compounds (Method 524.2 / soil and aqueous)

SVOCs: Semivolatile Organic Compounds plus 15 tentatively identified compounds (Method 625 / soil and aqueous)

Pb: Lead (Method SW-846 / soil and aqueous)

Source: Smith Technology Corporation (Smith Project No. 09-5004-12)

207ab.xls

organic contaminants of 10,000 mg/kg. Following soil sampling activities, the TPHC samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis. The sample collected for VOC, SVOC, and lead analyzes was chilled and delivered to Twenty First Century Environmental Laboratory 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 monitoring well (MW-1) was installed at the Building 204 area on July 6, 1994. It was installed approximately 20 feet west of Building 207 in the downgradient direction. It was screened in the 2 to 15 foot depth interval, across the water table, which is approximately 4 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 F.

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 sandpack 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 0.5 inches bgs. The well was secured with a water-tight, flush-mounted locking road box. The road box 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 peristaltic surface 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 November 9, 1994 and December 1, 1994, monitoring well MW-1 was sampled for VOCs and SVOCs. Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements for Site Remediation.*

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of UST No. 81533-211, post-excavation soil samples were collected from a total of six (6) locations on November 2, 1993, and from two (2) locations on November 23, 1993. These samples were analyzed for TPHC. One (1) sample was collected on November 8, 1993, and was analyzed for VOCs, SVOCs, and lead. To evaluate soil conditions following removal of UST No. 81533-5, post-excavation soil samples were collected from a total of seven (7) locations on November 8, 1993. All post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and in Table 3 and the soil sampling results are shown on Figure 3. The analytical data package is provided in Appendix E.

Soil samples A and B, collected on November 2, 1993, contained non-detectable concentrations of TPHC. Sample F contained a TPHC concentration of 924.0 mg/kg. Samples C, D, and E contained TPHC concentrations of 5,180.0 mg/kg, 6,160.0 mg/kg, and 1,170.0 mg/kg, respectively.

Sample D-2, collected from the area of highest TPHC concentration on November 8, 1993, contained 2-methylnaphthalene at 2.6 mg/kg, fluorene at 0.5 mg/kg, phenanthrene at 1.2 mg/kg, fluoranthene at 0.47 mg/kg, pyrene at 0.8 mg/kg, and lead at 31.6 mg/kg. None of these compounds were detected above their corresponding cleanup criteria.

Samples G, collected on November 23, 1993, contained a TPHC concentration of 165.0 mg/kg. Sample H contained a non-detectable concentration of TPHC.

Samples A, B, C, D, E, and F, collected from the excavation for UST 81533-5, contained TPHC concentrations ranging from 19.3 mg/kg to 371.0 mg/kg. Sample G contained a TPHC concentration of 5,740.0 mg/kg.

3.2 GROUNDWATER SAMPLING RESULTS

All VOC and SVOC results were either below the detection limit or in compliance with the New Jersey Groundwater Quality Standard (GWQS).

The sample collected on November 9, 1994 from MW-1 contained dimethylphthalate at a concentration of 1.0 ug/l. This compound was also found in the associated field blank at a concentration of 2.0 ug/l. The field blank also contained methylene chloride at 6 ug/l. The trip blank contained methylene chloride at 3 ug/l. No other compounds were detected.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT 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
207A:									
A/4.0-4.5'	1318.1	11/8/93	11/9/93	Total % Solid	--	--	85 %	--	--
				TPHC	3.3	yes	42.5	10,000	--
B/4.0-4.5'	1318.2	11/8/93	11/9/93	Total % Solid	--	--	85 %	--	--
				TPHC	3.3	yes	19.6	10,000	--
C/4.0-4.5'	1318.3	11/8/93	11/9/93	Total % Solid	--	--	86 %	--	--
				TPHC	3.3	yes	19.3	10,000	--
D/4.0-4.5'	1318.4	11/8/93	11/9/93	Total % Solid	--	--	83 %	--	--
				TPHC	3.3	yes	21.7	10,000	--
E/1.0-1.5'	1318.5	11/8/93	11/9/93	Total % Solid	--	--	85 %	--	--
				TPHC	23	yes	137	10,000	--
F/1.0-1.5'	1318.6	11/8/93	11/9/93	Total % Solid	--	--	84 %	--	--
				TPHC	23	yes	371	10,000	--
G/1.0-1.5'	1318.7	11/8/93	11/9/93	Total % Solid	--	--	85 %	--	--
				TPHC	23	yes	5,740	10,000	--
207B:									
A/4.5-5.0'	1306.1	11/2/93	11/2/93	Total % Solid	--	--	81 %	--	--
				TPHC	3.3	yes	ND	10,000	--
B/4.5-5.0'	1306.2	11/2/93	11/2/93	Total % Solid	--	--	83 %	--	--
				TPHC	3.3	yes	ND	10,000	--
C/4.5-5.0'	1306.3	11/2/93	11/2/93	Total % Solid	--	--	83 %	--	--
				TPHC	23	yes	5,180	10,000	--
D/4.5-5.0'	1306.4	11/2/93	11/2/93	Total % Solid	--	--	84 %	--	--
				TPHC	23	yes	6,160	10,000	--
E/4.5-5.0'	1306.5	11/2/93	11/2/93	Total % Solid	--	--	85 %	--	--
				TPHC	23	yes	1,170	10,000	--
F/4.5-5.0'	1306.6	11/2/93	11/2/93	Total % Solid	--	--	83 %	--	--
				TPHC	23	yes	924	10,000	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT 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
G/4.5-5.0'	1342.1	11/23/93	11/26/93	Total % Solid	--	--	99 %	--	--
				TPHC	3.3	yes	165	10,000	--
H/4.5-5.0'	1342.2	11/23/93	11/26/93	Total % Solid	--	--	98 %	--	--
				TPHC	3.3	yes	ND	10,000	--

NOTES:

--: Not applicable / does not exceed criteria

*: Cleanup criteria for total organics

ND: Indicates compound not detected

Actual soil TPHC values may be higher than reported due to absorbancy by polystyrene scoops. If absorbancy resulted in reducing the actual soil TPHC concentration by 50%, five (5) samples would have exceeded 1,000 mg/kg. In accordance with the NJDEP Technical Requirements, 25 % of those that exceeded 1,000 mg/kg were analyzed for volatile organic compounds.

Source: Smith Technology Corporation (Smith Project No. 09-5004-12)

207ab.xls

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
LEAD

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	Lead	5	--	31.6	400	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	Acrolein	0.29	--	ND	--	--
			Acylonitrile	0.29	--	ND	1/1	--
			Chloromethane	0.059	--	ND	520/10	--
			Bromomethane	0.059	--	ND	79/1	--
			Vinyl Chloride	0.059	--	ND	2/10	--
			Chloroethane	0.059	--	ND	--	--
			Acetone	0.059	--	ND	1,000/100	--
			1,1-Dichloroethene	0.029	--	ND	8/10	--
			Carbon Disulfide	0.059	--	ND	--	--
			Methylene Chloride	0.029	--	ND	49/1	--
			1,2-Dichloroethene(trans)	0.029	--	ND	1,000/50	--
			1,1-Dichloroethane	0.029	--	ND	570/10	--
			Vinyl Acetate	0.029	--	ND	--	--
			2-Butanone	0.059	--	ND	1,000/50	--
			Chloroform	0.029	--	ND	19/1	--
			1,1,1-Trichloroethane	0.029	--	ND	210/50	--
			Carbon Tetrachloride	0.029	--	ND	2/1	--
			1,2-Dichloroethane	0.029	--	ND	6/1	--
			Benzene	0.029	--	ND	3/1	--
			Trichloroethene	0.029	--	ND	23/1	--
			1,2-Dichloropropane	0.029	--	ND	10/--	--
			Bromodichloromethane	0.029	--	ND	11/1	--
			2-Chloroethylvinylether	0.059	--	ND	--	--
			2-Hexanone	0.059	--	ND	--	--
			trans-1,3-Dichloropropene	0.029	--	ND	4/1	--
			Toluene	0.029	--	ND	1,000/500	--
			cis-1,3-Dichloropropene	0.029	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.029	--	ND	34/1	--
			1,1,2-Trichloroethane	0.029	--	ND	22/1	--
			4-Methyl-2-Pentanone	0.059	--	ND	1,000/50	--
			Tetrachloroethene	0.029	--	ND	4/1	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	Dibromochloromethane	0.029	--	ND	110/1	--
			Chlorobenzene	0.029	--	ND	37/1	--
			Ethylbenzene	0.029	--	ND	1,000/100	--
			Total Xylenes	0.029	--	ND	410/10	--
			Styrene	0.029	--	ND	23/100	--
			Bromoform	0.029	--	ND	86/1	--
			m-Dichlorobenzene	0.029	--	ND	--	--
			p-Dichlorobenzene	0.029	--	ND	--	--
			o-Dichlorobenzene	0.029	--	ND	--	--
			VOLATILE TICS:					
			Octane,3-ethyl	--	--	0.054	--	--
			Cyclohexane,propyl	--	--	0.054	--	--
			Benzene,1-ethyl-3-methyl	--	--	0.091	--	--
			Decane,3-methyl	--	--	0.062	--	--
			Benzene,1,2-diethyl	--	--	0.055	--	--
			Bicyclo[2.2.1]heptane,2-methyl	--	--	0.091	--	--
			Benzene,1-methyl-3-(1-methylethy	--	--	0.086	--	--
			1H-Indene,2,3-dihydro-1-methyl	--	--	0.11	--	--
			Naphthalene,decahydro-2-methyl	--	--	0.076	--	--
			Cyclohexane,(4-methylpentyl)	--	--	0.066	--	--
			Spiro[5.5]undecane	--	--	0.088	--	--
			Benzene,(1-ethylpropyl)	--	--	0.100	--	--
			1H-Indene,2,3-dihydro-5-methyl	--	--	0.340	--	--
			Dodecane,6-methyl	--	--	0.200	--	--
			1H-Indene,2,3-dihydro-1,3-dimeth	--	--	0.049	--	--
			1H-Indene,2,3-dihydro-1,6-dimeth	--	--	0.072	--	--
			Benzene-(1,1-dimethyl-2-propenyl	--	--	0.084	--	--
			1H-Indene,2,3-dihydro-1,1-dimeth	--	--	0.13	--	--
			Cyclohexane,pentyl	--	--	0.11	--	--
			Naphthalene, decahydro-1,6-dimet	--	--	0.051	--	--
			TOTAL TICS:	--	--	1.969	--	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	N-nitrosodimethylamine	3.9	--	ND	--	--
			bis(2-Chloroethyl)Ether	3.9	--	ND	0.66/10	--
			1,3-Dichlorobenzene	3.9	--	ND	5,100/100	--
			1,4-Dichlorobenzene	3.9	--	ND	570/100	--
			Benzyl Alcohol	3.9	--	ND	10,000/50	--
			1,2-Dichlorobenzene	3.9	--	ND	5,100/50	--
			bis(2-chloroisopropyl)ether	3.9	--	ND	2,300/10	--
			N-Nitroso-Di-N-propylamine	3.9	--	ND	0.66/10	--
			Hexachloroethane	3.9	--	ND	6/100	--
			Nitrobenzene	3.9	--	ND	28/10	--
			Isophorone	3.9	--	ND	1,100/50	--
			Benzoic Acid	19.0	--	ND	--	--
			bis(2-Chloroethoxy)methane	3.9	--	ND	--	--
			1,2,4-Trichlorobenzene	3.9	--	ND	68/100	--
			Naphthalene	3.9	--	ND	230/100	--
			4-Chloroaniline	3.9	--	ND	--	--
			Hexachlorobutadiene	3.9	--	ND	1/100	--
			2-methylnaphthalene	3.9	--	2.6 J	--	--
			Hexachlorocyclopentadiene	3.9	--	ND	400/100	--
			2-Chloronaphthalate	3.9	--	ND	--	--
			2-Nitroaniline	19.0	--	ND	--	--
			Dimethylphthalate	3.9	--	ND	10,000/50	--
			Acenaphthylene	3.9	--	ND	--	--
			3-Nitroaniline	19.0	--	ND	--	--
			Acenaphthene	3.9	--	ND	3,400/100	--
			Dibenzofuran	3.9	--	ND	--	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	2,4-Dinitrotoluene	3.9	--	ND	1/10	--
			2,6-Dinitrotoluene	3.9	--	ND	1/10	--
			Diethylphthalate	3.9	--	ND	10,000/50	--
			4-Chlorophenyl-phenylether	3.9	--	ND	--	--
			Fluorene	3.9	--	0.5 J	2,300/100	--
			4-Nitroaniline	19.0	--	ND	--	--
			n-Nitrosodiphenylamine	3.9	--	ND	140/100	--
			4-Bromophenyl-phenylether	3.9	--	ND	--	--
			Hexachlorobenzene	3.9	--	ND	0.66/100	--
			Phenanthrene	3.9	--	1.2 J	--	--
			Anthracene	3.9	--	ND	10,000/100	--
			Di-n-butylphthalate	3.9	--	ND	5,700/100	--
			Fluoranthene	3.9	--	0.47 J	2,300/100	--
			Pyrene	3.9	--	0.8 J	1,700/100	--
			Butylbenzylphthalate	3.9	--	ND	1,100/100	--
			3,3'-Dichlorobenzidine	7.8	--	ND	--	--
			Benzo(a)anthracene	3.9	--	ND	0.9/500	--
			bis(2-Ethylhexyl)phthalate	3.9	--	ND	49/100	--
			Chrysene	3.9	--	ND	9/500	--
			Di-n-octylphthalate	3.9	--	ND	1,100/100	--
			Benzo(b)fluoranthene	3.9	--	ND	0.9/50	--
			Benzo(k)fluoranthene	3.9	--	ND	0.9/500	--
			Benzo(a)pyrene	3.9	--	ND	0.66/100	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	Soil Cleanup Criteria* (mg/kg)	Exceeds Criteria
D-2/4.5-5.0'	11/8/93	11/10/93	Indeno(1,2,3-cd)pyrene	3.9	--	ND	0.9/500	--
			Dibenz(a,h)anthracene	3.9	--	ND	0.66/100	--
			Benzo(g,h,i)perylene	3.9	--	ND	--	--
			Benzidine	7.8	--	ND	--	--
			VOLATILE TICS:					
			Unknown	--	--	5.3 J	--	--
			Unknown	--	--	6.7 J	--	--
			Naphthalene,1-methyl	--	--	7.0 J	--	--
			Unknown	--	--	4.7 J	--	--
			Unknown	--	--	4.7 J	--	--
			Unknown	--	--	13.0 J	--	--
			Unknown	--	--	4.7 J	--	--
			Dimethyl Naphthalene Isomer	--	--	9.3 J	--	--
			Dimethyl Naphthalene Isomer	--	--	8.0 J	--	--
			Unknown	--	--	15.0 J	--	--
			Substituted cyclohexane	--	--	6.3 J	--	--
			Unknown	--	--	4.3 J	--	--
			Unknown	--	--	15.0 J	--	--
			Unknown	--	--	7.3 J	--	--
			Trimethyl Naphthalene Isomer	--	--	6.3 J	--	--
			Trimethyl Naphthalene Isomer	--	--	4.7 J	--	--
			Trimethyl Naphthalene Isomer	--	--	7.3 J	--	--
			Trimethyl Naphthalene Isomer	--	--	12.0 J	--	--
			Unknown	--	--	40.0 J	--	--
			Unknown	--	--	16.0 J	--	--
			TOTAL TICS:	--	--	197.6	--	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	11/8/93	11/10/93	Acrolein	50	--	ND	10	--
			Acylonitrile	50	--	ND	50	--
			Chloromethane	10	--	ND	30	--
			Bromomethane	10	--	ND	10	--
			Vinyl Chloride	10	--	ND	5	--
			Chloroethane	10	--	ND	--	--
			Acetone	10	--	5.4 J	700	--
			1,1-Dichloroethene	5	--	ND	2	--
			Carbon Disulfide	10	--	ND	800	--
			Methylene Chloride	5	--	7.2	2	--
			1,2-Dichloroethene(trans)	5	--	ND	100	--
			1,1-Dichloroethane	5	--	ND	70	--
			Vinyl Acetate	5	--	ND	7,000	--
			2-Butanone	10	--	ND	--	--
			Chloroform	5	--	ND	6	--
			1,1,1-Trichloroethane	5	--	ND	30	--
			Carbon Tetrachloride	5	--	ND	2	--
			1,2-Dichloroethane	5	--	ND	2	--
			Benzene	5	--	ND	1	--
			Trichloroethene	5	--	ND	1	--
			1,2-Dichloropropane	5	--	ND	1	--
			Bromodichloromethane	5	--	ND	1	--
			2-Chloroethylvinylether	10	--	ND	--	--
			2-Hexanone	10	--	ND	--	--
			trans-1,3-Dichloropropene	5	--	ND	NA	--
			Toluene	5	--	ND	1,000	--

TABLE 3
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 207, MAIN POST
FORT MONMOUTH, NEW JERSEY
VOLATILES (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
Trip Blank	11/8/93	11/10/93	cis-1,3-Dichloropropene	5	--	ND	NA	--
			1,1,2,2-Tetrachloroethane	5	--	ND	2	--
			1,1,2-Trichloroethane	5	--	ND	3	--
			4-Methyl-2-Pentanone	10	--	ND	400	--
			Tetrachloroethene	5	--	ND	1	--
			Dibromochloromethane	5	--	ND	10	--
			Chlorobenzene	5	--	ND	4	--
			Ethylbenzene	5	--	ND	700	--
			Total Xylenes	5	--	ND	40	--
			Styrene	5	--	ND	100	--
			Bromoform	5	--	ND	4	--
			m-Dichlorobenzene	5	--	ND	--	--
			p-Dichlorobenzene	5	--	ND	--	--
			o-Dichlorobenzene	5	--	ND	--	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3

DATA ANALYSIS QUALIFIER DEFINITIONS
POST-EXCAVATION SOIL SAMPLING
FORT MONMOUTH, NEW JERSEY

--:	Not applicable / does not exceed criteria
*:	Residential Direct Contact (RDC) / Impact to Groundwater (IGW)
(J):	Indicates detected below sample quantitation limit
(B):	Indicates also present in blank
(ND):	Indicates compound not detected
(NA):	Not available for this constituent

The sample collected on December 1, 1994 from MW-1 contained methylene chloride (a common laboratory contaminant) at 4.0 ug/l, which exceeded the criteria of 2.0 ug/l. This compound was not detected in the associated trip blank or field blank. No other compounds were detected.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table was 5.69 feet below ground surface on November 9, 1994 and 4.07 feet below ground surface on December 1, 1994.

