UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

FORMER BUILDING 161

MAIN POST AREA
NJDEP UST REGISTRATION NO. 090010-14, 68
CLOSURE APPROVAL NO. C-91-2838

FEBRUARY 1996

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

PREPARED FOR:

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

PREPARED BY:

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EXECUTIVE SUMMARY

UST Closure

On March 12, 1993, two underground storage tanks (USTs) were closed by removal at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The USTs, New Jersey Department of Environmental Protection (NJDEP) Registration No. 090010-68 and 090010-14, were located immediately south of former Building 161 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-68 was a single-walled fiberglass, 550-gallon waste oil UST. UST No. 090010-14 was a steel, 1,000-gallon No. 2 fuel oil UST. The USTs were located adjacent to one another and were closed simultaneously. The tank closure was performed by All Service Environmental Inc.

Site Assessment - Soil

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) (*Technical Requirements*) and the NJDEP *Field Sampling Procedures Manual.* Soils surrounding the tanks were screened visually and with air monitoring instruments for evidence of contamination. Following removal, the USTs were inspected for holes. No holes were noted in UST No. 090010-68 and no potentially contaminated soils were observed surrounding this tank. Following removal and inspection of UST No. 090010-14, several holes of approximately 1/16 of an inch in diameter were observed by the Sub-Surface Evaluator. A sheen was also noted on groundwater within the excavation surrounding UST No. 090010-14. Based on this observation, a discharge was reported to the NJDEP by the DPW on March 12, 1993. Spill Case No. 93-3-12-2158-30 was assigned.

On March 12, 1993, following removal of UST Nos. 090010-68 and No. 090010-14, and the removal of approximately 10 cubic yards of potentially contaminated soil near UST No. 090010-14, post-excavation soil samples AA through GG were collected from seven (7) locations along the sidewalls of the excavation surrounding both tanks, immediately above groundwater. Samples AA, BB, CC, and DD were collected from the sidewalls of the excavation surrounding UST No. 090010-68 and were analyzed for total petroleum hydrocarbons (TPHC) and priority pollutants plus 40 tentatively identified compounds (PP+40). Samples EE, FF, and GG were collected from the sidewalls of the excavation surrounding UST 090010-14 and were analyzed for TPHC. Groundwater was present at approximately four (4) feet below ground surface (BGS). The piping length was less than 15 feet, therefore no piping samples were collected.

Findings - Soil

All samples collected from the USTs excavation and from below piping associated with the UST contained concentrations of TPHC and PP+40 below the corresponding NJDEP residential direct

contact and impact to groundwater soil cleanup criteria (N.J.A.C. 7:26D and revisions dated February 3, 1994).

Site Restoration

Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition. The excavated soil from the former location of UST No. 090010-14 was sent to Soil Remediation of Philadelphia Inc. where it was treated and restored to its original condition.

Site Assessment - Groundwater

In response to observing an apparent product sheen on the excavation water table, one shallow overburden monitoring well (MW-1) was installed at the Building 161 area on September 22, 1994. It was installed approximately 20 feet south of the UST excavation in the assumed downgradient direction. It was screened in the 2- to 12- foot depth interval, across the water table, which is approximately 7 feet below grade surface.

On May 18, 1995 and June 13, 1995, MW-1 was sampled for volatile organic compounds (VOCs) with xylene plus 10 tentatively identified compounds, and semivolatile organic compounds (BNCs) plus 15 tentatively identified compounds. Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual*, and the *Technical Requirements for Site Remediation*, N.J.A.C. 7:26E (*Technical Requirements*).

Findings - Groundwater

The sample collected from MW-1 on May 18, 1995, contained a methylene chloride concentration of 0.80 ug/l. The trip and field blanks both contained a methylene chloride concentration of 5.1 ug/l. No other compounds were detected in MW-1, the trip blank, or the field blank.

The sample collected from MW-1 on June 13, 1995, contained a methylene chloride concentration of 2.1 ug/l. This exceeded the Ground Water Quality Criteria for methylene chloride of 2.0 ug/l. The trip blank and the field blank contained a methylene chloride concentration of 2.3 ug/l and 2.1 ug/l, respectively. No other compounds were detected in MW-1, the trip blank, or the field blank.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table on May 18, 1995 was 6.65 feet below grade, and the depth to the water table on June 13, 1995 was 7.28 feet below grade.

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Site Assessment Quality Assurance

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

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with TPHC or PP+40 concentrations exceeding the applicable NJDEP residential direct contact or impact to groundwater do not remain in the former location of the USTs.

Based on the analytical results of the groundwater samples collected on May 18, 1995 and June 13, 1995, groundwater quality at the Building 161 UST closure site complies with the New Jersey Groundwater Quality Criteria for VOCs and BNCs. The trace concentrations of methylene chloride detected during both sampling rounds is attributed to sampling and/or analytical interference, based on the detection of methylene chloride, a common source of laboratory interference, in the sampling blanks.

No further action is proposed in regard to the closure and site assessment of UST No. 090010-14 and 090010-68.

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1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

Two (2) underground storage tanks (USTs), New Jersey Department of Environmental Protection (NJDEP) Registration No. 090010-68 and 090010-14, were closed at Building 161 at U.S. Army Fort Monmouth, New Jersey on March 12, 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 July 12, 1991. The plan was approved on February 20, 1992 and assigned TMS No. C-91-2838. UST No. 090010-68 was registered as a steel, 1,000-gallon tank containing waste oil. However upon removal and inspection, the UST was determined to be a single walled fiberglass, 550-gallon waste oil tank. It is likely that UST No. 090010-68 was originally a 1,000-gallon steel tank that was later replaced by a 550-gallon fiberglass tank, however no documentation of this replacement is available. UST No. 090010-14 was a steel, 1,000-gallon tank containing No. 2 heating oil.

Decommissioning activities for UST No. 090010-68 and 090010-14 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. All Service Environmental Inc., the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 090010-14 and 090010-68 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval and the signed certifications for UST No. 090010-14 and 090010-68 are included in Appendices A and B, respectively.

Based on an inspection of the USTs, field screening of subsurface soils and analytical results of collected soil samples, the DPW has concluded that an historical discharge was associated with UST No. 090010-14. A spill was reported to the NJDEP "Hotline" by the DPW for UST No. 090010-14 and Spill Case No. 93-3-12-2158-30 was assigned. No historical discharge has been associated with UST No. 090010-68.

This UST Closure and Site Investigation Report has been prepared by Smith Environmental Technologies Corporation, to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST) regulations. The applicable NJDEP-BUST regulations at the date of closure were the "*Interim Closure Requirements for Underground Storage Tank Systems*" (N.J.A.C. 7:14B-1 et seq. September 1990 and revisions dated November 1, 1991).