All groundwater analytical results are presented in Table 4 and shown on Figure 4. The groundwater analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, DPW.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 207 were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on November 9, 1994 and December 1, 1994, groundwater quality at the Building 207 closure site complies with the New Jersey Groundwater Quality Standards for VOCs and SVOCs.

The existing discrepancy as listed in the Executive Summary is believed to be acceptable as explained and does not warrant further investigation or explanation. Procedures have been corrected to eliminate recurrences in the future.

No further action is proposed in regard to the closure and site assessment of UST Nos. 81533-5 and 211 at Building 207.

TABLE 4
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	11/9/94	11/15/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	3	--	ND	2	--
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	11/9/94	11/15/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, 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)	GWQS (ug/l)	Exceeds Criteria
MW-1	11/9/94	11/10/94	bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	1	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	1	--	ND	600	--
			2,2'-oxybis(1-Chloropropane)	1	--	ND	--	--
			N-Nitroso-Di-N-propylamine	1	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	1	--	ND	10	--
			Isophorone	1	--	ND	100	--
			1,2,4-Trichlorobenzene	1	--	ND	9	--
			Naphthalene	1	--	ND	300	--
			Hexachlorobutadiene	1	--	ND	1	--
			bis(2-Chloroethoxy)methane	1	--	ND	--	--
			Hexachlorocyclopentadiene	1	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	1	--	--
			Acenaphthylene	1	--	ND	NA	--
			2,6-Dinitrotoluene	1	--	ND	NA	--
			Acenaphthene	1	--	ND	400	--
			2,4-Dinitrotoluene	1	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			4-Chlorophenyl-phenylether	1	--	ND	--	--
			Fluorene	1	--	ND	300	--
			n-Nitrosodiphenylamine	1	--	ND	20	--
			4-Bromophenyl-phenylether	1	--	ND	--	--
			Hexachlorobenzene	1	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	11/9/94	11/10/94	Phenanthrene	1	--	ND	NA	--
			Anthracene	1	--	ND	2,000	--
			Di-n-butylphthalate	1	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Pyrene	1	--	ND	200	--
			Butylbenzylphthalate	1	--	ND	100	--
			3,3'-Dichlorobenzidine	1	--	ND	60	--
			Benzo(a)anthracene	1	--	ND	0.05	--
			Chrysene	1	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	1	--	ND	30	--
			Di-n-octylphthalate	1	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	1	--	ND	0.5	--
			Benzo(a)pyrene	1	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	1	--	ND	0.05	--
			Dibenz(a,h)anthracene	1	--	ND	0.005	--
			Benzo(g,h,i)perylene	1	--	ND	NA	--
			N-nitrosodimethylamine	1	--	ND	20	--
			Benzidine	1	--	ND	50	--
			SEMIVOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 4

GROUNDWATER SAMPLING RESULTS

BUILDING 207, MAIN POST, FIELD BLANK

FORT MONMOUTH, NEW JERSEY

VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	11/9/94	11/15/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	6	--	6	2	yes
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	11/9/94	11/15/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 207, 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)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	11/9/94	11/10/94	bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	1	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	1	--	ND	600	--
			2,2'-oxybis(1-Chloropropane)	1	--	ND	--	--
			N-Nitroso-Di-N-propylamine	1	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	1	--	ND	10	--
			Isophorone	1	--	ND	100	--
			1,2,4-Trichlorobenzene	1	--	ND	9	--
			Naphthalene	1	--	ND	300	--
			Hexachlorobutadiene	1	--	ND	1	--
			bis(2-Chloroethoxy)methane	1	--	ND	--	--
			Hexachlorocyclopentadiene	1	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	2	--	2	--	--
			Acenaphthylene	1	--	ND	NA	--
			2,6-Dinitrotoluene	1	--	ND	NA	--
			Acenaphthene	1	--	ND	400	--
			2,4-Dinitrotoluene	1	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			4-Chlorophenyl-phenylether	1	--	ND	--	--
			Fluorene	1	--	ND	300	--
			n-Nitrosodiphenylamine	1	--	ND	20	--
			4-Bromophenyl-phenylether	1	--	ND	--	--
			Hexachlorobenzene	1	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	11/9/94	11/10/94	Phenanthrene	1	--	ND	NA	--
			Anthracene	1	--	ND	2,000	--
			Di-n-butylphthalate	1	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Pyrene	1	--	ND	200	--
			Butylbenzylphthalate	1	--	ND	100	--
			3,3'-Dichlorobenzidine	1	--	ND	60	--
			Benzo(a)anthracene	1	--	ND	0.05	--
			Chrysene	1	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	1	--	ND	30	--
			Di-n-octylphthalate	1	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	1	--	ND	0.5	--
			Benzo(a)pyrene	1	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	1	--	ND	0.05	--
			Dibenz(a,h)anthracene	1	--	ND	0.005	--
			Benzo(g,h,i)perylene	1	--	ND	NA	--
			N-nitrosodimethylamine	1	--	ND	20	--
			Benzidine	1	--	ND	50	--
			SEMIVOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 4

GROUNDWATER SAMPLING RESULTS

BUILDING 207, MAIN POST, TRIP BLANK

FORT MONMOUTH, NEW JERSEY

VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	11/9/94	11/15/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	3	--	3	2	yes
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 207, MAIN POST, TRIP BLANK

FORT MONMOUTH, NEW JERSEY

VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	11/9/94	11/15/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 4
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	12/1/94	12/5/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	4	--	4	2	yes
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	12/1/94	12/5/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, 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)	GWQS (ug/l)	Exceeds Criteria
MW-1	12/1/94	12/5/94	bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	1	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	1	--	ND	600	--
			2,2'-oxybis(1-Chloropropane)	1	--	ND	--	--
			N-Nitroso-Di-N-propylamine	1	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	1	--	ND	10	--
			Isophorone	1	--	ND	100	--
			1,2,4-Trichlorobenzene	1	--	ND	9	--
			Naphthalene	1	--	ND	300	--
			Hexachlorobutadiene	1	--	ND	1	--
			bis(2-Chloroethoxy)methane	1	--	ND	--	--
			Hexachlorocyclopentadiene	1	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	ND	--	--
			Acenaphthylene	1	--	ND	NA	--
			2,6-Dinitrotoluene	1	--	ND	NA	--
			Acenaphthene	1	--	ND	400	--
			2,4-Dinitrotoluene	1	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			4-Chlorophenyl-phenylether	1	--	ND	--	--
			Fluorene	1	--	ND	300	--
			n-Nitrosodiphenylamine	1	--	ND	20	--
			4-Bromophenyl-phenylether	1	--	ND	--	--
			Hexachlorobenzene	1	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	12/1/94	12/5/94	Phenanthrene	1	--	ND	NA	--
			Anthracene	1	--	ND	2,000	--
			Di-n-butylphthalate	1	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Pyrene	1	--	ND	200	--
			Butylbenzylphthalate	1	--	ND	100	--
			3,3'-Dichlorobenzidine	1	--	ND	60	--
			Benzo(a)anthracene	1	--	ND	0.05	--
			Chrysene	1	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	1	--	ND	30	--
			Di-n-octylphthalate	1	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	1	--	ND	0.5	--
			Benzo(a)pyrene	1	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	1	--	ND	0.05	--
			Dibenz(a,h)anthracene	1	--	ND	0.005	--
			Benzo(g,h,i)perylene	1	--	ND	NA	--
			N-nitrosodimethylamine	1	--	ND	20	--
			Benzidine	1	--	ND	50	--
			SEMIVOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 4
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	12/1/94	12/5/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	3	--	ND	2	--
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	12/1/94	12/5/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 207, 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)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK RE	12/1/94	1/9/95	bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	1	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	1	--	ND	600	--
			2,2'-oxybis(1-Chloropropane)	1	--	ND	--	--
			N-Nitroso-Di-N-propylamine	1	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	1	--	ND	10	--
			Isophorone	1	--	ND	100	--
			1,2,4-Trichlorobenzene	1	--	ND	9	--
			Naphthalene	1	--	ND	300	--
			Hexachlorobutadiene	1	--	ND	1	--
			bis(2-Chloroethoxy)methane	1	--	ND	--	--
			Hexachlorocyclopentadiene	1	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	2	--	ND	--	--
			Acenaphthylene	1	--	ND	NA	--
			2,6-Dinitrotoluene	1	--	ND	NA	--
			Acenaphthene	1	--	ND	400	--
			2,4-Dinitrotoluene	1	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			4-Chlorophenyl-phenylether	1	--	ND	--	--
			Fluorene	1	--	ND	300	--
			n-Nitrosodiphenylamine	1	--	ND	20	--
			4-Bromophenyl-phenylether	1	--	ND	--	--
			Hexachlorobenzene	1	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK RE	12/1/94	1/9/95	Phenanthrene	1	--	ND	NA	--
			Anthracene	1	--	ND	2,000	--
			Di-n-butylphthalate	1	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Pyrene	1	--	ND	200	--
			Butylbenzylphthalate	1	--	ND	100	--
			3,3'-Dichlorobenzidine	1	--	ND	60	--
			Benzo(a)anthracene	1	--	ND	0.05	--
			Chrysene	1	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	1	--	ND	30	--
			Di-n-octylphthalate	1	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	1	--	ND	0.5	--
			Benzo(a)pyrene	1	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	1	--	ND	0.05	--
			Dibenz(a,h)anthracene	1	--	ND	0.005	--
			Benzo(g,h,i)perylene	1	--	ND	NA	--
			N-nitrosodimethylamine	1	--	ND	20	--
			Benzidine	1	--	ND	50	--
			SEMIVOLATILE TICS:					
			UNKNOWN	--	--	2 J	--	--

TABLE 4

GROUNDWATER SAMPLING RESULTS

BUILDING 207, MAIN POST, TRIP BLANK

FORT MONMOUTH, NEW JERSEY

VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	12/1/94	12/5/94	Chloromethane	2	--	ND	30	--
			Bromomethane	1	--	ND	10	--
			Vinyl Chloride	1	--	ND	5	--
			Chloroethane	1	--	ND	--	--
			Methylene Chloride	3	--	ND	2	--
			1,1-Dichloroethene	2	--	ND	2	--
			1,1-Dichloroethane	1	--	ND	70	--
			Chloroform	1	--	ND	6	--
			1,2-Dichloroethane	1	--	ND	2	--
			1,1,1-Trichloroethane	1	--	ND	30	--
			Carbon Tetrachloride	2	--	ND	2	--
			Bromodichloromethane	1	--	ND	1	--
			1,2-Dichloropropane	1	--	ND	1	--
			cis-1,3-Dichloropropene	1	--	ND	NA	--
			Trichloroethene	2	--	ND	1	--
			Dibromochloromethane	1	--	ND	10	--
			1,1,2-Trichloroethane	1	--	ND	3	--
			Benzene	1	--	ND	1	--
			trans-1,3-Dichloropropene	1	--	ND	NA	--
			Bromoform	1	--	ND	4	--
			Tetrachloroethene	3	--	ND	1	--
			1,1,2,2-Tetrachloroethane	2	--	ND	2	--
			Toluene	2	--	ND	1,000	--
			Chlorobenzene	2	--	ND	4	--
			Ethylbenzene	2	--	ND	700	--
			Xylene (total)	6	--	ND	40	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 207, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	12/1/94	12/5/94	Trichlorofluoromethane	2	--	ND	--	--
			Acrolein	20	--	ND	10	--
			Acrylonitrile	2	--	ND	50	--
			Tertiary Butyl Alcohol	100	--	ND	500	--
			Methyl Tertiary Butyl Ether	1	--	ND	70	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	2	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			2-Chloroethylvinylether	4	--	ND	--	--
			trans,1,2-Dichloroethene	1	--	ND	100	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

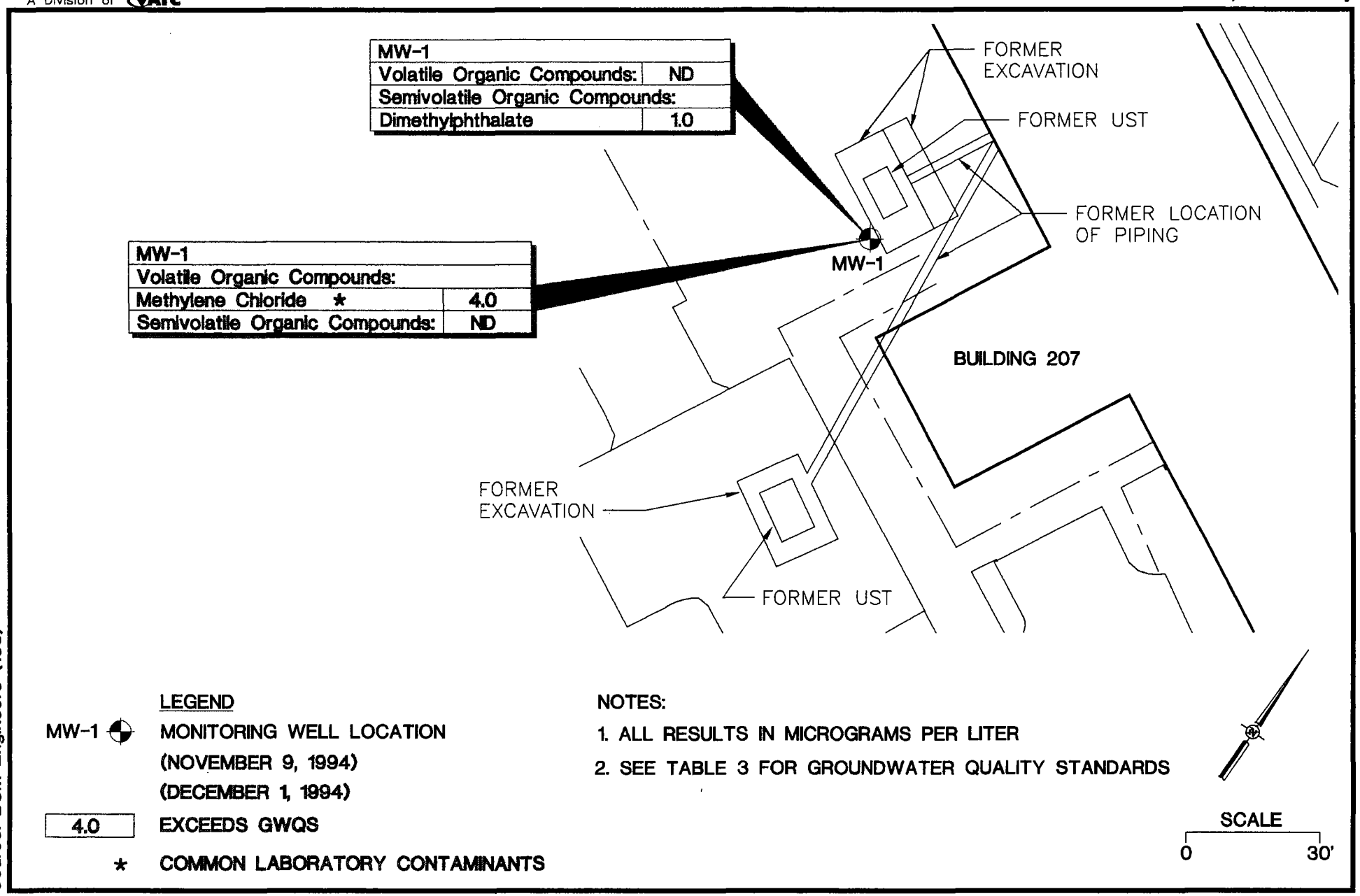
TABLE 4

DATA ANALYSIS QUALIFIER DEFINITIONS
GROUNDWATER SAMPLING
FORT MONMOUTH, NEW JERSEY

--:	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
GWQS:	Groundwater Quality Standards

BCM ENGINEERS
A Division of ATC

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



Source: BCM Engineers (153)

Project No. 09-5004-12

Figure 4
Building 207
Groundwater Sampling Results

The sample collected on December 1, 1994 from MW-1 contained methylene chloride (a common laboratory contaminant) at 4.0 ug/l, which exceeded the criteria of 2.0 ug/l. This compound was not detected in the associated trip blank or field blank. No other compounds were detected.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table was 5.69 feet below ground surface on November 9, 1994 and 4.07 feet below ground surface on December 1, 1994.

All groundwater analytical results are presented in Table 4 and shown on Figure 4. The groundwater analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, DPW.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 207 were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on November 9, 1994 and December 1, 1994, groundwater quality at the Building 207 closure site complies with the New Jersey Groundwater Quality Standards for VOCs and SVOCs.

The existing discrepancy as listed in the Executive Summary is believed to be acceptable as explained and does not warrant further investigation or explanation. Procedures have been corrected to eliminate recurrences in the future.

No further action is proposed in regard to the closure and site assessment of UST Nos. 81533-5 and 211 at Building 207.

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-93-2615 **UST #** 0081533

US Army Ft. Monmouth
DEH Bldg. ~~167~~ 207
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 4,000 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.

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

APPENDIX B

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 207A

NJDEP UST REGISTRATION NO. 81533-5

DATE TANK REMOVED Nov. 1, 1993

IJO / CONTRACT NUMBER 93-1016

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

UNDERGROUND STORAGE TANK (UST)
CLOSURE CERTIFICATION

BUILDING NO. 207B

NJDEP UST REGISTRATION NO. 81533-211

DATE TANK REMOVED 11/1/93

IJO / CONTRACT NUMBER 93-1016

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 [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

APPENDIX C

WASTE MANIFEST

FREEHOLD CARTAGE, INC.

MANIFEST

P.O. BOX 5010
FREEHOLD, NJ 07728-5010
PHONE: (908) 462-1001
FAX: (908) 308-0924

175 BARTOW MUN. AIRPORT
BARTOW, FL 33830
PHONE: (813) 533-4500
FAX: (813) 533-1613

108 MONAHAN AVENUE
DUNMORE, PA 18512
PHONE: (717) 342-7232
FAX: (717) 342-7367

FCI EPA ID NO
NJD054126166

G1744

1706583

STATE MANIFEST NO.: 1706585; 1706

(X) HM		PROPER U.S. DOT SHIPPING NAME	U.S. DOT HAZARDOUS CLASS	PACKING GROUP	NA/UN NO.	FORM	NET QTY.	UNIT MEASURE
X	1	PETROLEUM OIL	COMBUSTIBLE LIQUID	III	1270	L	4000	G.
	2	N.O.S.						
	3							

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E., IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR NAME/ADDRESS
US ARMY COMMUNICATIONS ELECTRONICS COMMAND
BLDG. 2504
FORT MONMOUTH, N.J.

PHONE
(908) 532-6223

GENERATOR EPA ID NO.
NJ3210020597

TRACTOR: 438
TRAILER: NA

TIME AT GENERATOR: 07:00 (MILITARY TIME ONLY)
ARRIVAL TIME / DEPARTURE TIME

FCI REP. LOADING (PRINT): ALFONSO TROCCHIO
PROCEDURE: VAC
BOX SPOTTED: —
BOX REMOVED: —

EQUIPMENT USED

COMMENTS OR DELAYS AT GENERATOR

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transported named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the generator is obligated to pay the agreed rate offered by the contractor.

GENERATOR'S SIGNATURE
X _____
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.

PLEASE PRINT NAME/TITLE: Charles M. Appleby / Envtro Prot. Spec

DATE LOADED: 11 / 5 / 93 (MO. / DAY / YR.)

TSDF NAME/ADDRESS
LIONETTI
OLD BRIDGE, N.J.

PHONE
(AREA CODE) —

TSDF EPA ID NO.
NJD085404464

TRACTOR: 438
TRAILER: NA

TIME AT TSDF: : (MILITARY TIME ONLY)
ARRIVAL TIME / DEPARTURE TIME

FCI REP. UNLOADING (PRINT)
PROCEDURE
BOX SPOTTED
BOX REMOVED

EQUIPMENT USED

COMMENTS OR DELAYS AT TSDF

TSDF SIGNATURE
X _____

PLEASE PRINT NAME/TITLE

DATE UNLOADED: 11 / 5 / 93 (MO. / DAY / YR.)

AR H-0257 PC 944	ME ME-HWT-47 ME-WOT-47	MO H-1490	NOVA SCOTIA, CANADA NSC 000 147	QUEBEC, CANADA QC-6ML-047
CT CT-HW-307	MD HWH-167 91-OP-1765	ND WH-429	OH 333-HW	RI RI-535
DE DE-HW-203 DE-SW-203	MA MA-294	NH TNH-0047	OK 3358	TX 40705
IL SWH-1540	MN 61572	NJ S-2265 15939	ONTARIO, CANADA A 840943	WI 11602
		NY JA-113	PA PA-AH-0067	

Original - FCI Office Copy
Yellow - FCI Office Copy
Blue - FCI Office Copy/Customer
Green - Retained by TSDF
Gold - Retained by Generator

G1744

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

ase type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 Manifest Document No.
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 SHIRG #10 BLDG 2504 ATT: SELFM-DL-EM-MS FT. MONMOUTH NJ 07703
4. Generator's Phone (908) 532-6223
A. State Manifest Document Number NJA 1706503
B. State Generator's ID MAIN POST 2078

5. Transporter 1 Company Name FREEHOLD CARTAGE INC.
6. US EPA ID Number NJD054126164
C. State Trans. ID NJDEPS 2265X
D. Transporter's Phone 908 462-1001

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address LIONETTI OIL RECOVERY Co INC RUNYON + CHEESEQUAKE RD OLD BRIDGE NJ 08857
10. US EPA ID Number NJD084044064
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 N.O.S. CLASS 3 (PETROLEUM OIL) COMBUSTIBLE LIQUID UN1270 PG III	001	TT	02000	G	X722
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. T/L PETROLEUM OIL % 1 WATER % 99
K. Handling Codes for Wastes Listed Above
a. T04 FILTRATION

15. Special Handling Instructions and Additional Information
NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NJ.
24 HOUR EMERGENCY NO. 201-427-2881
NJ DECAL 55429 ERG #27

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 Charles M. Appleby DPW Signature [signature] Month Day Year 1 05 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name ALONSO TROCCHIO Signature [signature] Month Day Year 1 05 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

Discrepancy Indication Space

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

NJA 1706503

SIGNATURE AND INFORMATION

GENERATOR CERTIFICATION

I hereby certify that the waste described on Hazardous Waste Manifest No. NJA 1706503 dated 11-04-93, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

X721: Waste automotive crankcase and lubricating oils from automotive service and gasoline stations, truck terminals, and garages.

X722: Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel oil tanks.

X723: Waste oil and bottom sludge generated by gasoline stations when gasoline and oil tanks are tested, cleaned or replaced.

X724: Waste petroleum oil generated when tank trucks or other vehicles or mobile vessels are cleaned, including, but not limited to, oil ballast water from product transport units of boats, barges, ships or other vessels.

X725: Oil spill cleanup residue which: A. is contaminated beyond saturation; or B. the generator fails to demonstrate that the spill material was not one of the listed hazardous waste oils.

X726: The following used and unused waste oils: metal working oils; turbine lubricating oils; diesel lubricating oils; and quenching oils.

X728: Bottom sludge generated from the processing, blending, and treatment of waste oil in waste oil processing facilities.

I am duly authorized to sign said certification.

Generator US Army Communications Electronics Command

Generator's EPA ID No. NJ3210020597

Address Fort Monmouth NJ 07703

Print Name Charles A. Applely Signature

Title Enviro Prof. Spec.

Date 11/5/93

Form 003 5/91

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 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 Manifest Document No.
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 AMSELFM-DL-EM-MS FORT MONMOUTH NJ 07703
4. Generator's Phone (908) 532-6223

A. State Manifest Document Number NJA 1706505
B. State Generator's ID Bldg 2078 MAIN POST

5. Transporter 1 Company Name: FREEHOLD CARTAGE INC
6. US EPA ID Number: NJD054126164
C. State Trans. ID NJDEPS 2265EX
D. Transporter's Phone (908) 462-1001

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address: LIONETTI OIL RECOVERY CO INC RUNYON + CHEESEQUAKE RD OLD BRIDGE NJ 08857
10. US EPA ID Number: NJD084044064
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. PETROLEUM OIL NOS, CLASS 3 (PETROLEUM OIL) X COMBUSTIBLE LIQUID UN1270 PG III	001	TT	1620 CA (00960)	G	X722
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. PETROLEUM OIL 5% WATER 95%
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a. T04 FILTRATION
c.
b.
d.

15. Special Handling Instructions and Additional Information
NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NJ
24 HOUR EMERGENCY # 201-427-2881
NJ DECAL # 55429 ERG 27

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: Charles M. Appleby DPW — Signature: [signature] — Month Day Year: 11 05 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ALFONSO IROCCHETO — Signature: [signature] — Month Day Year: 11 05 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

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

NJA 1706505

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

1 — TSD MAIL TO - TSD'S STATE

GENERATOR CERTIFICATION

I hereby certify that the waste described on Hazardous Waste Manifest No. NJA 1706504 dated 11-04-93, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

X721: Waste automotive crankcase and lubricating oils from automotive service and gasoline stations, truck terminals, and garages.

X722: Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel oil tanks.

X723: Waste oil and bottom sludge generated by gasoline stations when gasoline and oil tanks are tested, cleaned or replaced.

X724: Waste petroleum oil generated when tank trucks or other vehicles or mobile vessels are cleaned, including, but not limited to, oil ballast water from product transport units of boats, barges, ships or other vessels.

X725: Oil spill cleanup residue which: A. is contaminated beyond saturation; or B. the generator fails to demonstrate that the spill material was not one of the listed hazardous waste oils.

X726: The following used and unused waste oils: metal working oils; turbine lubricating oils; diesel lubricating oils; and quenching oils.

X728: Bottom sludge generated from the processing, blending, and treatment of waste oil in waste oil processing facilities.

I am duly authorized to sign said certification.

Generator US Army Communications Electronic Command

Generator's EPA ID No. NJ 3210020597

Address Fort Monmouth NJ 07703

Print Name Charles M. Appleby Signature

Title Envir. Prot. Spec.

Date 11/5/93

Form 003 5/91

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 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ 3 2 1 0 0 2 0 5 9 7 0 0 0 0 8
Manifest Document No.

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

A. State Manifest Document Number NJA 1706534

B. State Generator's ID Bldg. 207 B - under UST Pipeline Main Post

4. Generator's Phone (908) 532-6224

5. Transporter 1 Company Name
Freehold Cartage Inc

6. US EPA ID Number N J D 0 5 4 1 2 6 1 6 4

C. State Transporter's ID NJ-PC-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.
[redacted] Runyon & Cheesequake Rds.
Old Bridge, NJ 08857

10. US EPA ID Number N J D 0 1 8 4 0 4 4 0 6 4

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 N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III	0 0 1	T T	XX 475 G		X 7 2 2
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
T,L Petroleum Oil %5
Water %95
a.
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04-Filtration
b.
d.

15. Special Handling Instructions and Additional Information
NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NJ
24 HOUR EMERGENCY# 201-427-2881
NJ DECAL# 78594 ERG# 27

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.

GENERATOR

Printed/Typed Name: Charles M. Appleby SELFM-PW-EV
Signature:
Month Day Year: 1 1 0 1 93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ALFONSO TROCCHIO
Signature:
Month Day Year: 1 1 0 1 93

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. 3-89 Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

1 — TSD MAIL TO - TSD'S STATE

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

GENERATOR CERTIFICATION

I hereby certify that the waste described on Hazardous Waste Manifest No. NJA 1706538 dated _____, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

X721: Waste automotive crankcase and lubricating oils from automotive service and gasoline stations, truck terminals, and garages.

X722: Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel oil tanks.

X723: Waste oil and bottom sludge generated by gasoline stations when gasoline and oil tanks are tested, cleaned or replaced.

X724: Waste petroleum oil generated when tank trucks or other vehicles or mobile vessels are cleaned, including, but not limited to, oil ballast water from product transport units of boats, barges, ships or other vessels.

X725: Oil spill cleanup residue which: A. is contaminated beyond saturation; or B. the generator fails to demonstrate that the spill material was not one of the listed hazardous waste oils.

X726: The following used and unused waste oils: metal working oils; turbine lubricating oils; diesel lubricating oils; and quenching oils.

X728: Bottom sludge generated from the processing, blending, and treatment of waste oil in waste oil processing facilities.

I am duly authorized to sign said certification.

Generator U.S. Army Communications Electronics Command, Fort Monmouth NJ

Generator's EPA ID No. NJ3210020597 - ~~000~~

Address C/o James Shirghio, Bldg 2504 attn: SELFM-DL-EM-ENS Fort Monmouth NJ 07703-

Print Name Charles Appleby Signature _____

Title Environmental Protection Specialist

Date 11/1/93

Form 003 5/91

Bldg 207B, 208B, 152

SERV-AIR, INC.

A Subsidiary of E-SYSTEMS INC

look at

P/O NO:	P/O DATE:	INSP. DATE	TYPE INSP.	CERTIFICATION ☐ ACCEPTANCE ☐ MONTHLY ☐

CONTRACTOR NAME/ADDRESS:
Diversified Contracting

DESCRIPTION OF WORK
Backfilling of EXCAVATIONS of Tank 208B, 282, and 207B @ Barker Circle
IJO-93-1016 INV# 93116

CHECK LIST	YES	NO
1. Was workmanship acceptable?	↘	
2. Did Contractor comply with all safety/OSHA requirements?		
3. Did Contractor comply with all Contract requirements?	↘	
4. Were in-process inspections accomplished?		
5. Number of valid complaint calls this period.		
6. If IJO, vendors hours must be provided as part of job reports.		

☐↘ Accepted ☐ Rejected

Inspector Feb-14-94 Manager Vendor Representative

ASONS FOR ACCEPT/REJECTIONS

INVOICE

INVOICE DATE	INVOICE NO.	PA
12/15/93	93116	1

Diversified Conracting, Inc.
131 Racquet Rd.
Wall, NJ 07719

SOLD TO
E-Systems/Serv-Air, Inc.
ATTN: Gail Sutton
Bldg 276, PO Box 360
Fort Monmouth, NJ 07703

SHIP TO
US Army Communications and Electronics
Main Post - Barkers Circle
Fort Monmouth, NJ

	PURCHASE ORDER NO.	SHIP VIA	SHIP DATE	TERMS
	IJO 93-1016			Net 20

Backfilling of excavations for Tank 208B, 282, and 207B at Barkers Circle

Clean backfill
25 tons @ $11.70/ton 292.50 OK

3/4 Clean stone
123.53 tons @ $22/ton 2,717.66 OK

Transportation of excavated contaminated soil
148.53 tons @ $9.00/ton 1,336.77 OK

VERIFIED BY_____

DATE RECEIVED
DEC 2 1 1993

PAID MAR 07 1994

APPROVED BY_____

CONTRACT #____ ACCT #____

SALE AMOUNT	$ 4,346.93
MISC. CHARGES SALES TAX FREIGHT	
TOTAL	$ 4,346.93

24027

4/93

ate

Cust. Phone

JOHN GUIRE CO.

187 BRIGHTON AVE • LONG BRANCH, N.J. 07740

201-222-0612

Driver On Off

's Name Big A Trucking

Supplies

Price Per Ton

Price

Tax

Sub Total

Del. Chg.

TOTAL

DATE 1-24-93 TIME 7:59AM 62080 Gross lb.

26,350 Tare lb.

35,730 Net lb.

structions Cliff Tondi 17.87

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

prices are for street curb delivery, except where the curb and sidewalk are entirely bridged d and a suitable road provided to actual point of unloading inside of curb. We will assume no y for any damages where delivery is made inside of curb.

Rec'd By

T/A

Weigher

24031

Date

Cust. Phone

JOHN GUIRE CO.

187 BRIGHTON AVE • LONG BRANCH, N.J. 07740

201-222-0612

Driver On Off

er's Name Big A Trucking

Supplies

Price Per Ton

Price

Tax

Sub Total

Del. Chg.

TOTAL

DATE 1-24-93 TIME 7:49AM 61840 Gross lb.

26,350 Tare lb.

35,490 Net lb.

nstructions

17.75

-7.13 used

10.62

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

prices are for street curb delivery, except where the curb and sidewalk are entirely bridged ed and a suitable road provided to actual point of unloading inside of curb. We will assume no y for any damages where delivery is made inside of curb.