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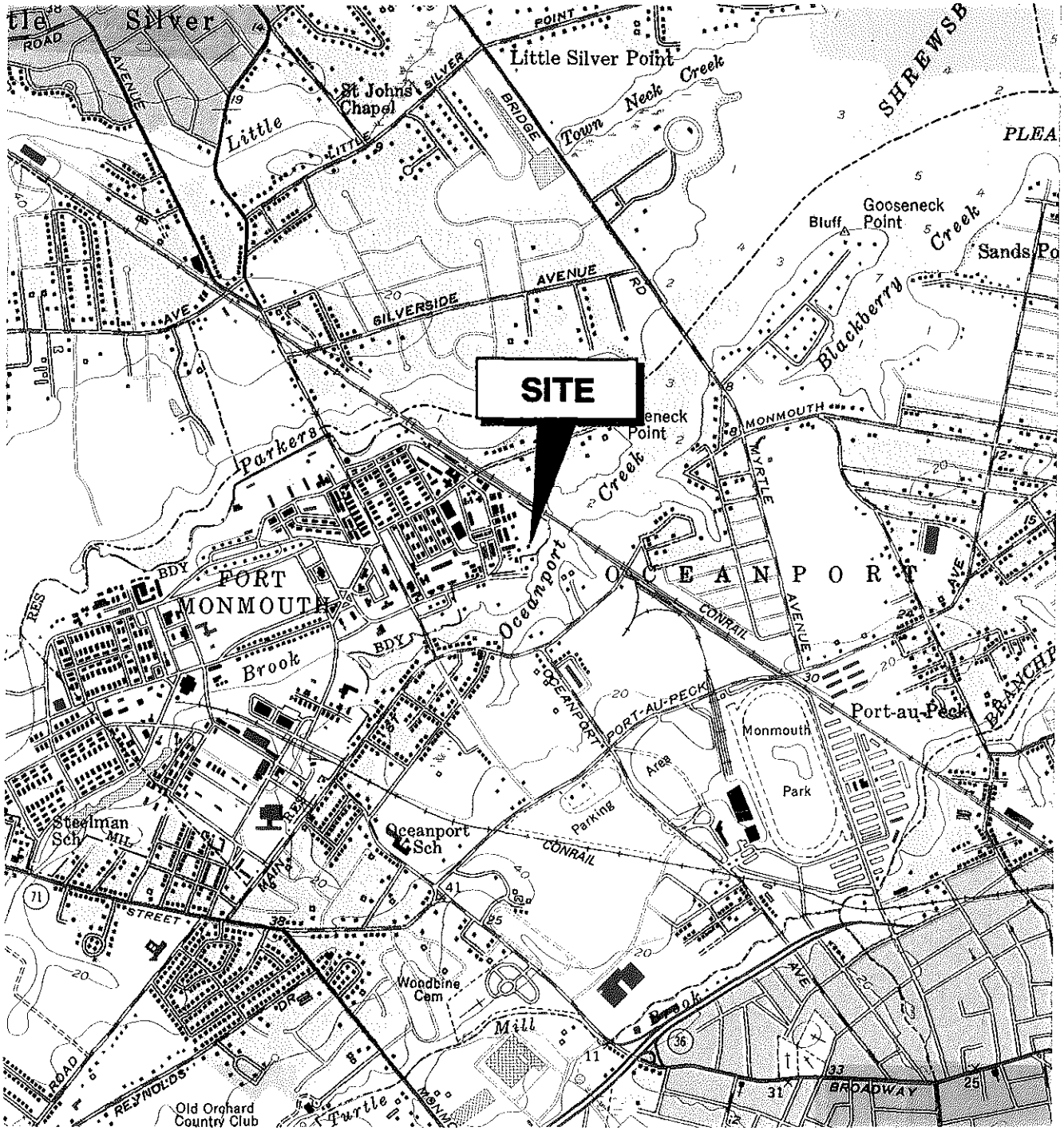
Department of Public Works
Fort Monmouth, New Jersey



N

SCALE
0 2000 FT.

NEW JERSEY
QUADRANGLE LOCATION

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

Project No. 00-5004-01

Figure 1
Site Location Map

This report was prepared using information required at the time of closure. Where possible, information required by the *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) *(Technical Requirements)* was included. 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.

1.2 SITE DESCRIPTION

Former Building 161 was located in the eastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 090010-68 and 090010-14 were located immediately south of Building 161. A site map is provided on Figure 2. Building 161 was formerly a military vehicle repair and maintenance facility, that was demolished following removal and closure of the USTs.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding former Building 161. 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).

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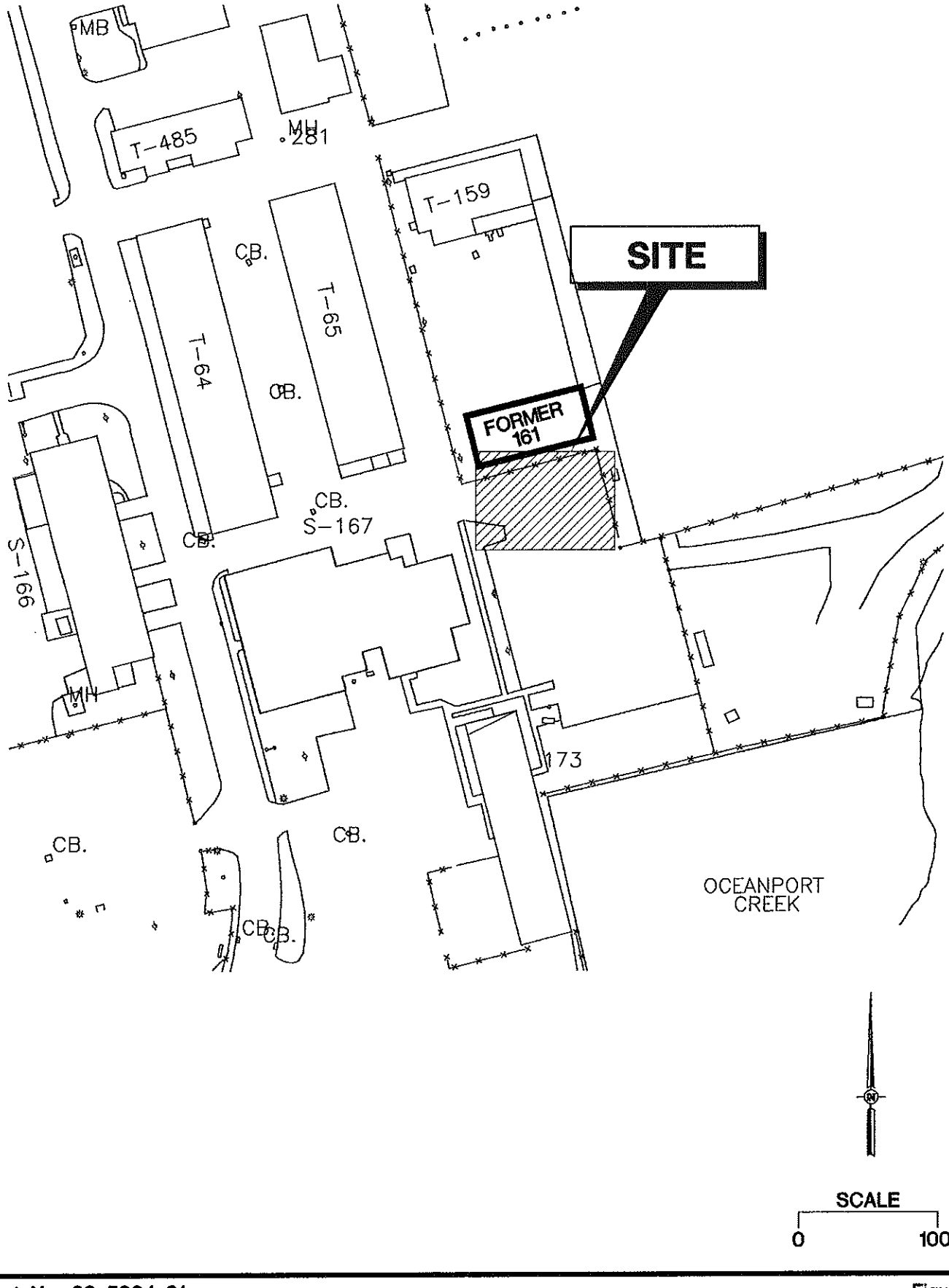

Source: BCM/Smith Environmental Technologies Corporation (003)

Project No. 09-5004-01

Figure 2
Building 161
Site Map

Local Geology

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

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

Hydrogeology

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

Based on records from wells drilled at the Main Post area, water is typically encountered at depths of two to nine feet BGS. The depth to the water table measured on September 22, 1994, in the Building 161 monitoring well MW-1, was approximately 7 feet below grade. According to Jablonski, wells drilled in the Red Bank and Tinton Sands may produce from 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 towards 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, direction of shallow groundwater flow 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 TANKS

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 closure activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was excavated to expose the USTs 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 850 gallons of liquid were transported and disposed of by Casie Ecology Oil Salvage, a NJDEP-approved petroleum recycling and disposal company. Refer to Appendix C for the waste manifest.

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. No cracks, holes or punctures were observed during the inspection of UST No. 090010-68 by the Sub-Surface Evaluator. However, several holes of approximately 1/16 of an inch were observed by the Sub-Surface Evaluator upon inspection of UST No. 090010-14.

Soils surrounding the USTs were screened visually and with an OVA for evidence of contamination. No evidence of contamination was noted surrounding UST No. 090010-68. A sheen, however, was noted on groundwater in the excavation surrounding UST No. 090010-14. A discharge was reported to the NJDEP by the DPW on March 12, 1993 and Spill Case No. 93-3-12-2158-30 was assigned. Approximately 10 cubic yards of potentially contaminated soil was removed from the area surrounding UST No. 090010-14.

Following cleaning of UST No. 090010-68, two rinsate samples (rinse #1 and rinse #2) and a field blank were collected and analyzed for TPHC. The samples were collected by running washwater along the interior surface of the UST. Rinse sample #1 was collected following the initial cleaning of UST 090010-68. The UST was cleaned a second time following the initial procedure, and rinse sample #2 was collected. Rinse sample #1 contained a TPHC concentration of 153.0 mg/l, rinse sample #2 contained a concentration of 134.0 mg/l, and the field blank contained a no-detectable concentration of TPHC. Refer to Table 2 and Appendix F for analytical results.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

UST No. 090010-14 was transported by All Service Environmental Inc., to Mazza and Sons Inc., for disposal in compliance with all applicable regulations and laws. UST No. 090010-68 was transported by All Service Environmental Inc., to Monmouth County Reclamation Center, for disposal in compliance with all applicable regulations and laws. The UST disposal certificates for UST No. 090010-68 and 090010-14, are provided in Appendix D.