Rec'd By Cliff Tondi

T/A

Weigher

CUSTOMER'S COPY

CONTROL NO.
A-881860

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. 908/356-5700

X _____
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X Don Ellis
CUSTOMER'S SIGNATURE

CRUSHED STONE • SAND • GRAVEL

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2328

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

TE	CUST. NO.	JOB NO.	TICKET NO.
11/15/93	06888	09:53	- 881860

STOMER
CLEANING UP THE ENVIORNMENT
103 GODWIN AVE.
P.O. BOX 237
MIDLAND PARK NJ 07432

DELIVER TO
ZONE:FORT MONMOUTH
FORT MONMOUTH BY PIPEHOUSE

GROSS 40.00
TARE 13.75
NET 26.25

ICKER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
36569	1		CHARGE	2	030

ANTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
26.25	20 Q.P.S. TYPE 5 CLA	T			4.05		

AMENTS

WAIT TIME

LOADS 3 ACCU. TONS 77.72

GRAND TOTAL

CUSTOMER'S COPY

CONTROL NO. A-881852

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. • 908/356-5700

X _____
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X Don Ellis
CUSTOMER'S SIGNATURE

CRUSHED STONE • SAND • GRAVEL

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2828

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

DATE	CUST. NO.	JOB NO.	TICKET NO.
11/18/93	08880	09:45	881852

CUSTOMER
CLEANING UP THE ENVIRONMENT
103 GODWIN AVE.
P.O. BOX 237
MIDLAND PARK NJ 07432

DELIVER TO
ZONE:FORT MONMOUTH
FORT MONMOUTH BY FIREHOUSE

GROSS 39.00
TARE 14.20
NET 24.80

TRUCKER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
33459	1		CHARGE	2	0.30

QUANTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
24.80	20 O.P.S. TYPE 5 CLR	T			4.05		

COMMENTS

LOADS 2 ACCU. TONS 51.47

WAIT TIME

GRAND TOTAL

CUSTOMER'S COPY

CONTROL NO. A-881806

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. • 908/356-5700

X _____
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X Don Ellis
CUSTOMER'S SIGNATURE

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2328

CRUSHED STONE • SAND • GRAVEL

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

E		CUST. NO.		JOB NO.		TICKET NO.	
	[illegible]		00000		08-89		A81806

OMER	DELIVER TO	GROSS
CLEANING UP THE ENVIRONMENT 30 GODWIN AVE. P.O. BOX 237 MIDDLEBROOK N.J. 07438	ZONE:FORT MONMOUTH FORT MONMOUTH BY FIREHOUSE	[illegible] 67 TARE 13.00 NET 26.67

KER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
[illegible]	11		CHARGE	2	030

NTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
26.67	2M D.B.S. TYPE 5 CLR	T			4.05		

IENTS

WAIT TIME

LOADS 1 · ACCU. TONS 26.67

GRAND TOTAL

S.C.M.I. - BOUND BROOK

CUSTOMER'S COPY

CONTROL NO.
A-881792

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. • 908/356-5700

X Pat
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X Don Ellis
CUSTOMER'S SIGNATURE

CRUSHED STONE • SAND • GRAVEL

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2328

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

E	11/18/93	CUST. NO.	08886	JOB NO.	08:14	TICKET NO.	881792

OMER
LEANING UP THE ENVIORNMENT
03 GODWIN AVE.
.O. BOX 237
IDLAND PARK NJ 07432

DELIVER TO
ZONE: FORT MONMOUTH
FORT MONMOUTH BY FIREHOUSE

GROSS 39.00
TARE 14.20
NET 24.80

KER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
0440	15		CHARGE	2	030

NTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
24.80	13 3/4 INCH CLEAN S	T			4.05		

IENTS

WAIT TIME

LOADS 1 ACCU. TONS 24.80

GRAND TOTAL

STAVOLA ASPHALT CO.-TIN. FALLS

Stavola Asphalt Co., Inc.

ASPHALT PLANTS

OFFICE COP

CONTROL NO. B339404

Old Bergen Mill Rd.
Millstone, NJ
(908) 446-7700

Hamilton Rd.
Tinton Falls, NJ
(908) 542-2328

Yellowbrook Rd.
Farmingdale, NJ
(908) 938-2801

THESE AREAS MUST BE SIGNED PRIOR TO UNLOADING OF MATERIAL

NOTE **ATTENTION DRIVER: CUSTOMER MUST SIGN BELOW AND RETURN YELLOW COPY TO SCALE**

X Don Ellis
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X
CUSTOMER'S SIGNATURE

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, NJ
908 / 542-2328

• ASPHALT
CRUSHED STONE • SAND
• GRAVEL

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

DATE	CUST. NO.	JOB NO.	TICKET NO.
11/17/93	08888	12:50	339404

CUSTOMER	DELIVER TO	GROSS	TARE	NET
CLEAN UP ENIVERMENT	ZONE:	35.78	14.77	21.01

TRUCKER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
08888	1		CHARGE	1	

QUANTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
21.01	19 3/4 INCH BLEND S	TON					

WAITING TIME OVER 20 MINUTES MUST BE SIGNED BELOW BY CUSTOMER

WAIT TIME H/T 0.00

TIME: ON JOB | TIME: OFF JOB

X
(SIGNATURE)

LOADS 1 | ACCU. TONS 21.01

GRAND TOTAL

APPENDIX D

UST DISPOSAL CERTIFICATE

MONMOUTH COUNTY
RECLAMATION CENTER
TINTON FALLS, NJ
MAILING ADDRESS: 5000 ASBURY AVE. NEPTUNE, NJ 07753

G32709

FACILITY ID NO. 1336F1SP01

RECEIPT DOCUMENT NUMBER
01337919

PAYER
FREE508152
FREEHOLD CARTAGE INC
P O BOX 5010
FREEHOLD NJ 07728

VEHICLE

TARE WEIGHT 18.6800 37360
GROSS WEIGHT 22.5900 45180

DATE	OPER	TERM/TIME	DEP NO	PLATE NO		
11/10/93	MED	14:06	15939AX	XP51XA	14:35	Norma

QUANTITY	CLASS	DESCRIPTION/ORIGIN	UNITS	UNIT PRICE	AMOUNT
3.9100	13	Bulky Waste MONMOUTH COUNTY EATONTOWN BOROUGH	Tons		

*** Prepayment Balance Remaining: 25328.57 ***

TRANSPORTER'S SIGNATURE

DOCUMENT TOTAL

CUSTOMER COPY

3.91 TONS Bulky Waste
Fiberglass tank disposal Bldg 208A, 282, 205, 207A, 287, 206

MAZZA & SONS, INC.

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

NO. _____

DATE 4 NOV 93

Customer's Name Clean up DIR

Address _____

Make of Autos

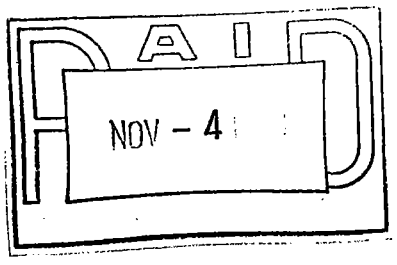
Tires

Tank 81533 - 211 Bldg. 207B

Price:

44840 LB G
39660 LB G

5180



	Weight	Price
Cast Iron		
Steel	77.	70
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT:		

Weigher _____ Customer Cliff Ford

APPENDIX E

MONITORING WELL PERMIT AND CONSTRUCTION LOG

207B SERIAL # 37081
DWR-133M (7/92)

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

Permit No. 293095

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

MONITORING WELL PERMIT 38

207B MW-1

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

COORD #: 1.14.44

Owner U.S. Army Fort Monmouth
Address
Fort Monmouth, NJ 07703

Driller Tree Organization, LTD
Address 1550 Rt 130 S
Burlington, NJ 08016

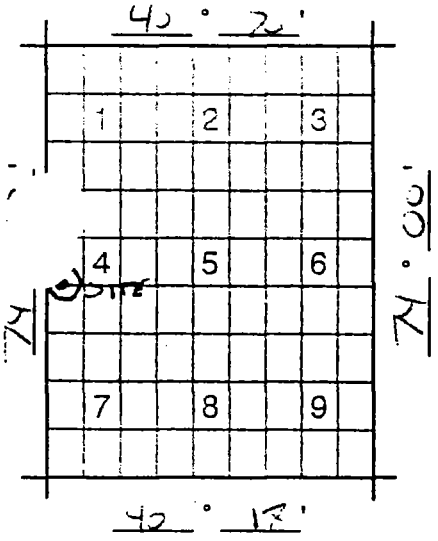
Name of Facility General Site (Main Post)
Address Building 207
Fort Monmouth, NJ 07703

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)	Monitor/Observation	If Yes, give pump capacity	GPM

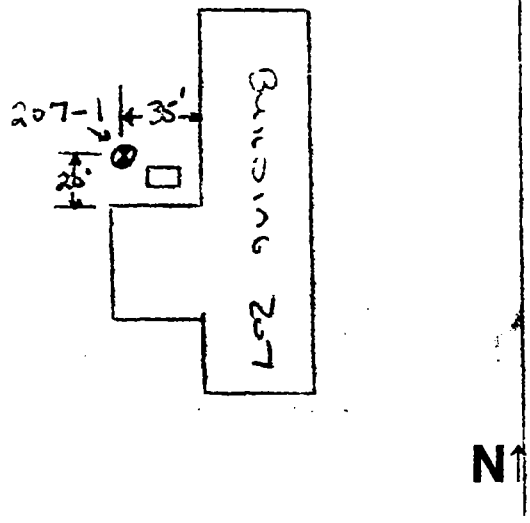
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
		Fort Monmouth	Monmouth

State Atlas Map No. 29



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 Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☒ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____

Case I.D. Number
93-11-2-1004-28

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
APR 5 1994

FOR P.E. SE

☐ 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.
☐ _____

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 March 28, 1994

Signature of Driller _____ License # 1421

Signature of Owner _____ SEIFM-EV

COPIES: Water Allocation - White and Pink; Health Dept. - Yellow; Owner - Gold; Driller - Blue

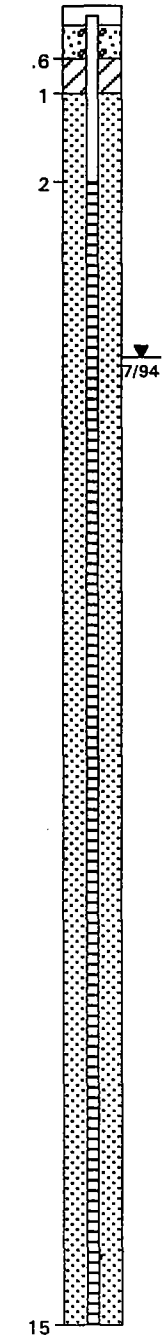
U.S. ARMY
FORT MONMOUTH
SELFM PW EV

LOG OF BORING 207B-MW1

Produced for Charles Appleby

Project Name	: BLDG 207	Completion Date	: 7/6/94
NJDEP Case #	: 93-11-2-1004-28	Northing	: N 540816.550
Logged By	: TYREE INC.	Easting	: E 2176426.839
Start Date	: 7/6/94	Driller	: M. Beck

29-30967
ELEV: 11.39



Depth in Feet	DESCRIPTION	GRAPHIC	USCS	Samples	Blows/Ft
0	Brown clay and sand		SC		
2	Green clay and sand		SC		
	Brown medium to fine sand		SW		
4	Green brown clay with trace of fine sand		SC		
	Green clay and sand		SC		
6	Brown clay and sand		SC		
8					
10					
12	Green clay and sand		SC		
14					
15					
16					

Well Construction Information

Well Construction

Date Completed	: 7/6/94
Hole Diameter	: 8 in
Drill Method	: HSA
Company Rep	: M. Beck

Well Casing

Material	: PVC
Diameter	: 4 in
Joints	: Threaded

Well Screen

Material	: PVC
Diameter	: 4 in
Joints	: Threaded
Opening	: 20 Slot
Sand Pack	: # 2 Morie Sand
Annulus Seal	: Bentonite/Portand : Tremmie

Well Screen

Material	: PVC
Diameter	: 4 in
Cap	:

NOTES

Well #1 is 207B-MW-1
Flushmount
Water level 4'

3-5-1996 c:\mp1\geo\207bmw1.ge3

THIS FORM . IT BE COMPLETED BY THE PERM ITEE AND/OR SURVEYOR

MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: U.S. ARMY
Name of Facility: FORT MONMOUTH
Location: MONMOUTH COUNTY, NJ
Case ~~NJPDES~~ Number: 93-11-2-1004-28

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
This number must be permanently affixed to the well casing. 29-309157-

Longitude (to nearest second): West 74°02'02.44"

Latitude (to nearest second): North 40°18'58.93"

Elevation of Top of Inner Casing (cap off) (one-hundredth of a foot): 11.39

Elevation of ground level (1/100th ft.) 11.63

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: FM-6

☐ 1927 ☐ 1983

Elev.: 6.94

Owners Well Number (As shown on application or plans): BLDG 207B 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 $(\text{mile})^{1/2}$. 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 - 39957
Atlas Sheet Coordinates 29 : 14 : 444

OWNER IDENTIFICATION - Owner U S ARMY FORT MONMOUTH
Address
City FORT MONMOUTH State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Bldg. 207 MW-1
County ~~MONMOUTH~~ Municipality ~~OCEANPORT BORO~~ Lot No. ~~N/A~~ Block No. ~~N/A~~
Address

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 7/6/94
Regulatory Program Requiring Well ~~UST~~ Case I.D. # ~~93-11-2-1024-28~~
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 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 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	6"	2'	4"	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	2'	15'	4"	.20 SLOT PVC
Tail Piece				
Gravel Pack	1'	15'		#2
Annular Seal/Grout	6"	1'		BENONITE
Method of Grouting	Pour			

Static water level after drilling 4 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 Type of Rig B-80
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. 1421
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGY

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

0 - 10' BROWN CLAY + SAND
10' 12' GREEN CLAY + SAND
12' - 15' BROWN MED TO FINE 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 Michael E Beck Date 7-11-94

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

APPENDIX F

SOIL ANALYTICAL DATA PACKAGE

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

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

Lab. ID #: 1318.1-.7
Sample Rec'd: 11/08/93
Analysis Start: 11/09/93
Analysis Comp: 11/09/93

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Method: SONC.

NJDEPE UST Reg.#: 0081533-5
TMS #: C-93-2615
NJDEPE Case #: none
Location #: **Bldg. # 207A**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1318.1	Site A, 4 - 4.5' hNu = ND	85	42.5	3.3
1318.2	Site B, 4 - 4.5' hNu = ND	85	19.6	3.3
1318.3	Site C, 4 - 4.5' hNu = ND	86	19.3	3.3
1318.4	Site D, 4 - 4.5' hNu = ND	83	21.7	3.3
1318.5	Site E, 1 - 1.5' hNu = ND	85	137.	23.
1318.6	Site F, 1 - 1.5' hNu = ND	84	371.	23.
1318.7	Site G, 1 - 1.5' hNu = 7.0	85	5740.	23.
M. BL.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added

1317.3 Dup. = 91% 1317.3 Spike = 89% 1317.3 Spike Dup.= 91% RPD: 98%

Brian K. McKee
Laboratory Director

SERV-AIR, INC.
An E-SYSTEMS Company

P.O. #: PWS-007

Chain of Custody

Project #:

Customer: C. Appleby DPW

Phone: x 26223

Sampler: Cute Inc. DAVE

Site Name: Bldg. 207 A

Date / Time: 11/8/93 | 1000

Analysis Parameters

Start:

Finish:

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solid	Benzene	HNu - Reading	Remarks
1318.1	11/8/93 1045	Site A - 4-4.5'	Soil	1	X	X	X	ND	
.2	1047	Site B 4-4.5'		1	X	X	X	ND	
.3	1049	Site C 4-4.5'		1	X	X	X	ND	
.4	1051	Site D 4-4.5'		1	X	X	X	ND	
.5	1054	Site E 1-1.5'		1	X	X	X	ND	Sample Kept <4°C
.6	1057	Site F 1-1.5'		1	X	X	X	ND	
.7	1100	Site G 1-1.5'		1	X	X	X	7.0	

HNu Calibration
SN 220136
Cal - 55 ppm IV
@ span of 4.2 ok jt
9:45 Am

Preservation Method

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

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	11/8/93 1130		

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

SAI-ENV COC form 01 Page ___1___ of ___1___ Pages Rev. A Date: 02 Apr 93

November 8, 1997

Daniel Hubbard

0926

Blank 0 MV

3375 84 MV

67.5 164 MV

135 323 MV

1317.1 (dil 7) 92 MV

1317.2 (dil 7) 174 MV

1317.3 12 MV

1317.3 Dup 13 MV

1317.3 Spk 82 MV

1317.3 Dup Spk 84

1317.4 (dil 3) 78

1318.1 23 MV

1318.2 14 MV

1318.3 14 MV

1318.4 15 MV

1318.5 (dil 7) 14 MV

1318.6 (dil 7) 34 MV

1318.7 (dil 7) 252 MV

1319.1 (dil 7) 643 MV

1319.2 12 MV

1319.3 11 MV

1319.4 (dil 7) 172

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

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 #: 1318.1-.7
Sample Rec'd: 11/08/93
Analysis Start: 11/09/93
Analysis Comp: 11/09/93

Analysis: Munsel

Lab ID#	Soil Color
1318.1	2.5Y 4/4 Olive Brown
1318.2	2.5Y 4/4 Olive Brown
1318.3	2.5Y 4/4 Olive Brown
1318.4	2.5Y 4/3 Olive Brown
1318.5	2.5Y 4/4 Olive Brown
1318.6	2.5Y 3/2 Very Dark Grayish Brown
1318.7	2.5Y 2.5/1 Black

Brian K. McKee
Laboratory Director

11/9/93 1:28 PM

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 #: 1306.1-.6
Sample Rec'd: 11/02/93
Analysis Start: 11/02/93
Analysis Comp: 11/02/93

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Method: SONC.

NJDEPE UST Reg.#: 0081533-211
TMS #: none
DICAR #: 93-11-2-1004-28
Location #: Bldg. # 207B

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1306.1	Site A, 4.5 - 5' hNu=ND	81	ND	3.3
1306.2	Site B, 4.5 - 5' hNu=ND	83	ND	3.3
1306.3	Site C, 4.5 - 5' hNu=5.0 *	83	5180.	23.
1306.4	Site D, 4.5 - 5' hNu=10.0 *	84	6160.	23.
1306.5	Site E, 4.5 - 5' hNu=5.0	85	1170.	23.
1306.6	Site F, 4.5 - 5' hNu=7.0	83	924.	23.
M. BL.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added

Batch Dup.= 100%,Batch Spike=111%,Batch Spike Dup.=107% RPD=97%

Brian K. McKee
Laboratory Director

SERV-AIR, INC.
An E-SYSTEMS Company

P.O. #:

Chain of Custody

Project #: C93-2615	Sampler: Cote Inc.	Date / Time 11/2/93 | 1200	Start:
Customer: Chandler Appleby	Site Name: Bldg. 207B UST # 81533-211	Analysis Parameters	Finish:
Phone: 26224	DICAR # 93-11-2-1004-28		Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solid	Munsell	HNU - Reading	Remarks
1306.1	11/2/93 1045	Site A - 4.5-5'	Soil	1	X	X	X	ND	
.2	1046	Site B - 4.5'-5'	Soil	1	X	X	X	ND	
.3	1048	Site C - 4.5-5'	Soil	1	X	X	X	5.0	
.4	1050	Site D - 4.5-5'	Soil	1	X	X	X	10.0	
.5	1053	Site E - 4.5-5'	Soil	1	X	X	X	5.0	
.6	1054	Site F - 4.5-5'	Soil	1	X	X	X	7.0	
									HNU - SN-270136
									Span Cal. at 4.5@
									55ppm Cal. Gas.

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
[signature]	11/2/93 | 1350	Radwan S. Ghosh	Hand

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		Radwan S. Ghosh	11/2/93 | 1:55 PM

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

FT. MONMOUTH OFFICE

November 2, 1993
1700
Sarah Hubbard

Blank 0 MV

33.75 81 MV

67.5 163 MV

135 3.26 MV

1306.1 ND

1306.2 ND

1306.3 (dil 7) 74 5,183 mg/kg

1306.4 (dil 7) 89 6,156 mg/kg

1308.5 (dil 7) 17 1,174 mg/kg

1306.6 (dil 7) 13 MV 9,238 mg/kg

Building 287

1307.1 dil 7 44 MV 3,126 mg/kg

1307.2 dil 7 35 MV 2,490 mg/kg

1307.3 (dil 7) 53 1,836 mg/kg

1307.4 (dil 7) 29 1,947 mg/kg

1307.5 29 MV 47 mg/kg

1307.6 ND

1307.6 Dup ND

1307.6 Spk 63 MV 210 mg/kg

1307.6 Dup Spk 61 203 mg/kg

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

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 #: 1306.1-.6
Sample Rec'd: 11/02/93
Analysis Start: 11/02/93
Analysis Comp: 11/02/93

Analysis: Munsel

Lab ID#	Soil Color
1306.1	5Y 5/3 Olive
1306.2	5Y 4/1 Dark Gray
1306.3	5Y 4/2 Olive Gray
1306.4	5Y 4/4 Olive
1306.5	5Y 4/2 Olive Gray
1306.6	5Y 5/3 Olive

Brian K. McKee
Laboratory Director

11/8/93 1:02 PM

Bldg 207 B
Record 12/7/93 from SAIC Ft.
No FB Records

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

TELECOPIER TRANSMITTAL COVER-SHEET

Pages
Date: 13

Number of Pages (Including Cover Sheet): 13

PLEASE DELIVER THE FOLLOWING PAGES TO:

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E-545 Fort Monmouth - U.S.A.E.
SEW-AR

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COMMENTS:

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Collected 11/8/93

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E-SYSTEMS, INC.

PROJECT: U.S. ARMY FORT MONMOUTH, NJ BLDG 207 B

ANALYSIS NO:	CLIENT ID:	
A 5223	1315.1	Site D-2
A 5224	1315.2	TB
A 5225	1315.3	FB

DATE RECEIVED: NOVEMBER 9, 1993

TWENTY FIRST CENTURY
ENVIRONMETNAL, INC.

RICHARD W. LYNCH
LABORATORY MANAGER

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 207 B

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/Kg)	RESULT (mg/Kg)
A 5223	1315.1	5.00	31.6

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A5223	DILUTION FACTOR	5.80
CLIENT ID	1315.1 BLDG 2078 D2	QA BATCH	
DATA FILE	>82061	DATE ANALYZED	11/10/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	290	Bromodichloromethane	ND	29
Acrylonitrile	ND	290	2-Chloroethylvinylether	ND	59
Chloromethane	ND	59	2-Hexanone	ND	59
Bromomethane	ND	59	trans-1,3-Dichloropropene	ND	29
Vinyl Chloride	ND	59	Toluene	ND	29
Chloroethane	ND	59	cis-1,3-Dichloropropene	ND	29
Acetone	ND	59	1,1,2,2-Tetrachloroethane	ND	29
1,1-Dichloroethene	ND	29	1,1,2-Trichloroethane	ND	29
Carbon Disulfide	ND	59	4-Methyl-2-pentanone	ND	59
Methylene Chloride	ND	29	Tetrachloroethene	ND	29
1,2-Dichloroethene(trans)	ND	29	Dibromochloromethane	ND	29
1,1-Dichloroethane	ND	29	Chlorobenzene	ND	29
Vinyl Acetate	ND	29	Ethylbenzene	ND	29
2-Butanone	ND	59	m&p-Xylenes	ND	29
Chloroform	ND	29	o-Xylene	ND	29
1,1,1-Trichloroethane	ND	29	Styrene	ND	29
Carbon Tetrachloride	ND	29	Bromoform	ND	29
1,2-Dichloroethane	ND	29	m-Dichlorobenzene	ND	29
Benzene	ND	29	p-Dichlorobenzene	ND	29
Trichloroethene	ND	29	o-Dichlorobenzene	ND	29
1,2-Dichloropropane	ND	29			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	108	70 - 121	OK
Toluene-d8	99.3	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 85.0 is used for all Target compounds.

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

21st Century Environmental Inc.
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	U.S. Army Ft. Monmouth, NJ	MATRIX	Soil
SAMPLE NUMBER	A5223 E	DILUTION FACTOR	10.00
CLIENT ID	Bldg 2076 (SS-3)	QA BATCH	
DATA FILE	>C3006	DATE ANALYZED	11/15/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-Nitrosodimethylamine	ND	3900	Acenaphthene	ND	3900
Phenol	ND	3900	2,4-Dinitrophenol	ND	19000
bis(-2-Chloroethyl)Ether	ND	3900	4-Nitrophenol	ND	19000
2-Cholorophenol	ND	3900	Dibenzofuran	ND	3900
1,3-Dichlorobenzene	ND	3900	2,4-Dinitrotoluene	ND	3900
1,4-Dichlorobenzene	ND	3900	2,6-Dinitrotoluene	ND	3900
Benzyl Alcohol	ND	3900	Diethylphthalate	ND	3900
1,2-Dichlorobenzene	ND	3900	4-Chlorophenyl-phenylether	ND	3900
2-Methylphenol	ND	3900	Fluorene	500 J	3900
bis(2-chloroisopropyl)Ether	ND	3900	4-Nitroaniline	ND	19000
4-Methylphenol	ND	3900	4,6-Dinitro-2-Methylphenol	ND	19000
N-Nitroso-Di-n-Propylamine	ND	3900	N-Nitrosodiphenylamine	ND	3900
Hexachloroethane	ND	3900	4-Bromophenyl-phenylether	ND	3900
Nitrobenzene	ND	3900	Hexachlorobenzene	ND	3900
Isophorone	ND	3900	Pentachlorophenol	ND	19000
2-Nitrophenol	ND	3900	Phenanthrene	1200 J	3900
2,4-Dimethylphenol	ND	3900	Anthracene	ND	3900
Benzoic Acid	ND	19000	Di-n-Butylphthalate	ND	3900
bis(-2-Chloroethoxy)Methane	ND	3900	Fluoranthene	470 J	3900
2,4-Dichlorophenol	ND	3900	Pyrene	800 J	3900
1,2,4-Trichlorobenzene	ND	3900	Butylbenzylphthalate	ND	3900
Naphthalene	ND	3900	3,3'-Dichlorobenzidine	ND	7800
4-Chloroaniline	ND	3900	Benzo(a)Anthracene	ND	3900
Hexachlorobutadiene	ND	3900	Bis(2-Ethylhexyl)Phthalate	ND	3900
4-Chloro-3-Methylphenol	ND	3900	Chrysene	ND	3900
2-Methylnaphthalene	2600 J	3900	Di-n-Octyl Phthalate	ND	3900
Hexachlorocyclopentadiene	ND	3900	Benzo(b)Fluoranthene	ND	3900
2,4,6-Trichlorophenol	ND	3900	Benzo(k)Fluoranthene	ND	3900
2,4,5-Trichlorophenol	ND	19000	Benzo(a)Pyrene	ND	3900
2-Chloronaphthalene	ND	3900	Indeno(1,2,3-cd)Pyrene	ND	3900
2-Nitroaniline	ND	19000	Dibenzo(a,h)Anthracene	ND	3900
Dimethyl Phthalate	ND	3900	Benzo(g,h,i)Perylene	ND	3900
Acenaphthylene	ND	3900	Benzidine	ND	7800
3-Nitroaniline	ND	19000			

Percent Solid of 85.0 is used for all Target compounds.

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

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	A5224	DILUTION FACTOR	1.00
CLIENT ID	1315.2 BLDG 2078	QA BATCH	
DATA FILE	>84399	DATE ANALYZED	11/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	5.4 J	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	7.2	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.2	76 - 114	OK
Toluene-d8	96.5	88 - 110	OK
Bromofluorobenzene	103	86 - 115	OK

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

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 207 B

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
A 5225	1315.3	0.05	N.D.

Report of Analysis
U.S. A· ', Fort Monmouth Environmental Lab· 'ory
NJDEPE Certification # 13461

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

Lab. ID #: 1342.1-.2
Sample Rec'd: 11/23/93
Analysis Start: 11/26/93
Analysis Comp: 11/26/93

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Method: SONC.

NJDEPE UST Reg .#: 81533-211
TMS #:C-93-2615 (207A)
Closure #:
Location: Bldg. 207B

Lab. ID.	Description	% Solid	Result	MDL
1342.1	Site G, 4.5 - 5' ova = ND	99	165.	3.3
1342.2	Site H, 4.5 - 5' ova = ND	98	ND	3.3
M. Bl.	Method Blank	100	ND	3.3

Notes: All results are reported in mg/Kg dry weight.
ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added
1341.1 Dup. = 100%, 1341.1 Spk. = 97%, 1341.1 Spk Dup. = 102%, RPD = 4%

Brian K. McKee
Laboratory Director

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 #: 1342.1-.2
Sample Rec'd: 11/23/93
Analysis Start: 11/26/93
Analysis Comp: 11/26/93

Analysis: Munsel

Lab ID#	Soil Color
1342.1	5Y 4/2 Olive Gray
1342.2	5Y 5/3 Olive

Brian K. McKee
Laboratory Director

11/29/93 10:20 AM

SERV-AIR, INC.
An E-SYSTEMS Company

P.O. #: PWS-007

Chain of Custody

Project #: Tms-C-93-2615
Customer: C.Appleby DPW
Phone: x26024
Sampler: Cute Inc.
Site Name: Bldg 2078
UST-815533-211
Tms-C-93-2615 (2078)
Date / Time: 11/23/93 0910
Analysis Parameters
Start:
Finish:

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsell	Field OVA Reading	Remarks
1342.1	11/23/93 0925	Site G - 4.5'-5'	Soil	1	X	X	X	ND	
↓ .2	11/23/93 0930	Site H - 4.5'-5'	Soil	1	X	X	X	ND	

Preservation Method

OVA - SN A52114
Calibrated To Zero Air
within 95 ppm @ 905 am
to Reading of 99 ppm. OK AD.

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

Relinquished By (signature) | Date / Time: 11/23/93 1613 | Received for Lab by (signature): Sarah Stubblefield | Date / Time: 11-22-93 1613

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

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

November 26, 1993 1108

Sarah J. Hubbard

Blank	0 MV
33.75	84 MV
67.5	163 MV
135	327 MV

1341.1	ND
1341.1 Dup	ND
1341.1 Spk	71 MV
1341.1 Dup Spk	74 MV
1341.2	27 MV
1342.1	117 MV
1342.2	3 MV
1343.1	120 MV
1345.2	68 MV

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

APPENDIX G
GROUNDWATER ANALYTICAL DATA PACKAGE

nytest environmental inc.

Project No.: 9421415
Log in No. : 22521E
P.O. No. : Pending
Date : 2/21/95
SDG No. : Army 2
NJDEPE Case #: 93-11-2-1004-28

ANALYTICAL DATA REPORT
PACKAGE FOR

Aguilar Associates

30 Freneau Avenue

Matawan, NJ 07747

ATTN: Darryl Schmitt
REF: US Army Fort Monmouth,Well# and NJDEPE Reg# 1- 2930957
Sample Location Bldg. 207B

LABORATORY NUMBER	SAMPLE IDENTIFICATION	TYPE OF SAMPLE

S E E N E X T P A G E

WE CERTIFY THAT THIS REPORT IS A TRUE REPORT OF RESULTS OBTAINED FROM OUR TESTS OF THIS MATERIAL.

RESPECTFULLY SUBMITTED,
NYTEST ENVIRONMENTAL INC.

REMO GIGANTE
EXEC. VICE PRESIDENT

NYS Lab ID. #10195
NJ Cert. #73469

NYTEST ENVIRONMENTAL Inc.

LABORATORY NUMBER	SAMPLE IDENTIFICATION	WELL #	TYPE OF SAMPLE
2252108	207B-1	1-2930957	Water
2252101	814-FB	-	Water
2252102	814-TB	-	Water

Table of Contents

BLDG.#: 207B MW#: 1 NJDEPE WELL ID # 2930957

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 11/9/94

IJO#94-0843

SAMPLING CONTRACTOR: Aguilar Associates Inc.

LABORATORY: NYTEST Environmental Inc. CERT #:73469

SAMPLERS NAMES: D. Schmith T. DeMichele, C. Aguilar, S. Panizzi, W. Prillwitz

WEATHER CONDITIONS: 65°F Sunny

ELEVATION OF CASING SURVEY MARK: 11.39

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 15.40 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: 2.0 FT

LENGTH OF SCREENED SECTION: 13 FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 5.69 FT

ELEVATION OF GW PRIOR TO PURGING: 5.7 FT

THICKNESS OF LNAPL PRIOR TO PURGING : —.— FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 0 PPM

pH: 4.63 TEMP: 18 C, SPECIFIC CONDUCTIVITY: 180 uS

DEPTH OF WELL: 15.40 FT D.O. - 4.2

HEIGHT OF WATER: 9.71 FT

EVACUATED GAL. H2O: 19 GAL (9.71 X .65 X 3 = 18.9)

PURGING START TIME: 1:02 END TIME: 1:27

PURGE METHOD: REDI-FLOW 2 INCH SUBMERSIBLE PUMP VARIABLE FLOW RATE OF <0.5 GPM TO >5.0 GPM

PURGE RATE (<0.5 GPM): <1 GPM

TOTAL VOLUME PURGED: 19 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 6.58 FT

DISSOLVED OXYGEN: 6.9 pH: 4.76 TEMP: 19 °C

SPECIFIC CONDUCTIVITY: 190 uS

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

START TIME OF SAMPLING: 1:50 END TIME: 2:05

DISSOLVED OXYGEN: 5.2 pH: 4.91 TEMP: 18 °C

SPECIFIC CONDUCTIVITY: 190 uS

COMMENTS: _____

TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

NEI nytest environmental.

(516) 625-5500 FAX: (516) 625-1274

Chain of Custody Record

page # : 1 of 1

Client Name: Aguilar Assoc. + Cons., Inc.

Address: 30 Freneau Ave.

Matawan, NJ 07747

Project Manager: D. Schmitt

Phone: (908) 290-7800 FAX: (908) 290-7800

Project Name: Fort Monmouth Bldg 207B

Project Number:

P.O. #:

Analytical Protocol: Deliverables:

Sampled By: D. Schmitt

Login #:

Ship to:

Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control

Date Shipped:

Carrier:

Air Bill #:

Cooler #:

C of C #:

SDG #:

NEI QT #:

Analysis Requested

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Location	No. of Containers	Gas+15, xylenes, TBA MTBE	Base Neutrals								Comments
	M V - 1	11/9/94	1350		4	2	2								

Bin #'s In / Out (For Lab Use Only)

000001

Relinquished by	Date / Time	Received by	Date / Time
Relinquished by: B. McK Print Name: B. McKee	11/10 1530	Received by: [signature] Print Name: Jay Trepiccio	11/.. 3:..
Relinquished by: Print Name:		Received by: Print Name:	
Relinquished by: [signature] Print Name: J. Trepiccio	11/10 8:..	Received by Laboratory: [signature] Print Name: [illegible]	11/10/94 [illegible]

Lab Use Only

Custody Seals: Intact **Broken** (circled) Absent

Sample Rec'd in Good Condition? : **Y** (circled) N

Sample Temperature: 4 Degrees Celcius

INSPECTED BY: [initials]

COMMENTS:

Special Instructions :

CLIENT RETAIN YELLOW COPY ONLY

TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

NEI nytest environmental.