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

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

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and visual observations, approximately 10 cubic yards of potentially contaminated soils were excavated from the area surrounding the former location of UST No. 090010-14. Potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were staged onsite within the Main Post area 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. Refer to Appendix B for Certificate Of Soil Remediation.

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2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All TPHC analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory. All PP+40 analyses were performed and reported by Twenty First Century Environmental Laboratory. Both laboratories are NJDEP-certified testing laboratories. All sampling was performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator according to the methods described in the NJDEP *Field Sampling Procedures Manual* (1992). Sampling frequency and parameters analyzed complied with the NJDEP-BUST document "*Interim Closure Requirements for Underground Storage Tank Systems*" (September 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Site Investigation Activities.

- Closure Contractor: All Service Environmental Inc.
  Contact Person: Mark Turoff
  Phone Number: (914)365-0800
  NJDEP Company Certification No.: 3100194

- Subsurface Evaluator: Charles 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 McKee
  Phone Number: (908)532-4359
  NJDEP Company Certification No.: 13461

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

- Hazardous Waste Hauler: Casie Ecology Oil Salvage
  Contact Person: Greg Call
  Phone Number: (609)696-4401
  NJDEP Hazardous Waste Hauler No.: S6747

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. Approximately 10 cubic yards of potentially contaminated soils were removed from the excavation surrounding UST No. 090010-14. Soils along the sidewalls of the excavation surrounding UST No. 090010-68 did not exhibit signs of potential contamination.

2.3 SOIL SAMPLING

On March 12, 1993, following removal of USTs No. 090010-68 and No. 090010-14, and the removal of approximately 10 cubic yards of potentially contaminated soil near UST No. 090010-14, post-excavation soil samples AA through GG were collected from seven (7) locations along the sidewalls of the excavation surrounding this tanks, immediately above groundwater. Samples AA, BB, CC, and DD were collected from the sidewalls surrounding UST No. 090010-68 and were analyzed for TPHC and PP+40. Samples EE, FF, and GG were collected from the sidewalls surrounding UST No. 090010-14 and were analyzed for TPHC. Groundwater was present at approximately four (4) feet below ground surface (BGS). A soil sampling location map is provided on Figure 3.

The site assessment was performed by U.S. Army personnel in accordance with the *Technical Requirements* and the *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided on Table 1. The samples were collected using decontaminated stainless steel scoops. Following soil sampling activities, the samples being analyzed for TPHC were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory, located in Fort Monmouth, New Jersey. Samples being analyzed for PP+40 were 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 observing an apparent product sheen on the excavation water table, one shallow overburden monitoring well (MW-1) was installed at the Building 161 area on September 22, 1994. A monitoring well location map is provided on Figure 4. The well was installed approximately 20 feet south of the UST excavation in the assumed downgradient direction. It was screened in the 2- to 12- foot depth interval, across the water table, which is approximately 7 feet below grade surface.

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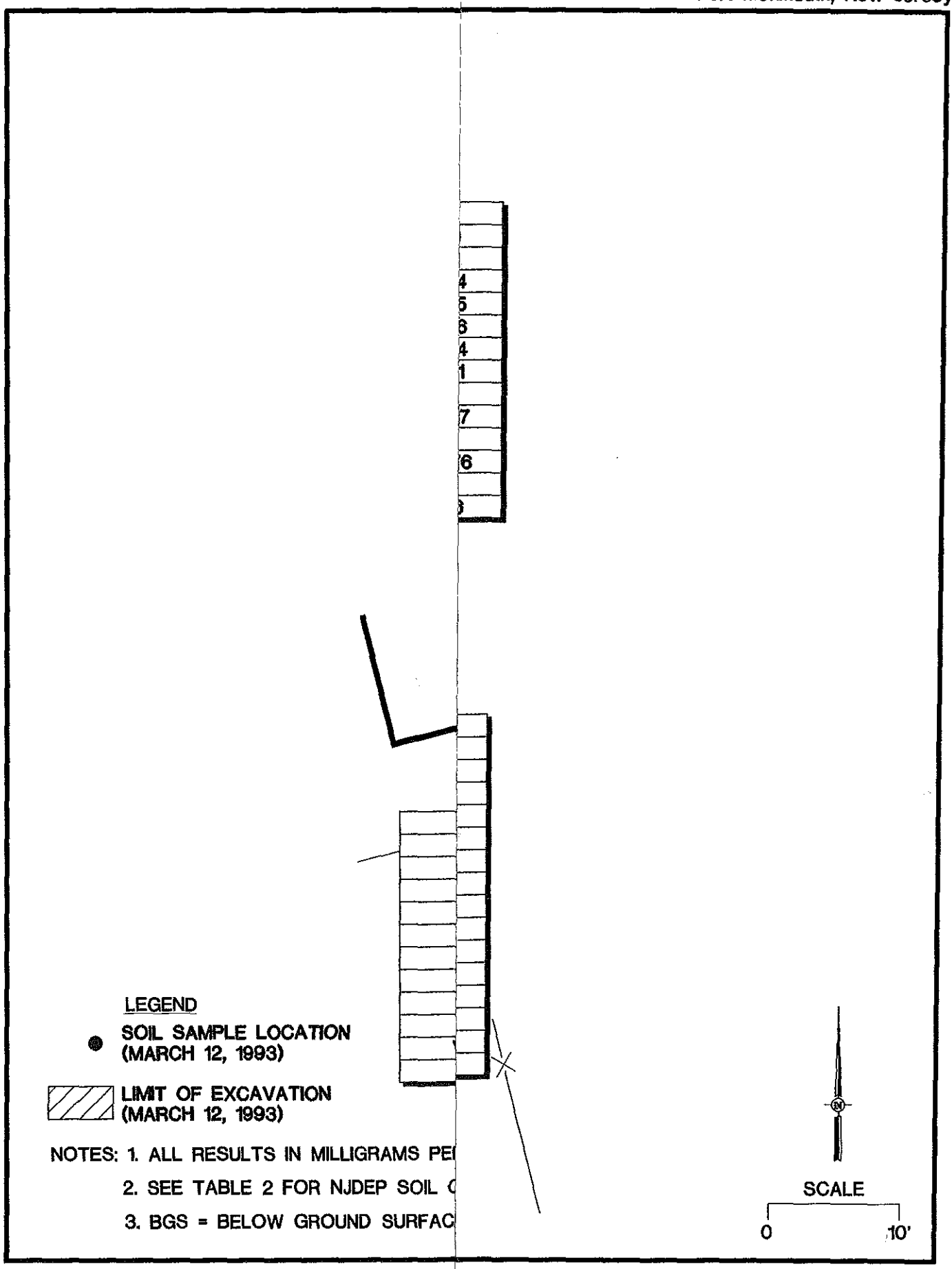

Source: Smith Environmental Technologies Corporation (027)

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Figure 3
Building 161
Soil Sampling Results

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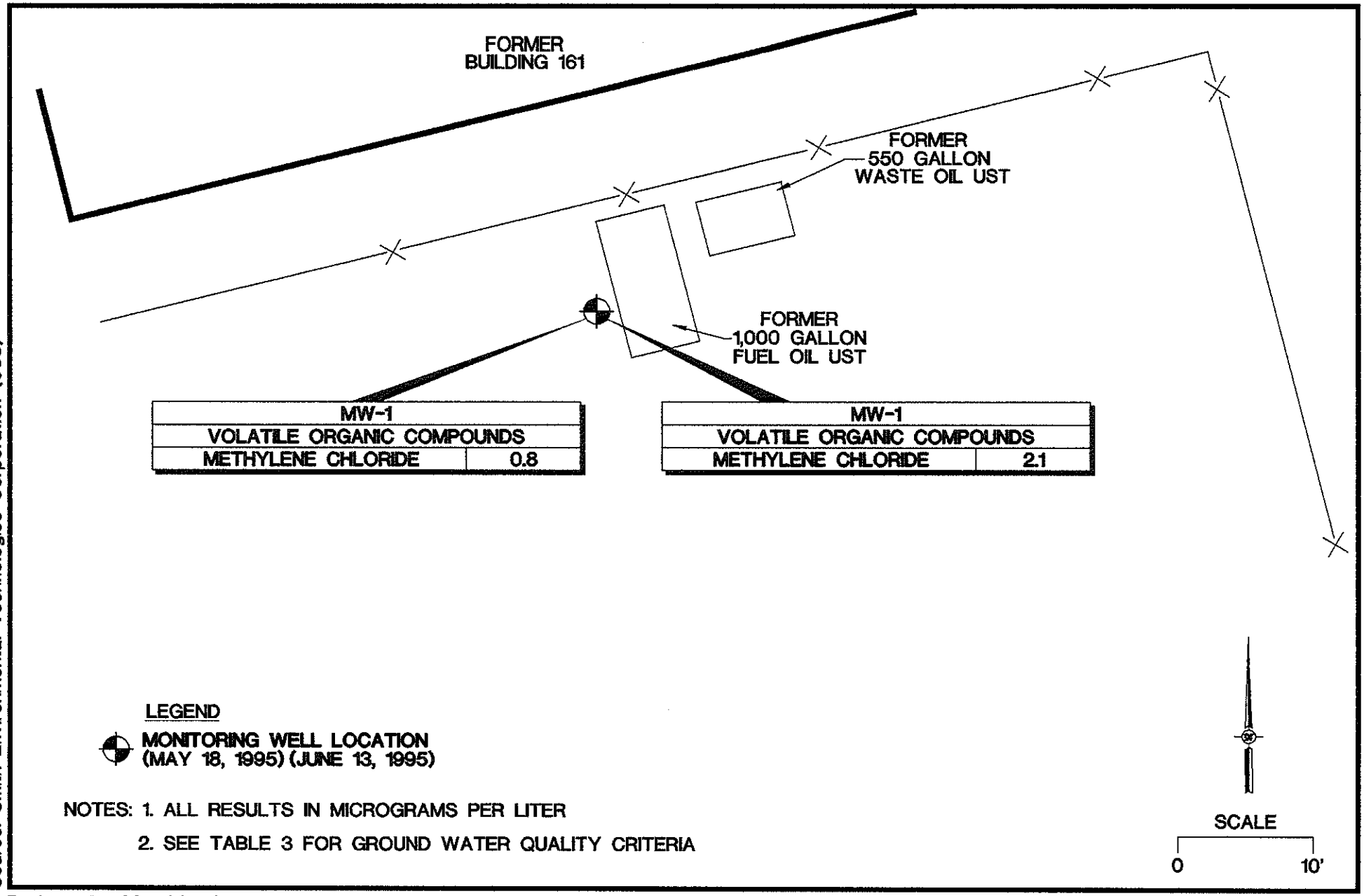
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Environmental Technologies Corporation (038)

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Figure 4

Building 161
Monitoring Well Location

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 161, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
AA	03/11/93 03/12/93	Soil	Post-Excavation	TPHC VOCs with Xylene, BNCs, PCBs, PPM, Cyanide, Phenol	Stainless Steel Scoop
BB	03/11/93 03/12/93	Soil	Post-Excavation	TPHC VOCs with Xylene, BNCs, PCBs, PPM, Cyanide, Phenol	Stainless Steel Scoop
CC	03/11/93 03/12/93	Soil	Post-Excavation	TPHC VOCs with Xylene, BNCs, PCBs, PPM, Cyanide, Phenol	Stainless Steel Scoop
DD	03/11/93 03/12/93	Soil	Post-Excavation	TPHC VOCs with Xylene, BNCs, PCBs, PPM, Cyanide, Phenol	Stainless Steel Scoop
EE	03/11/93	Soil	Post-Excavation	TPHC	Stainless Steel Scoop
FF	03/11/93	Soil	Post-Excavation	TPHC	Stainless Steel Scoop
GG	03/11/93	Soil	Post-Excavation	TPHC	Stainless Steel Scoop
MW-1	05/18/95	Aqueous	Groundwater	VOCs, BNCs	Teflon Bottom Bailer
MW-1	06/13/95	Aqueous	Groundwater	VOCs, BNCs	Teflon Bottom Bailer

*Note: TPHC — Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)
BNCs — Base Neutral Compounds plus 15 tentatively identified compounds (Method 8270:soil / 625:aqueous)
VOCs — Volatile Organic Compounds plus 15 tentatively identified compounds (Method 8240:soil)
Volatile Organic Compounds plus 10 tentatively identified compounds (Method 524.2:aqueous)
PCBs — Poly Chlorinated Biphenyls (Method 3550:soil / 608:aqueous)
PPM — Priority Pollutant Metals (Method 6010:soil / 200.7:aqueous)

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 permit and a well construction log are presented in Appendix E.

The well was constructed with a 4-inch (ID) PVC riser and 0.020 slotted PVC well screen. A silica sand pack was installed in the annulus between the borehole wall and the screen. The sand pack was extended approximately 1 foot above the top of the screen. The sand pack above the well screen was graded down to a fine sand to minimize grout intrusion.

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

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

2.4.2 Monitoring Well Sampling

On May 18, 1995, and June 13, 1995, MW-1 was sampled for VOCs with xylene plus 10 tentatively identified compounds, and BNCs plus 15 tentatively identified compounds. Sampling and analysis were completed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements.*

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

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3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the USTs and associated piping, four (4) post-excavation soil samples (AA, BB, CC, and DD) were collected from the sidewalls of the excavation surrounding UST No. 090010-68 on March 12, 1993, and analyzed for TPHC and PP+40. Three (3) post-excavation soil samples (EE, FF, and GG) were collected from the sidewalls surrounding UST No. 090010-14 on March 12, 1993 and were analyzed for TPHC. The post-excavation soil sample results were compared to the applicable NJDEP residential direct contact and impact to groundwater soil cleanup criteria (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided on Table 2. The soil analytical data package is provided in Appendix F. The full data package, including associated quality control data, is on file at the U.S. Army Fort Monmouth, DPW.

All post-excavation soil samples collected on March 12, 1993, from the UST excavation sidewalls contained contaminant concentrations below the most stringent NJDEP soil cleanup criteria.

Based on visible sheen on the water in the excavation, and several holes in the walls of the UST, a discharge was reported to the NJDEP by the DPW on March 12, 1993. Spill Case No. 93-3-12-2158-30 was assigned.

3.2 GROUNDWATER SAMPLING RESULTS

The groundwater sampling results are listed in Table 3 and shown on Figure 4. The laboratory documentation is in Appendix G.

The sample collected from MW-1 on May 18, 1995, contained a methylene chloride concentration of 0.80 ug/l. The trip and field blanks both contained a methylene chloride concentration of 5.1 ug/l. No other compounds were detected in MW-1, the trip blank, or the field blank.

The sample collected from MW-1 on June 13, 1995, contained a methylene chloride concentration of 2.1 ug/l. This exceeded the Ground Water Quality Criteria (GWQC) for methylene chloride of 2.0 ug/l. The trip blank and the field blank contained a methylene chloride concentration of 2.3 ug/l and 2.1 ug/l, respectively. No other compounds were detected in MW-1, the trip blank, or the field blank. Any detected TICs can be found in Table 3.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Sample Quantitation Limit (mg/l)	Compound of Concern	Result (mg/l)	NJDEP Soil Cleanup Criteria (mg/l)	Exceeds Cleanup Criteria
Rinse #1	1163.1	3-12-93	3-17-93	TPHC	1.0	--	153.0	--	--
Rinse #2	1163.2	3-12-93	3-17-93	TPHC	1.0	--	134.0	--	--
Field Blank	M Bl.	3-12-93	3-17-93	TPHC	1.0	--	ND	--	--