(516) 625-5500 FAX: (516) 625-1274

Chain of Custody Record

page # : 1 of 1

Client Name: Aguilar Associates & Consultants, Inc.
Address: 30 Freneau Ave
Matawan, NJ 07747

Project Manager: D. Schmitt
Phone: (908) 290-7800 FAX (908) 290-7806
Project Name: Fort Monmouth Bldg 814
Project Number:
P.O. #:
Analytical Protocol: Deliverables:
Sampled By: D. Schmitt

Login #:
Ship to:
Nytest Environmental Inc.
60 Seaview Blvd
Port Washington N.Y. 11050
Attn.: Sample Control
Date Shipped:
Carrier:
Air Bill #:
Cooler #:
C of C #:
SDG #:
NEI QT #:

Analysis Requested

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Location	No. of Containers	624+15, xylenes, TBA MTBE	Base Neutrals							Comments
	Field B	11/9/94	8:45		4	2	2							
	Trip B	11/8/94	–		2	2								
	Dupl	11/9/94	–		4	2	2							
	MW-1	11/9/94	9:30	site 814	4	2	2							

Bin #'s In / Out (For Lab Use Only)

000002

Relinquished by	Date / Time	Received by	Date / Time
B. McK (signature); Print Name: B. McKee	11/10 1530	Jay Toepfer (signature); Print Name: JAY TOEPFERT	11/10 [illegible]
Relinquished by:; Print Name:		Received by:; Print Name:	
Jay Toepfer (signature); Print Name: J. Toepfer	11/[illegible] 5:25	Received by Laboratory: (signature); Print Name: [illegible]	[illegible] [illegible]

Lab Use Only
Custody Seals: Intact Broken Absent
Sample Rec'd in Good Condition? : Y N
Sample Temperature: 4 Degrees Celsius
INSPECTED BY: PO
COMMENTS:

Special Instructions :

CLIENT RETAINS YELLOW COPY ONLY

U.S. ARMY FORT MONMOUTH

P.O. #: Aguilar / 94-0843

Chain of Custody

Project #: 93-11-2-1004-28

Customer: C. Appleby
SELFm - PW - EU

Phone: (908) 532-6224

Sampler: D. Schmitt

Date / Time: 11/9/94

Site Name: Bldg 2073
DICAR # - 93-11-2-1004-28
MW Sampling

Analysis Parameters: BTEX + MTBE, TBA, Base Neutrals, HNu

Start:

Finish:

Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	BTEX+MTBE	TBA	Base Neutrals	HNu	Remarks
1220.1	11/9/94	1350	MW-1, 493057	AQ	4	2	2		0	Sample Kept "4°C
1716.1	11-9-94	0845	Field Blank	AQ	4	2	2			
.2	↓	—	Trip Blank	↓	2	2				HNu SN 801497
.3	↓	0845	Duplicate	↓	4	2	2			HNu = 0
										calibrated 11/4/94

300003

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Danny W Schmitt	11-9 94 | 1620	B. [illegible]	
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
B. [illegible]	11-10-94 | 1530	[illegible]	11/10 | 9:30

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

Enviornmental Laboratory

Qualification Number 1346

NORTEST ENVIRONMENTAL INC.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	NAME: [signature]	TITLE: SCO	
Client: AGVIAR	Date Broken: 11/10/94	Military Time Seal Broken: 2000	
Login #: 22521	Analytical Parameter/Fraction: 8080 PEST HERB P624+15 P15	TBN625+15	

SAMPLE NO.	ALIQUOT/EXTRACT NO.	SAMPLE NO.	ALIQUOT/EXTRACT NO.
22521 - 01	814-FB	13	1076-1
" - 02	814 TB	14	1076-2
" - 03	814-DUP	15	1073
" - 04	814-1	16	1076 3MS
" - 05	287-1	17	1076 3MSD
" - 06	208B-1	18	689B-2
" - 07	282-1	19	2044-1
" - 08	207B-1	20	2044-2
" - 09	689A-1	21	2044-3
" - 10	600-1	22	2044-FB
" - 11	2700.4-1	23	2044 DUP
" - 12	1220-1	24	2044 TB

DATE	TIME	RELINQUISHED BY	RECIEVED BY	PURPOSE OF CHANGE OF CUST.
11/1/94	1600	PRINTED NAME M. LAM SIGNATURE M. La	PRINTED NAME C Voss SIGNATURE C Voss	8080 PEST HERB, TBN625+15
11/4/94	0800	PRINTED NAME M. LANI SIGNATURE M. La	PRINTED NAME S Carver SIGNATURE S Carver	P624+15
11/16/94	1310	PRINTED NAME C Voss SIGNATURE C Voss	PRINTED NAME R Fletcher SIGNATURE R Fletcher	Storage
11/22/94	16:00	PRINTED NAME M. LANI SIGNATURE M. La	PRINTED NAME H. Trujillo SIGNATURE Hotr	Metals
11/30/94	1500	PRINTED NAME H. Trujillo SIGNATURE Hotr	PRINTED NAME M. LANI SIGNATURE M. La	Storage
12/6/94	0815	PRINTED NAME S Carver SIGNATURE S Carver	PRINTED NAME M. LANI SIGNATURE M. La	Storage
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	

LABORATORY DELIVERABLES

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

Tom Bley — 2/21/95

Laboratory Manager or Environmental Consultant's Signature — Date

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		✓
3.	GC/MS Tune 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 ______
b. B/N Fraction ______
c. Acid Fraction ______

7. Surrogate Recoveries Meet Criteria — No: ✓ Yes: ___

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

BFB(57, ~~58, 55, 58, 55,~~ 56, 58, 54, ~~56,~~ 56, 56, 55, 56)

a. VOA Fraction ~~BFB (62, 59, 58, 58)~~ Em Summaty 2/19/95
b. B/N Fraction ______
c. Acid Fraction ______

If not met, were the calculations checked and the results qualified as estimated? NA

8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if not met, list these compounds and their recoveries which fall outside the acceptable range) — No: ✓ Yes: ___

a. VOA Fraction 1,1-Dichloroethane (166, 178) Chloroform (159, 170) 1,2-Dichloroethane (173, 184)
b. B/N Fraction Phenanthrene (59, 60)
c. Acid Fraction ______

9. Internal Standard Area/Retention Time Shift Meet Criteria NA

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

		No	Yes
10.	Extraction Holding Time Met	___	✓

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

11.	Analysis Holding Time Met	___	✓

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

Additional Comments: _____

Laboratory Manager: [signature] Date 2/21/95

Laboratory Chronicle

Client Name: Aguilar Associates

Log In No.: 22521E

Date(s) of Sample Collection: 11/09/94

Date Received: 11/10/94

Sample ID: As per chain of custody

Organics Extraction:

1. Acids 11/13/94
2. Base/Neutrals
3. Pesticides/PCBs
4. Herbicides

Analysis:

	11/14/94	11/15/94
1. Volatiles		
2. Acids	12/03/94	
3. Base/Neutrals		
4. Pesticides/PCBs		
5. Herbicides		

Section Supervisor Review & Approval [signature]

Inorganics:

1. Metals
2. Cyanides
3. Phenols

Other Analysis:

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

Dates are included for re-extractions and reanalysis.

NARRATIVE DISCUSSION
VOLATILES - 22521E
Bldg:207B

INTRODUCTION

This narrative covers the analysis of three (3) samples in accordance with NEI SOP #703 based on USEPA Method 624.

HOLDING TIMES

The analytical holding time for this analysis was met.

CALIBRATIONS

All required minimum RRFs and maximum % RSD initial calibration requirements have been met in accordance with the Method.

QC CHECK SAMPLE

Three (3) out of thirty-one (31) % recoveries in QC check samples N0198 were outside QC limits.

METHOD BLANKS

The method blank associated with these samples did not contain any target compounds at or above QC limits.

SURROGATES

Surrogate recoveries met QC criteria with the exception of sample 207B. No further action was taken due to lab error.

MATRIX SPIKES

As requested sample 1076-3 was utilized for the MS and MSD analyses. The 1,1-Dichloroethane, Chloroform, and 1,2-Dichloroethane recoveries in the MS and MSD were above advisory QC limits. The form 3 was included in this report.

INTERNAL STANDARDS

Area response and retention time summaries are not required.

SAMPLE COMMENTS

NEI is reporting the results to our method detection limits (MDL's) rounded up to the nearest part per billion (ppb) in accordance with the guidance provided by NJDEP. These MDL's indicate that NEI did not detect any compounds above these levels.
No further analytical problems were encountered.

NARRATIVE DISCUSSION
SEMIVOLATILES - 22521E
Bldg:207B

INTRODUCTION

This narrative covers the analysis of two (2) samples in accordance with NEI SOP #501 based on USEPA Method 625.

HOLDING TIMES

The extraction and analytical holding times for this analysis were met.

CALIBRATIONS

Required minimum RRFs and maximum % RSD initial calibration requirements have been met in accordance with the Method.

QMETHOD BLANKS

The method blank associated with these samples did not contain any target compounds at or above QC limits.

SURROGATES

All samples met surrogate QC criteria.

MATRIX SPIKES

As requested sample 1076-3 was utilized for the MS and MSD analyses. The Phenanthrene recoveries in the MS and MSD were above advisory QC limits. The form 3 was included in this report.

INTERNAL STANDARDS

Area response and retention time summaries are not required.

SAMPLE COMMENTS

NEI is reporting the results to our method detection limits (MDL's) rounded up to the nearest part per billion (ppb) in accordance with the guidance provided by NJDEP. These MDL's indicate that NEI did not detect any compounds above these levels.

No analytical problems were encountered.

nytest environmental inc

I certify that this data package has been reviewed for the quality control and quality assurance measures for all analyzed methodologies.

Remo Gigante
Exec. Vice President

METHODOLOGY SUMMARY

AQUEOUS METHODOLOGIES:	REF 1	REF 2	REF 3	REF 5
BNA, Pesticides/PCB's Extraction		3510/3520		
AA/ICP Sample Preparation	200.7			
Furnace Sample Preparation	200.0			
Mercury Sample Preparation	245.1			
Hexavalent Chromium Sample Preparation	218.5			
Clean-Up		3610/3620/3630/ 3640/3660		
Organochlorine Pesticide and PCB's by Gas Chromatography			608	505
Herbicides by Gas Chromatography			362	515.1
Purgeable Organics by GC/MS			624	524.2
Base/Neutral, Acids by GC/MS			625	525
2,3,7,8-TCDD by GC/MS			613/625	
BTEX			602	502.2
EDB/DBCP by Microextraction				504.1

NON-AQUEOUS METHODOLOGIES:	
BNA, Pesticides/PCB's Extraction	3550
AA/ICP Sample Preparation	3050
Furnace Sample Preparation	3020/3030/3050
Mercury Sample Preparation	7471
Clean-Up	3610/3620/3630/ 3640/3660

GC, Gas Chromatography/Mass Spectrometry:

Purgeable Organics	8240/8021
Base/Neutral and Acid Extractables	8270
Organophosphorus Pesticides	8140
Organochlorine Pesticide and PCB's by Gas Chromatography	8080
BTEX	8020
Halogenated Purgeable Organics	8010

METHODOLOGY SUMMARY

REFERENCES:

(1) USEPA-600/4-79-020, Methods for Chemical Analysis of Water and Waste

(2) USEPA SW 846, Test Methods for Evaluating Solid Waste, Third Edition

(3) Federal Register 40 CFR Part 136, Vol.49, No.209 Test Parameters for the Analysis of Pollutants

(4) Federal Register Vol.51, No.216 Friday, 11/7/86, pp.40643-40652

(5) Method for the Determination of Organic Compounds in Drinking Water, EPA 500/4-88/039, Dec. 1988

(6) Standard Method for Examination of Water and Wastewater, 15 Edition 1980

Method Qualifiers for Organic Non-CLP Methodologies

Q Qualifier - Specified entries and their meanings as follows:

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit is corrected for dilutions and for the moisture content for soil samples. If a sample extract can not be concentrated to the protocol - specific volume, this fact is also accounted for in reporting the sample quantitation limit. The number is the minimum detected limits for the sample.

J - Indicates an estimated volume. The flag is used either when estimating concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the **N** code is not used.

B - This flag is used when the analyte is found in the analyte is found in the associated blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound.

E - This flag identifies compounds whose concentrations exceeded the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

A - This flag indicates that a TIC is a suspected aldol condensation product.

GC/MS Data

Volatile Data

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

814-FB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0223.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	6	
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

814-FB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0223.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

814-FB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0223.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

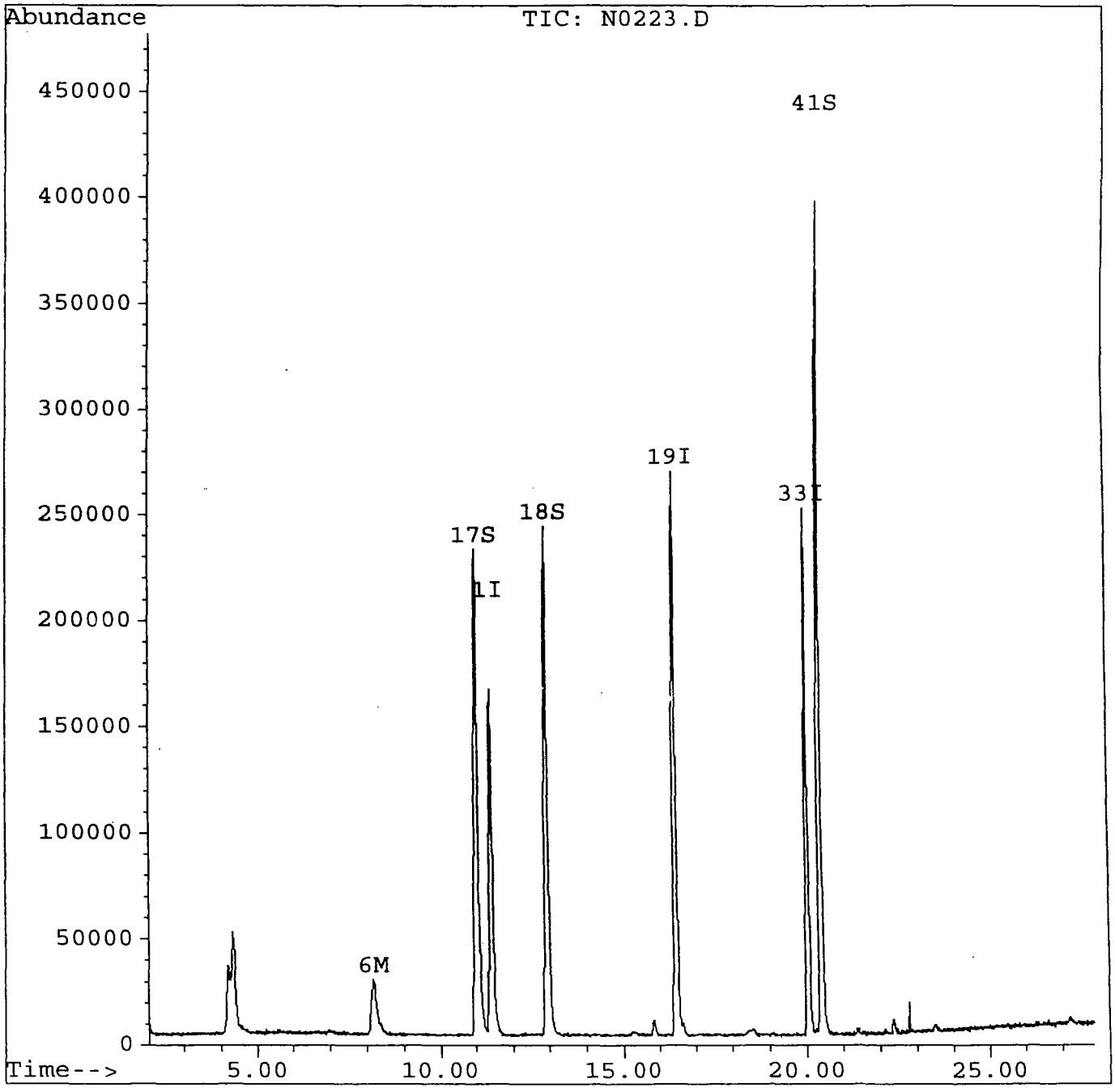
	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV1494\N0223.D
Acq Time : 15 Nov 94 00:47 am
Sample : 2252101,814-FB,
Misc : 1,1,,,5,5,P624,R11-10-94
Quant Time: Dec 30 13:49 1994

Operator: LDS
Inst : HPN
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 23 10:39:23 1994
Response via : Multiple Level Calibration



000020

Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV1494\N0223.D
Acq Time : 15 Nov 94 00:47 am
Sample : 2252101,814-FB,
Misc : 1,1,,,5,5,P624,R11-10-94
Quant Time: Dec 30 13:49 1994

Operator: LDS
Inst : HPN
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 23 10:39:23 1994
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) CI01 Bromochloromethane	11.40	128	146555	30.00	ug/l	0.06
19) 2-BROMO-1-CHLOROPROPANE	16.46	77	566776	30.00	ug/l	0.04
33) 1,4-DICHLOROBUTANE	20.03	55	482362	30.00	ug/l	0.02
System Monitoring Compounds						%Recovery
17) PENTAFLUOROBENZENE	11.01	168	642342	21.03	ug/l	70.08%
18) FLUOROBENZENE	12.94	96	772863	21.62	ug/l	72.06%
41) CS10 4-Bromofluorobenzene	20.40	95	480777	19.44	ug/l	64.8[illegible]
Target Compounds						Qvalue
6) C030 Methylene Chloride	8.19	84	75784	5.52	ug/l m	38

000021

(#) = qualifier out of range (m) = manual integration

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

814-TB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0224.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	3	
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3 Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

814-TB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0224.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

814-TB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0224.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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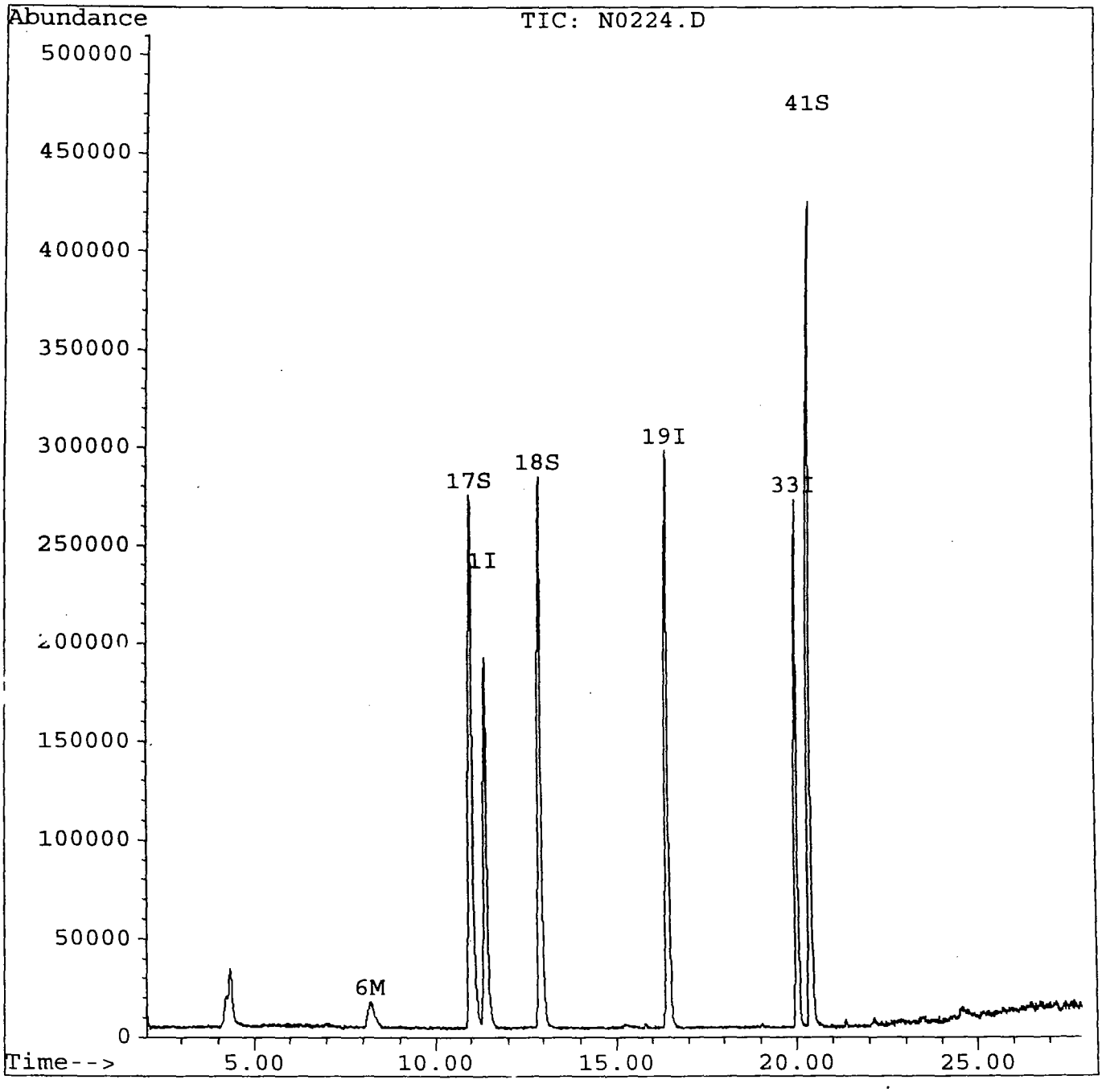
26.					
27.					
28.					
29.					
30.					

Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV1494\N0224.D
Acq Time : 15 Nov 94 1:20 am
Sample : 2252102,814-TB,
Misc : 1,1,,,5,5,P624,R11-10-94
Quant Time: Dec 23 11:21 1994

Operator: LDS
Inst : HPN
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 23 10:39:23 1994
Response via : Multiple Level Calibration



000025

Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV1494\N0224.D
Acq Time : 15 Nov 94 1:20 am
Sample : 2252102,814-TB,
Misc : 1,1,,,5,5,P624,R11-10-94
Quant Time: Dec 23 11:21 1994

Operator: LDS
Inst : HPN
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 23 10:39:23 1994
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) CI01 Bromochloromethane	11.40	128	167328	30.00	ug/l	0.06
19) 2-BROMO-1-CHLOROPROPANE	16.45	77	623815	30.00	ug/l	0.0[illegible]
33) 1,4-DICHLOROBUTANE	20.02	55	527478	30.00	ug/l	0.00
System Monitoring Compounds						**%Recovery**
17) PENTAFLUOROBENZENE	11.00	168	760652	21.81	ug/l	72.69%
18) FLUOROBENZENE	12.93	96	905565	22.19	ug/l	73.95%
41) CS10 4-Bromofluorobenzene	20.39	95	510540	18.88	ug/l	62.94%
Target Compounds						**Qvalue**
6) C030 Methylene Chloride	8.20	84	47422	3.02	ug/l	89

000026

(#) = qualifier out of range (m) = manual integration

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252108

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0230.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	3	U
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252108

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0230.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22521 SAS No.: SDG No.: ARMY2

Matrix: (soil/water) WATER Lab Sample ID: 2252108

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N0230.D

Level: (low/med) LOW Date Received: 11/10/94

% Moisture: not dec. _____ Date Analyzed: 11/15/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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29.					
30.					

nytest environmental inc.

Project No.: 9421415
Log in No. : 22662H
P.O. No. : Pending
Date : 2/21/95
SDG No. : Army 3
NJDEPE Case #: 93-11-2-1004-28

ANALYTICAL DATA REPORT
PACKAGE FOR

Aguilar Associates

30 Freneau Avenue

Matawan, NJ 07747

ATTN: Darryl Schmitt
REF: US Army Fort Monmouth,Well# and NJDEPE Reg# 1- 2930957
Sample Location Bldg. 207B

LABORATORY NUMBER	SAMPLE IDENTIFICATION	TYPE OF SAMPLE

S E E N E X T P A G E

WE CERTIFY THAT THIS REPORT IS A TRUE REPORT OF RESULTS OBTAINED FROM OUR TESTS OF THIS MATERIAL.

RESPECTFULLY SUBMITTED,
NYTEST ENVIRONMENTAL INC.

NYS Lab ID. #10195
NJ Cert. #73469

RENO GIGANTE
EXEC. VICE PRESIDENT

NYTEST ENVIRONMENTAL Inc.

LABORATORY NUMBER	SAMPLE IDENTIFICATION	WELL #	TYPE OF SAMPLE
2266212	207B-1	1-2930957	Water
2266213	207B-1MS	1-2930957MS	Water
2266214	207B-MSD	1-2930957MSD	Water
2266208	TRIPBL	-	Water
2266218	FIELDB	-	Water

Table of Contents

BLDG.#: 207B W#: 1 NJDEPE WELL ID # 2930957

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 12/1/94

IJO#94-0843

SAMPLING CONTRACTOR: Aguilar Associates Inc.

LABORATORY: NYTEST Environmental Inc. CERT #:73469

SAMPLERS NAMES: D. Schmitt, N. Vonasek, S. Panizzi

WEATHER CONDITIONS: Mid 40's cold, windy

ELEVATION OF CASING SURVEY MARK: 11.39

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 15.35 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: 2.0 FT

LENGTH OF SCREENED SECTION: 13 FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 4.07 FT

ELEVATION OF GW PRIOR TO PURGING: 7.32 FT

THICKNESS OF LNAPL PRIOR TO PURGING : -.- FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 0 PPM

pH: 5.23 TEMP: 13.5 C, SPECIFIC CONDUCTIVITY: 220 ms D.O. - 2.0

DEPTH OF WELL: 15.35 FT

HEIGHT OF WATER: 11.28 FT

EVACUATED GAL. H2O: 22 GAL (11.28 X .65 X 3 = 21.99)

PURGING START TIME: 8:11 END TIME: 8:30

PURGE METHOD: REDI-FLOW 2 INCH SUBMERSIBLE PUMP VARIABLE FLOW RATE OF <0.5 GPM TO >5.0 GPM

PURGE RATE (<0.5 GPM): <1 GPM

TOTAL VOLUME PURGED: 22 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 4.83 FT

DISSOLVED OXYGEN: 2.5 pH: 4.94 TEMP: 13.5 °C

SPECIFIC CONDUCTIVITY: 220 ms

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

START TIME OF SAMPLING: 9:15 END TIME: 9:25

DISSOLVED OXYGEN: 4.3 pH: 5.18 TEMP: 12 °C

SPECIFIC CONDUCTIVITY: 210 ms

COMMENTS: _____

U.S. ARMY FORT MONMOUTH

P.O. #: Aguilar / 94-0843

Chain of Custody

Project #: 93-11-2-1004-28	Sampler: D. Schmitt - Aguilar	Date / Time 12/1/94 9:30	Start:
Customer: C. Appleby SELFm-pu-EU	Site Name: Bldg 207 B DICAR# - 93-11-2-1004-28	Analysis Parameters	Finish:
Phone: (908) 532-6224	MW Sampling		Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	624+6, xylenes, TBA, MTBE	Base Neutrals						Hnu (ppm)	Remarks
1748.1	12/1/94	9:20	MW-1, 2930957	AQ	4	2	2						0	Sample Kept 4°C
1748.2	12/1/94	9:05	Field Blank	AQ	4	2	2							
1748.3	12/1/94	8:40	Trip Blank	AQ	2	2								
1748.4	12/1/94	—	Duplicate	AQ	4	2	2							
1748.5	12/1/94	9:30	MW-1 BLDG 207 B 2930957 MW-1B	AQ	4	2	2							
														Hnu SN 801497
														Hnu = 0 ppm
														calibrated 11/23/94
														54 ppm Benzene Syringe Leads 54 ppm Span 9.8 D.F.

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time

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

Enviornmental Laboratory

Certification Number 13461

TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

NEI nytest environmental.

(516) 625-5500 FAX: (516) 625-1274

Chain of Custody Record

page # : 1 of 1

Client Name: Aguilar Associates
Address: 30 Freneau Ave
MATAWAN, N.J 07747
Project Manager: D. Schmitt
Phone: 908-290-7800 FAX: 908-290-7506
Project Name: Ft Monmouth, Bld 287
Project Number: 93-11-29-1745-01
P.O. #:
Analytical Protocol: Deliverables:
Sampled By:

Analysis Requested: (handwritten column heads, partly illegible)

Login #:
Ship to: Nytest Environmental Inc, 60 Seaview Blvd, Port Washington N.Y. 11050, Attn.: Sample Control
Date Shipped:
Carrier:
Air Bill #:
Cooler #:
C of C #:
SDG #:
NEI QT #:

Lab ID (Lab Use Only)	Sample ID (Maximum of 6 Characters)	Date Sampled	Time Sampled	Sample Location	No. of Containers	Analysis 1	Analysis 2	Comments
07	MW-1	2/1/94	9:40	Bld 287, 287 [illegible]	4	2	2	
08	FieldB	↓	9:05	Type B	4	2	2	
15	TripB1	↓	8:40	↓	2	2		
09	Duplic	↓	—	↓	4	2	2	

1000001

Relinquished by	Date / Time	Received by	Date / Time
Darryl W. Schmitt (Print Name: Darryl W. Schmitt)	2/2/94 1630	[signature] (Print Name: MURRAY FERGUSON)	2/2 1630
[signature] (Print Name: MURRAY FERGUSON)	2/2 1830	Received by: (Print Name:)	
Relinquished by: (Print Name:)		Received by Laboratory: [signature] (Print Name: Michael Lan)	2/2/94 1830

Lab Use Only
Custody Seals: Intact Broken Absent (circled)
Sample Rec'd in Good Condition?: Y (circled) N
Sample Temperature: 6 Degrees Celsius
INSPECTED BY: ML
COMMENTS:

Special Instructions:

CLIENT RETAINS YELLOW COPY ONLY

TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

nytest environmental inc

CHAIN OF CUSTODY RECORD

Page 1 of 1

SHIP TO: Nytest Environmental Inc.
60 Seaview Blvd.
Port Washington, NY 11050
(516) 625-5500
Attn. Mike Lee

REPORT TO: Client Name Ambler Assoc. & Cons., Inc.
Address 38 Freneau Ave.
Matawan, NJ 07747
Phone 908-290-7800
Attn. D. Schmitt

Project No.	Project Name Fort Monmouth Bldg 207B		Date Shipped	Carrier
Sampler: (Signature) Darryl W. Schmitt		Analytical Protocol	Air Bill No.	Cooler No.

Sample I.D.	Date/Time Sampled		Sample Description	No. Of Containers	ANALYSIS REQUESTED
MW-1	11/1/94	9:20	AQ	4	624+15, xylenes, TBA, MTHF, Base Neutrals
MS/MSD	"	"	"	4	"

	Date / Time		Date / Time
Relinquished by (Signature) Darryl W. Schmitt	12/2/94 1630	Rec'd By (Signature) Murray Ferguson	12/2 1630
Print Name Darryl W. Schmitt		Print Name Murray Ferguson	
Relinquished by (Signature) Murray Ferguson	12/2 1830	Rec'd by (Signature)	
Print Name Murray Ferguson		Print Name	
Relinquished by (Signature)		Received for Laboratory by (Signature) Michael Lan	12/3/94 1830
Print Name		Print Name Michael Lan	

Special Instructions/Comments

000002

Client Retains Yellow Copy Only

N . TEST ENVIRONMENTAL INC

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	NAME: Michael Lan	TITLE: S
Client: Aguilar Assoc	Date Broken 12/02/94	Military Time Seal Broken: 1830
Login #: 22662	Analytical Parameter/Fraction: A24+15, PBN625+15	

SAMPLE NO.	ALIQUOT/EXTRACT NO.	SAMPLE NO.	ALIQUOT/EXTRACT NO.
814-1	22662-01	1220-1	22662-11
1076-1	02	207B-1	12
1076-2	03	207B-1MS	13
1076-3	04	207B-1MSD	14
689B-2	05	208B-1	15
600-1	06	282-1	16
287-1	07	689A-1	17
FIELDB	08	TRIPBL	18
DUPLIC	09		
27604-1	10		

DATE	TIME	RELINQUISHED BY	RECIEVED BY	PURPOSE OF CHANGE OF CUS
12/5	11:50	PRINTED NAME M. LANI SIGNATURE M. Lan	PRINTED NAME S Carver SIGNATURE S Carver	VOA
12/5/94	1200	PRINTED NAME M. LANI SIGNATURE M. Lan	PRINTED NAME C Voss SIGNATURE C Voss	PBN625+15
12/6/94	1305	PRINTED NAME C Voss SIGNATURE C Voss	PRINTED NAME PLEACIDES SIGNATURE [signature]	STORAGE
12/13/94	0800	PRINTED NAME S Carver SIGNATURE S Carver	PRINTED NAME M. LANI SIGNATURE M. Lan	STORAGE
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	000003

LABORATORY DELIVERABLES

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

Tom Bley — 2/21/95

Laboratory Manager or Environmental Consultant's Signature — Date

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		✓
3.	GC/MS Tune 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: AMT 2/18/95

a. VOA fraction ~~VBLK 3Y MeCl₂ 6 ppb~~, ~~VBLK 41 MeCl₂ 1.5 ppb~~, VBLK 43 Xylenes 1.3 ppb VBLK 45 MeCl₂ 2.1 ppb ~~xylene 1.5 ppb~~ AMT 2/18/95

b. ~~B/N Fraction~~ ______

c. Acid Fraction ______

7. Surrogate Recoveries Meet Criteria — No ✓ — Yes ~~✓~~ RH 1/11/95

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

a. VOA Fraction ______
b. B/N Fraction See Form 2C
c. Acid Fraction ______

If not met, were the calculations checked and the results qualified as estimated? **NA** RH 1/11/95

8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if not met, list these compounds and their recoveries which fall outside the acceptable range) — No ✓ — Yes ~~✓~~

a. VOA Fraction ______
b. B/N Fraction See Recovery Reports.
c. Acid Fraction ______

9. Internal Standard Area/Retention Time Shift Meet Criteria — NA

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

		No	Yes
10.	Extraction Holding Time Met	✓	

If not met, list number of days exceeded each sample: SEVERAL SAMPLES REQUIRED RE-EXTRACTIONS, WHICH WERE PERFORMED OUTSIDE OF HOLDING TIME

11.	Analysis Holding Time Met		✓

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

Additional Comments: _____

Laboratory Manager: [signature] Date 2/21/95

Laboratory Chronicle

Client Name: Aguilar Associates

Log In No.: 22662H

Date(s) of Sample Collection: 12/01/94

Date Received: 12/02/94

Sample ID: As per chain of custody

Organics Extraction:

1. Acids — 12/05/94 — 12/30/94
2. Base/Neutrals
3. Pesticides/PCBs
4. Herbicides

Analysis:

1. Volatiles — 12/05/94 — 12/06/94
2. Acids — 1/03/95 — 1/09/95
3. Base/Neutrals
4. Pesticides/PCBs
5. Herbicides

Section Supervisor Review & Approval: Lori Bey

Inorganics:

1. Metals
2. Cyanides
3. Phenols

Other Analysis:

Section Supervisor Review & Approval: Lori Bey

Quality Control Supervisor Review & Approval: Lori Bey

Dates are included for re-extractions and reanalysis.

NARRATIVE DISCUSSION
VOLATILES - 22662H

Bldg:207B

INTRODUCTION

This narrative covers the analysis of three(3) samples in accordance with NEI SOP #703 based on USEPA Method 624.

HOLDING TIMES

The analytical holding time for this analysis was met.

CALIBRATIONS

All required minimum RRFs and maximum % RSD initial calibration requirements have been met in accordance with the Method.