-- Not applicable / does not exceed criteria
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	1162.1	03-11-93	03-16-93	Total Solid	--	--	82%	--	--
				TPHC	3.3	yes	ND	10,000	--
BB/3.5-4.0'	1162.2	03-11-93	03-16-93	Total Solid	--	--	90%	--	--
				TPHC	3.3	yes	ND	10,000	--
CC/3.5-4.0'	1162.3	03-11-93	03-16-93	Total Solid	--	--	86%	--	--
				TPHC	3.3	yes	ND	10,000	--
DD/3.5-4.0'	1162.4	03-11-93	03-16-93	Total Solid	--	--	83%	--	--
				TPHC	3.3	yes	ND	10,000	--
EE/3.5-4.0'	1162.5	03-11-93	03-16-93	Total Solid	--	--	82%	--	--
				TPHC	3.3	yes	ND	10,000	--
FF/3.5-4.0'	1162.6	03-11-93	03-16-93	Total Solid	--	--	82%	--	--
				TPHC	3.3	yes	ND	10,000	--
GG/3.5-4.0'	1162.7	03-11-93	03-16-93	Total Solid	--	--	83%	--	--
				TPHC	3.3	yes	313.0	10,000	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-16-93	Alpha-BHC	0.006	--	ND	--	--
			Beta-BHC	0.006	--	ND	--	--
			Delta-BHC	0.006	--	ND	--	--
			Gamma-BHC	0.006	--	ND	--	--
			Heptachlor	0.006	--	ND	0.15/50	--
			Aldrin	0.006	--	ND	--	--
			Heptachlor Epoxide	0.006	--	ND	--	--
			Endosulfan I	0.006	--	ND	--	--
			Dieldrin	0.006	--	ND	0.042/50	--
			4,4 - DDE	0.006	--	ND	2/50	--
			Endrin	0.006	--	ND	17/50	--
			Endosulfan II	0.012	--	ND	--	--
			4,4' - DDD	0.012	--	ND	3/50	--
			Endosulfan Sulfate	0.012	--	ND	--	--
			4,4' - DOT	0.012	--	ND	--	--
			Methoxychlor	0.300	--	ND	280/50	--
			Endrin Aldehyde	0.012	--	ND	--	--
			Chlordane	0.300	--	ND	--	--
			Toxaphene	0.600	--	ND	0.10/50	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-16-93	Arochlor-1016	0.300	--	ND	--	--
			Arochlor-1221	0.300	--	ND	--	--
			Arochlor-1232	0.300	--	ND	--	--
			Arochlor-1242	0.300	--	ND	--	--
			Arochlor-1248	0.300	--	ND	--	--
			Arochlor-1254	0.300	--	ND	--	--
			Arochlor-1260	0.300	--	ND	--	--
			Total PCBs	--	--	--	0.49/50	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-16-93	Antimony	5.00	--	ND	14	--
			Arsenic	0.25	--	9.30	20	--
			Beryllium	1.00	--	ND	1	--
			Cadmium	1.00	--	ND	1	--
			Chromium	1.00	--	40.3	--	--
			Copper	1.00	--	2.91	600	--
			Lead	5.00	--	6.88	400	--
			Mercury	0.10	--	ND	14	--
			Nickel	5.00	--	ND	250	--
			Selenium	0.25	--	0.83	63	--
			Silver	1.00	--	ND	110	--
			Thallium	1.00	--	ND	2	--
			Zinc	1.00	--	21.8	1,500	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-24-93	Acrolein	0.060	--	ND	--	--
			Acrylonitrile	0.060	--	ND	1/1	--
			Chloromethane	0.012	--	ND	520/10	--
			Bromomethane	0.012	--	ND	79/1	--
			Vinyl Chloride	0.012	--	ND	2/10	--
			Chloroethane	0.012	--	ND	--	--
			Acetone	0.012	--	0.022 B	1,000/100	--
			1,1-Dichloroethene	0.006	--	ND	8/10	--
			Carbon Disulfide	0.012	--	ND	--	--
			Methylene Chloride	0.006	--	ND B	49/1	--
			1,2-Dichloroethene (trans)	0.006	--	ND	1,000/50	--
			1,1-Dichloroethane	0.006	--	ND	570/10	--
			Vinyl Acetate	0.006	--	ND	--	--
			2-Butanone	0.012	--	ND	1,000/50	--
			Chloroform	0.006	--	ND	19/1	--
			1,1,1-Trichloroethane	0.006	--	ND	210/50	--
			Carbon Tetrachloride	0.006	--	ND	2/1	--
			1,2-Dichloroethane	0.006	--	ND	6/1	--
			Benzene	0.006	--	ND	3/1	--
			Trichloroethene	0.006	--	ND	23/1	--
			1,2-Dichloropropane	0.006	--	ND	10	--
			Bromodichloromethane	0.006	--	ND	11/1	--
			2-Chloroethylvinylether	0.012	--	ND	--	--
			2-Hexanone	0.012	--	ND	--	--
			trans-1,3-Dichloropropene	0.006	--	ND	4/1	--
			Toluene	0.006	--	0.013	1,000/500	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-24-93	cis-1,3-Dichloropropene	0.006	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.006	--	ND	34/1	--
			1,1,2-Trichloroethane	0.006	--	ND	22/1	--
			4-Methyl-2-pentanone	0.012	--	ND	1,000/50	--
			Tetrachloroethene	0.006	--	ND	4/1 **	--
			Dibromochloromethane	0.006	--	ND	110/1	--
			Chlorobenzene	0.006	--	ND	37/1	--
			Ethylbenzene	0.006	--	0.006	1,000/100	--
			Xylenes (Total)	0.006	--	0.037	410/10	--
			Styrene	0.006	--	ND	--	--
			Bromoform	0.006	--	ND	86/1	--
			m-Dichlorobenzene	0.006	--	ND	--	--
			p-Dichlorobenzene	0.006	--	ND	--	--
			o-Dichlorobenzene	0.006	--	ND	--	--

Note:

* Residential Direct Contact / Impact to Groundwater

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

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-17-93	N-Nitrosodiethylamine	0.4	--	ND	--	--
			Phenol	0.4	--	ND	10,000/50	--
			bis(2 chloroethyl)Ether	0.4	--	ND	0.66/10	--
			2-Cholorophenol	0.4	--	ND	280/10	--
			1,3-Dichlorobenzene	0.4	--	ND	5,100/100	--
			1,4-Dichlorobenzene	0.4	--	ND	570/100	--
			Benzyl Alcohol	0.4	--	ND	10,000/50	--
			1,2-Dichlorobenzene	0.4	--	ND	5,100/50	--
			2-Methylphenol	0.4	--	ND	2,800	--
			bis(2-chloroisopropyl)Ether	0.4	--	ND	2,300/10	--
			4-Methylphenol	0.4	--	ND	2,800	--
			N-Nitroso-Di-n-propylamine	0.4	--	ND	0.66/10	--
			Hexachloroethane	0.4	--	ND	6/100	--
			Nitrobenzene	0.4	--	ND	28/10	--
			Isophorone	0.4	--	ND	1,100/50	--
			2-Nitrophenol	0.4	--	ND	--	--
			2-4-Dimethylphenol	0.4	--	ND	1,100/10	--
			Benzoic Acid	2.0	--	ND	--	--
			bis(2-Chloroethoxy)Methane	0.4	--	ND	--	--
			2,4-Dichlorophenol	0.4	--	ND	170/10	--
			1,2,4-Trichlorobenzene	0.4	--	ND	68/100	--
			Naphthalene	0.4	--	ND	230/100	--
			4-Chloroaniline	0.4	--	ND	230	--
			Hexachlorobutadiene	0.4	--	ND	1/100	--
			4-Chloro-3-Methylphenol	0.4	--	ND	10,000/100	--
			2-Methylnaphthalene	0.4	--	ND	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-17-93	Hexachlorocyclopentadiene	0.4	--	ND	1/100	--
			2,4,6-Trichlorophenol	0.4	--	ND	62/10	--
			2,4,5-Trichlorophenol	2.0	--	ND	5,600/50	--
			2-Chloronaphthalene	0.4	--	ND	--	--
			2-Nitroaniline	2.0	--	ND	--	--
			Dimethyl Phthalate	0.4	--	ND	10,000/50	--
			Acenaphthylene	0.4	--	ND	--	--
			3-Nitroaniline	2.0	--	ND	--	--
			Acenaphthene	0.4	--	ND	3,400/100	--
			2,4-Dinitrophenol	2.0	--	ND	170/10	--
			4-Nitrophenol	2.0	--	ND	--	--
			Dibenzofuran	0.4	--	ND	--	--
			2,4-Dinitrotoluene	0.4	--	ND	1/10	--
			2,6-Dinitrotoluene	0.4	--	ND	1/10	--
			Diethylphthalate	0.4	--	ND	10,000/50	--
			4-Chlorophenyl-phenlyether	0.4	--	ND	--	--
			Fluorene	0.4	--	ND	2,300/100	--
			4-Nitroaniline	2.0	--	ND	--	--
			4-6-Dinitro-2-Methylphenol	2.0	--	ND	--	--
			N-Nitrosodiphenylamine	0.4	--	ND	--	--
			4-Bromophenyl-phenylether	0.4	--	ND	--	--
			Hexachlorobenzene	0.4	--	ND	0.66/100	--
			Pentachlorophenol	2.0	--	ND	6/100	--
			Phenanthrene	0.4	--	ND	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, MAIN POST, SITE AA
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-17-93	Anthracene	0.4	--	ND	10,000/100	--
			Di-n-Butylphthalate	0.4	--	ND	5,700/100	--
			Fluoranthene	0.4	--	ND	2,300/100	--
			Pyrene	0.4	--	ND	1,700/100	--
			Butylbenzylphthalate	0.4	--	ND	1,100/100	--
			3,3-Dichlorobenzidine	0.8	--	ND	2/100	--
			Benzo(a)Anthracene	0.4	--	ND	0.9/500	--
			Bis(2-Ethylhexyl)Phthalate	0.4	--	0.04 JB	49/100	--
			Chrysene	0.4	--	ND	9/500	--
			Di-n-Octyl Phthalate	0.4	--	ND	1,100/100	--
			Benzo(b)Fluoranthene	0.4	--	ND	0.9/50	--
			Benzo(k)Fluoranthene	0.4	--	ND	0.9/500	--
			Benzo(a)Pyrene	0.4	--	ND	0.66/100	--
			Indeno(1,2,3-cd)Pyrene	0.4	--	ND	0.9/500	--
			Dibenzo(a,h)Anthracene	0.4	--	ND	--	--
			Benzo(g,h,i)Perylene	0.4	--	ND	--	--
			Benzidine	0.8	--	ND	--	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-24-93	UNKNOWN (Total)	--	--	0.02	--	--
			Benzene, 1-ethyl-3-methyl	--	--	0.01	--	--
			Benzene 1,2,4-trimethyl	--	--	0.01	--	--
			Total TICS	--	--	0.04	10,000	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE AA
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
AA/3.5-4.0'	03-12-93	03-17-93	UNKNOWN	--	--	0.44	--	--
			Ethane, 1,1,2-trichloro	--	--	0.28	--	--
			Ethane 1,1,2,2-tetrachloro	--	--	0.80	--	--
			Total TICS	--	--	1.52	10,000	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-16-93	Antimony	5.00	--	ND	14	--
			Arsenic	0.25	--	4.74	20	--
			Beryllium	1.00	--	ND	1	--
			Cadmium	1.00	--	ND	1	--
			Chromium	1.00	--	38.5	--	--
			Copper	1.00	--	3.66	600	--
			Lead	5.00	--	8.84	400	--
			Mercury	0.10	--	ND	14	--
			Nickel	5.00	--	ND	250	--
			Selenium	0.25	--	ND	63	--
			Silver	1.00	--	ND	110	--
			Thallium	1.00	--	ND	2	--
			Zinc	1.00	--	70.1	1,500	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-24-93	Acrolein	0.057	--	ND	--	--
			Acrylonitrile	0.057	--	ND	1/1	--
			Chloromethane	0.011	--	ND	520/10	--
			Bromomethane	0.011	--	ND	79/1	--
			Vinyl Chloride	0.011	--	ND	2/10	--
			Chloroethane	0.011	--	ND	--	--
			Acetone	0.011	--	0.017 B	1,000/100	--
			1,1-Dichloroethene	0.006	--	ND	8/10	--
			Carbon Disulfide	0.011	--	ND	--	--
			Methylene Chloride	0.006	--	ND B	49/1	--
			1,2-Dichloroethene (trans)	0.006	--	ND	1,000/50	--
			1,1-Dichloroethane	0.006	--	ND	570/10	--
			Vinyl Acetate	0.006	--	ND	--	--
			2-Butanone	0.011	--	ND	1,000/50	--
			Chloroform	0.006	--	ND	19/1	--
			1,1,1-Trichloroethane	0.006	--	ND	210/50	--
			Carbon Tetrachloride	0.006	--	ND	2/1	--
			1,2-Dichloroethane	0.006	--	ND	6/1	--
			Benzene	0.006	--	ND	3/1	--
			Trichloroethene	0.006	--	ND	23/1	--
			1,2-Dichloropropane	0.006	--	ND	10	--
			Bromodichloromethane	0.006	--	ND	11/1	--
			2-Chloroethylvinylether	0.011	--	ND	--	--
			2-Hexanone	0.011	--	ND	--	--
			trans-1,3-Dichloropropene	0.006	--	ND	4/1	--
			Toluene	0.006	--	ND	1,000/500	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-24-93	cis-1,3-Dichloropropene	0.006	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.006	--	ND	34/1	--
			1,1,2-Trichloroethane	0.006	--	ND	22/1	--
			4-Methyl-2-pentanone	0.011	--	ND	1,000/50	--
			Tetrachloroethene	0.006	--	ND	4/1 **	--
			Dibromochloromethane	0.006	--	ND	110/1	--
			Chlorobenzene	0.006	--	ND	37/1	--
			Ethylbenzene	0.006	--	ND	1,000/100	--
			Xylenes (Total)	0.006	--	ND	410/10	--
			Styrene	0.006	--	ND	--	--
			Bromoform	0.006	--	ND	86/1	--
			m-Dichlorobenzene	0.006	--	ND	--	--
			p-Dichlorobenzene	0.006	--	ND	--	--
			o-Dichlorobenzene	0.006	--	ND	--	--

Note:

* Residential Direct Contact / Impact to Groundwater

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

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	N-Nitrosodiethylamine	0.38	--	ND	--	--
			Phenol	0.38	--	ND	10,000/50	--
			bis(2 chloroethyl)Ether	0.38	--	ND	0.66/10	--
			2-Cholorophenol	0.38	--	ND	280/10	--
			1,3-Dichlorobenzene	0.38	--	ND	5,100/100	--
			1,4-Dichlorobenzene	0.38	--	ND	570/100	--
			Benzyl Alcohol	0.38	--	ND	10,000/50	--
			1,2-Dichlorobenzene	0.38	--	ND	5,100/50	--
			2-Methylphenol	0.38	--	ND	2,800	--
			bis(2-chloroisopropyl)Ether	0.38	--	ND	2,300/10	--
			4-Methylphenol	0.38	--	ND	2,800	--
			N-Nitroso-Di-n-propylamine	0.38	--	ND	0.66/10	--
			Hexachloroethane	0.38	--	ND	6/100	--
			Nitrobenzene	0.38	--	ND	28/10	--
			Isophorone	0.38	--	ND	1,100/50	--
			2-Nitrophenol	0.38	--	ND	--	--
			2-4-Dimethylphenol	0.38	--	ND	1,100/10	--
			Benzoic Acid	1.90	--	ND	--	--
			bis(2-Chloroethoxy)Methane	0.38	--	ND	--	--
			2,4-Dichlorophenol	0.38	--	ND	170/10	--
			1,2,4-Trichlorobenzene	0.38	--	ND	68/100	--
			Naphthalene	0.38	--	ND	230/100	--
			4-Chloroaniline	0.38	--	ND	230	--
			Hexachlorobutadiene	0.38	--	ND	1/100	--
			4-Chloro-3-Methylphenol	0.38	--	ND	10,000/100	--
			2-Methylnaphthalene	0.38	--	ND	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	Hexachlorocyclopentadiene	0.38	--	ND	1/100	--
			2,4,6-Trichlorophenol	0.38	--	ND	62/10	--
			2,4,5-Trichlorophenol	1.90	--	ND	5,600/50	--
			2-Chloronaphthalene	0.38	--	ND	--	--
			2-Nitroaniline	1.90	--	ND	--	--
			Dimethyl Phthalate	0.38	--	ND	10,000/50	--
			Acenaphthylene	0.38	--	ND	--	--
			3-Nitroaniline	1.90	--	ND	--	--
			Acenaphthene	0.38	--	ND	3,400/100	--
			2,4-Dinitrophenol	1.90	--	ND	170/10	--
			4-Nitrophenol	1.90	--	ND	--	--
			Dibenzofuran	0.38	--	ND	--	--
			2,4-Dinitrotoluene	0.38	--	ND	1/10	--
			2,6-Dinitrotoluene	0.38	--	ND	1/10	--
			Diethylphthalate	0.38	--	ND	10,000/50	--
			4-Chlorophenyl-phenlyether	0.38	--	ND	--	--
			Fluorene	0.38	--	ND	2,300/100	--
			4-Nitroaniline	1.90	--	ND	--	--
			4-6-Dinitro-2-Methylphenol	1.90	--	ND	--	--
			N-Nitrosodiphenylamine	0.38	--	ND	--	--
			4-Bromophenyl-phenylether	0.38	--	ND	--	--
			Hexachlorobenzene	0.38	--	ND	0.66/100	--
			Pentachlorophenol	1.90	--	ND	6/100	--
			Phenanthrene	0.38	--	ND	--	--
			Anthracene	0.38	--	ND	1,000/100	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, MAIN POST, SITE BB
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	Di-n-Butylphthalate	0.38	--	ND	5,700/100	--
			Fluoranthene	0.38	--	ND	2,300/100	--
			Pyrene	0.38	--	ND	1,700/100	--
			Butylbenzylphthalate	0.38	--	ND	1,100/100	--
			3,3-Dichlorobenzidine	0.75	--	ND	2/100	--
			Benzo(a)Anthracene	0.38	--	ND	0.9/500	--
			Bis(2-Ethylhexyl)Phthalate	0.38	--	0.076 JB	49/100	--
			Chrysene	0.38	--	ND	9/500	--
			Di-n-Octyl Phthalate	0.38	--	ND	1,100/100	--
			Benzo(b)Fluoranthene	0.38	--	ND	0.9/50	--
			Benzo(k)Fluoranthene	0.38	--	ND	0.9/500	--
			Benzo(a)Pyrene	0.38	--	ND	0.66/100	--
			Indeno(1,2,3-cd)Pyrene	0.38	--	ND	0.9/500	--
			Dibenzo(a,h)Anthracene	0.38	--	ND	--	--
			Benzo(g,h,i)Perylene	0.38	--	ND	--	--
			Benzidine	0.75	--	ND	--	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	Alpha-BHC	0.0057	--	ND	--	--
			Beta-BHC	0.0057	--	ND	--	--
			Delta-BHC	0.0057	--	ND	--	--
			Gamma-BHC	0.0057	--	ND	--	--
			Heptachlor	0.0057	--	ND	0.15/50	--
			Aldrin	0.0057	--	ND	--	--
			Heptachlor Epoxide	0.0057	--	ND	--	--
			Endosulfan I	0.0057	--	ND	--	--
			Dieldrin	0.0057	--	ND	0.042/50	--
			4,4 - DDE	0.0057	--	ND	2/50	--
			Endrin	0.0057	--	ND	17/50	--
			Endosulfan II	0.011	--	ND	--	--
			4,4' - DDD	0.011	--	ND	3/50	--
			Endosulfan Sulfate	0.011	--	ND	--	--
			4,4' - DOT	0.011	--	ND	--	--
			Methoxychlor	0.280	--	ND	280/50	--
			Endrin Aldehyde	0.011	--	ND	--	--
			Chlordane	0.280	--	ND	--	--
			Toxaphene	0.570	--	ND	0.10/50	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	Arochlor-1016	0.280	--	ND	--	--
			Arochlor-1221	0.280	--	ND	--	--
			Arochlor-1232	0.280	--	ND	--	--
			Arochlor-1242	0.280	--	ND	--	--
			Arochlor-1248	0.280	--	ND	--	--
			Arochlor-1254	0.280	--	ND	--	--
			Arochlor-1260	0.280	--	ND	--	--
			Total PCBs	--	--	--	0.49/50	--