QC CHECK SAMPLE

All % recoveries in the QC check samples met the requirements as stipulated by the method.

METHOD BLANKS

The method blank associated with these samples met all method requirements.

SURROGATES

All surrogate recoveries met QC criteria.

MATRIX SPIKES

As requested sample 207B-1 was utilized for the MS and MSD analyses. Spike recoveries were within the advisory QC limits. The form 3 was included in this report.

INTERNAL STANDARDS

Area response and retention time summaries are not required.

SAMPLE COMMENTS

NEI is reporting the results to our method detection limits (MDL's) rounded up to the nearest part per billion (ppb) in accordance with the guidance provided by NJDEP. These MDL's indicate that NEI did not detect any compounds above these levels.

No further analytical problems were encountered.

NARRATIVE DISCUSSION
SEMIVOLATILES - 22662H
Bldg:207B

INTRODUCTION

This narrative covers the analysis of two (2) samples in accordance with NEI SOP #501 based on USEPA Method 625.

HOLDING TIMES

The extraction and analytical holding times for this analysis were met with the exception of sample FIELDB which was reextracted outside of the allowable holding time.

Initial extraction of this sample which was performed within the allowable holding time did not meet QC criteria, therefore reexrtraction was performed.

CALIBRATIONS

Required minimum RRFs and maximum % RSD initial calibration requirements have been met in accordance with the Method.

QMETHOD BLANKS

The method blanks associated with these samples did not contain any target compounds at or above QC limits.

SURROGATES

Surrogate recoveries were outside QC limits in method blank SBLK67 and samples 207B-1 and FIELDB. It should be noted that all samples showed a consistant recovery pattern. Reextraction and reanalysis was performed on FIELDB. Comparable results were obtained. Both sets of data are included.

MATRIX SPIKES

As requested sample 207B-1 was utilized for the MS and MSD analyses. The form 3 was included in this report.

INTERNAL STANDARDS

Area response and retention time summaries are not required.

SAMPLE COMMENTS

NEI is reporting the results to our method detection limits (MDL's) rounded up to the nearest part per billion (ppb) in accordance with the guidance provided by NJDEP. These MDL's indicate that NEI did not detect any compounds above these levels.

During the extraction of sample 207B-1 emulsion occured.

No other analytical problems were encountered.

nytest environmental inc

I certify that this data package has been reviewed for the quality control and quality assurance measures for all analyzed methodologies.

Remo Gigante
Exec. Vice President

METHODOLOGY SUMMARY

AQUEOUS METHODOLOGIES:	REF 1	REF 2	REF 3	REF 5
BNA, Pesticides/PCB's Extraction		3510/3520		
AA/ICP Sample Preparation	200.7			
Furnace Sample Preparation	200.0			
Mercury Sample Preparation	245.1			
Hexavalent Chromium Sample Preparation	218.5			
Clean-Up		3610/3620/3630/ 3640/3660		
Organochlorine Pesticide and PCB's by Gas Chromatography			608	505
Herbicides by Gas Chromatography			362	515.1
Purgeable Organics by GC/MS			624	524.2
Base/Neutral, Acids by GC/MS			625	525
2,3,7,8-TCDD by GC/MS			613/625	
BTEX			602	502.2
EDB/DBCP by Microextraction				504.1

NON-AQUEOUS METHODOLOGIES:	
BNA, Pesticides/PCB's Extraction	3550
AA/ICP Sample Preparation	3050
Furnace Sample Preparation	3020/3030/3050
Mercury Sample Preparation	7471
Clean-Up	3610/3620/3630/ 3640/3660

GC, Gas Chromatography/Mass Spectrometry:	
Purgeable Organics	8240/8021
Base/Neutral and Acid Extractables	8270
Organophosphorus Pesticides	8140
Organochlorine Pesticide and PCB's by Gas Chromatography	8080
BTEX	8020
Halogenated Purgeable Organics	8010

METHODOLOGY SUMMARY

REFERENCES:

(1) USEPA-600/4-79-020, Methods for Chemical Analysis of Water and Waste

(2) USEPA SW 846, Test Methods for Evaluating Solid Waste, Third Edition

(3) Federal Register 40 CFR Part 136, Vol.49, No.209 Test Parameters for the Analysis of Pollutants

(4) Federal Register Vol.51, No.216 Friday, 11/7/86, pp.40643-40652

(5) Method for the Determination of Organic Compounds in Drinking Water, EPA 500/4-88/039, Dec. 1988

(6) Standard Method for Examination of Water and Wastewater, 15 Edition 1980

Method Qualifiers for Organic Non-CLP Methodologies

Q Qualifier - Specified entries and their meanings as follows:

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit is corrected for dilutions and for the moisture content for soil samples. If a sample extract can not be concentrated to the protocol - specific volume, this fact is also accounted for in reporting the sample quantitation limit. The number is the minimum detected limits for the sample.

J - Indicates an estimated volume. The flag is used either when estimating concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the **N** code is not used.

B - This flag is used when the analyte is found in the analyte is found in the associated blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound.

E - This flag identifies compounds whose concentrations exceeded the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

A - This flag indicates that a TIC is a suspected aldol condensation product.

GC/MS Data

Volatile Data

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELDB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266208

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1202.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	3	U
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELDB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266208

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1202.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELDB

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266208

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1202.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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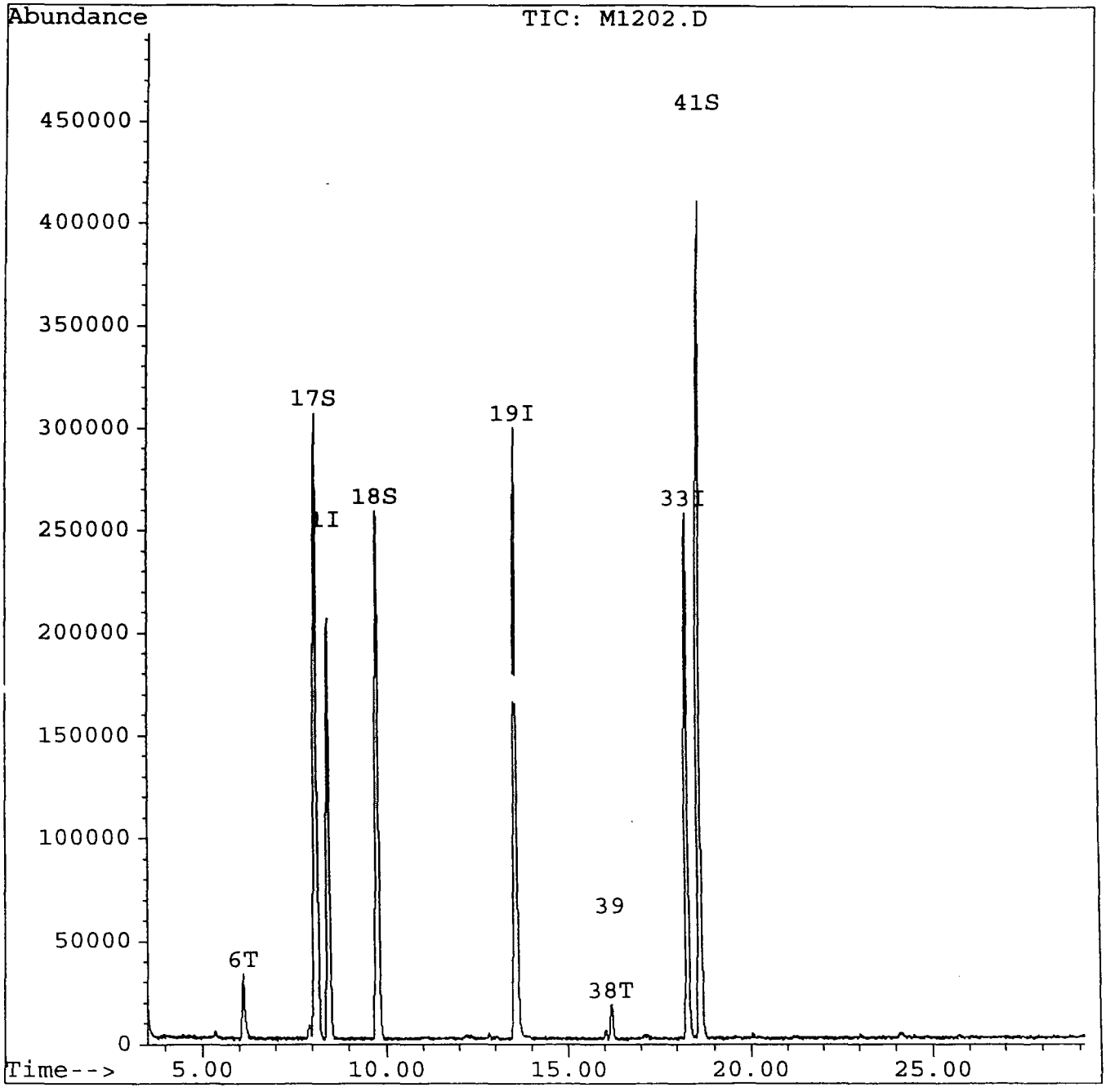
Quantitation Report

Data File : C:\HPCHEM\1\DATA\120594\M1202.D
Acq Time : 5 Dec 94 16:48 pm
Sample : 2266208,FIELDB,
Misc : 1,1,,,5,5,L,W,R12-2-94,
Quant Time: Dec 19 14:51 1994

Operator: VC
Inst : HPM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Tue Nov 29 12:18:35 1994
Response via : Multiple Level Calibration



000020

Quantitation Report

Data File : C:\HPCHEM\1\DATA\120594\M1202.D
Acq Time : 5 Dec 94 16:48 pm
Sample : 2266208,FIELDB,
Misc : 1,1,,,5,5,L,W,R12-2-94,
Quant Time: Dec 19 14:51 1994

Operator: VC
Inst : HPM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Tue Nov 29 12:18:35 1994
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) CI01 Bromochloromethane	8.43	128	128492	30.00 ug/l	0.00
19) 2-Bromo-1-Chloropropane	13.57	77	435580	30.00 ug/l	0.00
33) 1,4-Dichlorobutane	18.29	55	448672	30.00 ug/l	0.00
System Monitoring Compounds					%Recovery
17) Pentafluorobenzene	8.09	168	809224	28.34 ug/l	94.48%
18) Fluorobenzene	9.76	96	649625	26.18 ug/l	87.26%
41) CS10 4-Bomofluorobenzene	18.63	95	379755	29.73 ug/l	99.09%
Target Compounds					Qvalue
6) C030 Methylene Chloride ✓	6.11	84	31756	2.69 ug/l	92
39) C250 M-P,Xylene ✓	16.19	106	15882	1.33 ug/l	98

✓ COMPOUND BELOW MDL
VC 1/10/95

000021

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266212

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1220.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/06/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	4	
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266212

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1220.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/06/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

207B-1

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266212

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1220.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/06/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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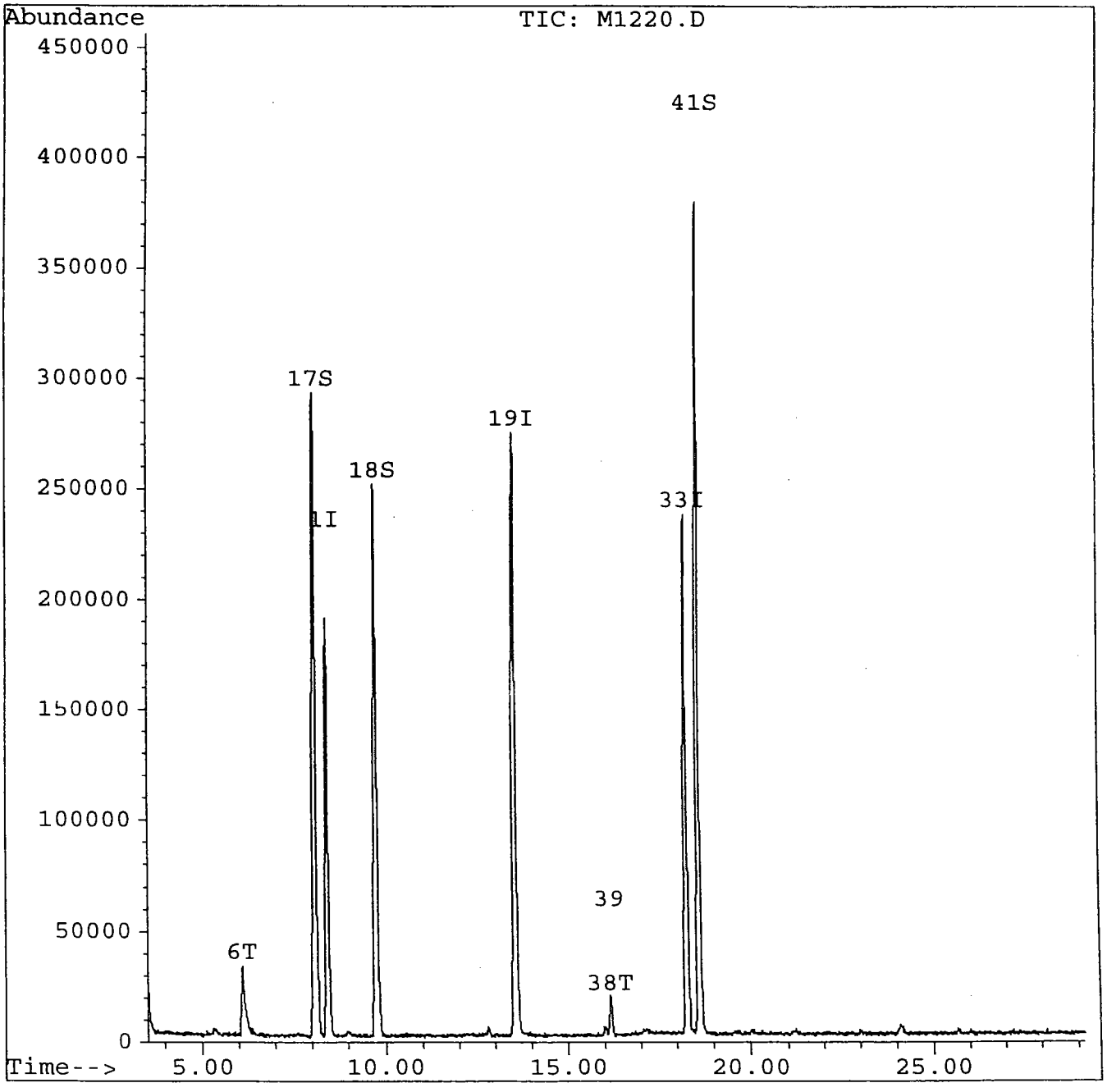
Quantitation Report

Data File : C:\HPCHEM\1\DATA\120594\M1220.D
Acq Time : 6 Dec 94 11:24 am
Sample : 2266212,207B-1,
Misc : 1,1,,,5,5,L,W,R12-2-94,
Quant Time: Dec 19 15:12 1994

Operator: VC
Inst : HPM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Tue Nov 29 12:18:35 1994
Response via : Multiple Level Calibration



000025

Quantitation Report

Data File : C:\HPCHEM\1\DATA\120594\M1220.D
Acq Time : 6 Dec 94 11:24 am
Sample : 2266212,207B-1,
Misc : 1,1,,,5,5,L,W,R12-2-94,
Quant Time: Dec 19 15:12 1994

Operator: VC
Inst : HPM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\P624.M
Title : VOA Standards for 5 point calibration
Last Update : Tue Nov 29 12:18:35 1994
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) CI01 Bromochloromethane	8.40	128	120224	30.00	ug/l	-0.02
19) 2-Bromo-1-Chloropropane	13.54	77	417169	30.00	ug/l	-0.02
33) 1,4-Dichlorobutane	18.26	55	429807	30.00	ug/l	-0.02
System Monitoring Compounds						%Recovery
17) Pentafluorobenzene	8.07	168	768583	28.77	ug/l	95.90%
18) Fluorobenzene	9.74	96	628243	27.06	ug/l	90.20%
41) CS10 4-Bomofluorobenzene	18.60	95	359725	29.39	ug/l	97.98%
Target Compounds						Qvalue
6) C030 Methylene Chloride	6.09	84	40702	3.69	ug/l #	83
39) C250 M-P,Xylene	16.17	106	17021	1.48	ug/l	91

< COMPOUND BELOW MDL
ME 1/10/95

000026

(#) = qualifier out of range (m) = manual integration

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBL

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266218

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1201.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene Chloride	3	U
75-35-4	1,1-Dichloroethene	2	U
75-34-3	1,1-Dichloroethane	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	2	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	2	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
127-18-4	Tetrachloroethene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	2	U
108-88-3	Toluene	2	U
108-90-7	Chlorobenzene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Xylene (total)	6	U
75-69-4	Trichloromonofluoromethane	2	U
107-02-8	Acrolein	20	U
107-13-1	Acrylonitrile	2	U
75-65-0	Tertiary Butyl Alcohol	100	U
1634-34-4	Methyl Tertiary Butyl Ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U

000027

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBL

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266218

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1201.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-75-8	2-Chloroethylvinyl Ether	4	U
156-60-5	Trans, 1,2-Dichloroethene	1	U

000028

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBL

Lab Name: NYTEST ENV INC Contract: 9421415

Lab Code: NYTEST Case No.: 22633 SAS No.: SDG No.: ARMY3

Matrix: (soil/water) WATER Lab Sample ID: 2266218

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M1201.D

Level: (low/med) LOW Date Received: 12/02/94

% Moisture: not dec. _____ Date Analyzed: 12/05/94

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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