Note:

* Residential Direct Contact / Impact to Groundwater
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE BB
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
BB/3.5-4.0'	03-12-93	03-17-93	Ethane, 1,1,2-trichloro	--	--	0.270	--	--
			Ethane 1,1,2,2-tetrachloro	--	--	0.760	--	--
			Unknown (Total)	--	--	0.95	--	--
			Total TICS	--	--	1.98	10,000	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-16-93	Antimony	5.00	--	8.58	14	--
			Arsenic	0.25	--	3.88	20	--
			Beryllium	1.00	--	ND	1	--
			Cadmium	1.00	--	ND	1	--
			Chromium	1.00	--	50.7	--	--
			Copper	1.00	--	4.09	600	--
			Lead	5.00	--	7.71	400	--
			Mercury	0.10	--	ND	14	--
			Nickel	5.00	--	ND	250	--
			Selenium	0.25	--	0.46	63	--
			Silver	1.00	--	ND	110	--
			Thallium	1.00	--	ND	2	--
			Zinc	1.00	--	31.7	1,500	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-24-93	Acrolein	0.06	--	ND	--	--
			Acrylonitrile	0.06	--	ND	1/1	--
			Chloromethane	0.012	--	ND	520/10	--
			Bromomethane	0.012	--	ND	79/1	--
			Vinyl Chloride	0.012	--	ND	2/10	--
			Chloroethane	0.012	--	ND	--	--
			Acetone	0.012	--	0.011 JB	1,000/100	--
			1,1-Dichloroethene	0.006	--	ND	8/10	--
			Carbon Disulfide	0.012	--	ND	--	--
			Methylene Chloride	0.006	--	ND B	49/1	--
			1,2-Dichloroethene (trans)	0.006	--	ND	1,000/50	--
			1,1-Dichloroethane	0.006	--	ND	570/10	--
			Vinyl Acetate	0.006	--	ND	--	--
			2-Butanone	0.012	--	ND	1,000/50	--
			Chloroform	0.006	--	ND	19/1	--
			1,1,1-Trichloroethane	0.006	--	ND	210/50	--
			Carbon Tetrachloride	0.006	--	ND	2/1	--
			1,2-Dichloroethane	0.006	--	ND	6/1	--
			Benzene	0.006	--	ND	3/1	--
			Trichloroethene	0.006	--	ND	23/1	--
			1,2-Dichloropropane	0.006	--	ND	10	--
			Bromodichloromethane	0.006	--	ND	11/1	--
			2-Chloroethylvinylether	0.012	--	ND	--	--
			2-Hexanone	0.012	--	ND	--	--
			trans-1,3-Dichloropropene	0.006	--	ND	4/1	--
			Toluene	0.006	--	ND	1,000/500	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-24-93	cis-1,3-Dichloropropene	0.006	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.006	--	ND	34/1	--
			1,1,2-Trichloroethane	0.006	--	ND	22/1	--
			4-Methyl-2-pentanone	0.012	--	ND	1,000/50	--
			Tetrachloroethene	0.006	--	ND	4/1 **	--
			Dibromochloromethane	0.006	--	ND	110/1	--
			Chlorobenzene	0.006	--	ND	37/1	--
			Ethylbenzene	0.006	--	ND	1,000/100	--
			Xylenes (Total)	0.006	--	ND	410/10	--
			Styrene	0.006	--	ND	--	--
			Bromoform	0.006	--	ND	86/1	--
			m-Dichlorobenzene	0.006	--	ND	--	--
			p-Dichlorobenzene	0.006	--	ND	--	--
			o-Dichlorobenzene	0.006	--	ND	--	--

Note:

* Residential Direct Contact / Impact to Groundwater

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

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	N-Nitrosodiethylamine	0.39	--	ND	--	--
			Phenol	0.39	--	ND	10,000/50	--
			bis(2 chloroethyl)Ether	0.39	--	ND	0.66/10	--
			2-Cholorophenol	0.39	--	ND	280/10	--
			1,3-Dichlorobenzene	0.39	--	ND	5,100/100	--
			1,4-Dichlorobenzene	0.39	--	ND	570/100	--
			Benzyl Alcohol	0.39	--	ND	10,000/50	--
			1,2-Dichlorobenzene	0.39	--	ND	5,100/50	--
			2-Methylphenol	0.39	--	ND	2,800	--
			bis(2-chloroisopropyl)Ether	0.39	--	ND	2,300/10	--
			4-Methylphenol	0.39	--	ND	2,800	--
			N-Nitroso-Di-n-propylamine	0.39	--	ND	0.66/10	--
			Hexachloroethane	0.39	--	ND	6/100	--
			Nitrobenzene	0.39	--	ND	28/10	--
			Isophorone	0.39	--	ND	1,100/50	--
			2-Nitrophenol	0.39	--	ND	--	--
			2-4-Dimethylphenol	0.39	--	ND	1,100/10	--
			Benzoic Acid	2.0	--	ND	--	--
			bis(2-Chloroethoxy)Methane	0.39	--	ND	--	--
			2,4-Dichlorophenol	0.39	--	ND	170/10	--
			1,2,4-Trichlorobenzene	0.39	--	ND	68/100	--
			Naphthalene	0.39	--	ND	230/100	--
			4-Chloroaniline	0.39	--	ND	230	--
			Hexachlorobutadiene	0.39	--	ND	1/100	--
			4-Chloro-3-Methylphenol	0.39	--	ND	10,000/100	--
			2-Methylnaphthalene	0.39	--	ND	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	Hexachlorocyclopentadiene	0.39	--	ND	400/100	--
			2,4,6-Trichlorophenol	0.39	--	ND	62/10	--
			2,4,5-Trichlorophenol	2.0	--	ND	5,600/50	--
			2-Chloronaphthalene	0.39	--	ND	--	--
			2-Nitroaniline	2.0	--	ND	--	--
			Dimethyl Phthalate	0.39	--	ND	10,000/50	--
			Acenaphthylene	0.39	--	ND	--	--
			3-Nitroaniline	2.0	--	ND	--	--
			Acenaphthene	0.39	--	ND	3,400/100	--
			2,4-Dinitrophenol	2.0	--	ND	170/10	--
			4-Nitrophenol	2.0	--	ND	--	--
			Dibenzofuran	0.39	--	ND	--	--
			2,4-Dinitrotoluene	0.39	--	ND	1/10	--
			2,6-Dinitrotoluene	0.39	--	ND	1/10	--
			Diethylphthalate	0.39	--	ND	10,000/50	--
			4-Chlorophenyl-phenlyether	0.39	--	ND	--	--
			Fluorene	0.39	--	ND	2,300/100	--
			4-Nitroaniline	2.0	--	ND	--	--
			4-6-Dinitro-2-Methylphenol	2.0	--	ND	--	--
			N-Nitrosodiphenylamine	0.39	--	ND	140/100	--
			4-Bromophenyl-phenylether	0.39	--	ND	--	--
			Hexachlorobenzene	0.39	--	ND	0.66/100	--
			Pentachlorophenol	2.0	--	ND	6/100	--
			Phenanthrene	0.39	--	ND	--	--
			Anthracene	0.39	--	ND	10,000/100	--
			Di-n-Butylphthalate	0.39	--	ND	5,700/100	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, MAIN POST, SITE CC
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	Fluoranthene	0.39	--	ND	2,300/100	--
			Pyrene	0.39	--	ND	1,700/100	--
			Butylbenzylphthalate	0.39	--	ND	1,100/100	--
			3,3-Dichlorobenzidine	0.78	--	ND	2/100	--
			Benzo(a)Anthracene	0.39	--	ND	0.9/500	--
			Bis(2-Ethylhexyl)Phthalate	0.39	--	ND B	49/100	--
			Chrysene	0.39	--	ND	9/500	--
			Di-n-Octyl Phthalate	0.39	--	ND	1,100/100	--
			Benzo(b)Fluoranthene	0.39	--	ND	0.9/50	--
			Benzo(k)Fluoranthene	0.39	--	ND	0.9/500	--
			Benzo(a)Pyrene	0.39	--	ND	0.66/100	--
			Indeno(1,2,3-cd)Pyrene	0.39	--	ND	0.9/500	--
			Dibenzo(a,h)Anthracene	0.39	--	ND	0.66/100	--
			Benzo(g,h,i)Perylene	0.39	--	ND	--	--
			Benzidine	0.78	--	ND	--	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	Alpha-BHC	0.006	--	ND	--	--
			Beta-BHC	0.006	--	ND	--	--
			Delta-BHC	0.006	--	ND	--	--
			Gamma-BHC	0.006	--	ND	--	--
			Heptachlor	0.006	--	ND	0.15/50	--
			Aldrin	0.006	--	ND	--	--
			Heptachlor Epoxide	0.006	--	ND	--	--
			Endosulfan I	0.006	--	ND	--	--
			Dieldrin	0.006	--	ND	0.042/50	--
			4,4 - DDE	0.006	--	ND	2/50	--
			Endrin	0.006	--	ND	17/50	--
			Endosulfan II	0.012	--	ND	--	--
			4,4' - DDD	0.012	--	ND	3/50	--
			Endosulfan Sulfate	0.012	--	ND	--	--
			4,4' - DOT	0.012	--	ND	--	--
			Methoxychlor	0.30	--	ND	280/50	--
			Endrin Aldehyde	0.012	--	ND	--	--
			Chlordane	0.30	--	ND	--	--
			Toxaphene	0.60	--	ND	0.10/50	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	Arochlor-1016	0.30	--	ND	--	--
			Arochlor-1221	0.30	--	ND	--	--
			Arochlor-1232	0.30	--	ND	--	--
			Arochlor-1242	0.30	--	ND	--	--
			Arochlor-1248	0.30	--	ND	--	--
			Arochlor-1254	0.30	--	ND	--	--
			Arochlor-1260	0.30	--	ND	--	--
			Total PCBs	--	--	--	0.49/50	--

Note:

* Residential Direct Contact / Impact to Groundwater
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE CC
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
CC/3.5-4.0'	03-12-93	03-17-93	Ethane, 1,1,2-trichloro	--	--	0.36	--	--
			Ethane, 1,1,2,2-tetrachloro	--	--	0.91	--	--
			Unknown	--	--	0.36	--	--
			Total TICS	--	--	1.63	10,000	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-16-93	Antimony	5.00	--	ND	14	--
			Arsenic	0.25	--	5.28	20	--
			Beryllium	1.00	--	ND	1	--
			Cadmium	1.00	--	ND	1	--
			Chromium	1.00	--	53.7	--	--
			Copper	1.00	--	7.25	600	--
			Lead	5.00	--	18.4	400	--
			Mercury	0.10	--	ND	14	--
			Nickel	5.00	--	4.53	250	--
			Selenium	0.25	--	0.42	63	--
			Silver	1.00	--	ND	110	--
			Thallium	1.00	--	ND	2	--
			Zinc	1.00	--	45.7	1,500	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-24-93	Acrolein	0.06	--	ND	--	--
			Acrylonitrile	0.06	--	ND	1/1	--
			Chloromethane	0.012	--	ND	520/10	--
			Bromomethane	0.012	--	ND	79/1	--
			Vinyl Chloride	0.012	--	ND	2/10	--
			Chloroethane	0.012	--	ND	--	--
			Acetone	0.012	--	0.011 JB	1,000/100	--
			1,1-Dichloroethene	0.006	--	ND	8/10	--
			Carbon Disulfide	0.012	--	ND	--	--
			Methylene Chloride	0.006	--	0.0042 JB	49/1	--
			1,2-Dichloroethene (trans)	0.006	--	ND	1,000/50	--
			1,1-Dichloroethane	0.006	--	ND	570/10	--
			Vinyl Acetate	0.006	--	ND	--	--
			2-Butanone	0.012	--	ND	1,000/50	--
			Chloroform	0.006	--	ND	19/1	--
			1,1,1-Trichloroethane	0.006	--	ND	210/50	--
			Carbon Tetrachloride	0.006	--	ND	2/1	--
			1,2-Dichloroethane	0.006	--	ND	6/1	--
			Benzene	0.006	--	ND	3/1	--
			Trichloroethene	0.006	--	ND	23/1	--
			1,2-Dichloropropane	0.006	--	ND	10	--
			Bromodichloromethane	0.006	--	ND	11/1	--
			2-Chloroethylvinylether	0.012	--	ND	--	--
			2-Hexanone	0.012	--	ND	--	--
			trans-1,3-Dichloropropene	0.006	--	ND	4/1	--
			Toluene	0.006	--	0.0031 J	1,000/500	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-24-93	cis-1,3-Dichloropropene	0.006	--	ND	4/1	--
			1,1,2,2-Tetrachloroethane	0.006	--	ND	34/1	--
			1,1,2-Trichloroethane	0.006	--	ND	22/1	--
			4-Methyl-2-pentanone	0.012	--	ND	1,000/50	--
			Tetrachloroethene	0.006	--	0.0029 J	4/1 **	--
			Dibromochloromethane	0.006	--	ND	110/1	--
			Chlorobenzene	0.006	--	ND	37/1	--
			Ethylbenzene	0.006	--	0.0012 J	1,000/100	--
			Xylenes (Total)	0.006	--	0.0053 J	410/10	--
			Styrene	0.006	--	ND	23/100	--
			Bromoform	0.006	--	ND	86/1	--
			m-Dichlorobenzene	0.006	--	ND	--	--
			p-Dichlorobenzene	0.006	--	ND	--	--
			o-Dichlorobenzene	0.006	--	ND	--	--

Note:

* Residential Direct Contact / Impact to Groundwater

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

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	N-Nitrosodiethylamine	0.4	--	ND	--	--
			Phenol	0.4	--	ND	10,000/50	--
			bis(2 chloroethyl)Ether	0.4	--	ND	0.66/10	--
			2-Cholorophenol	0.4	--	ND	280/10	--
			1,3-Dichlorobenzene	0.4	--	ND	5,100/100	--
			1,4-Dichlorobenzene	0.4	--	ND	570/100	--
			Benzyl Alcohol	0.4	--	ND	10,000/50	--
			1,2-Dichlorobenzene	0.4	--	ND	5,100/50	--
			2-Methylphenol	0.4	--	ND	2,800	--
			bis(2-chloroisopropyl)Ether	0.4	--	ND	2,300/10	--
			4-Methylphenol	0.4	--	ND	2,800	--
			N-Nitroso-Di-n-propylamine	0.4	--	ND	0.66/10	--
			Hexachloroethane	0.4	--	ND	6/100	--
			Nitrobenzene	0.4	--	ND	28/10	--
			Isophorone	0.4	--	ND	1,100/50	--
			2-Nitrophenol	0.4	--	ND	--	--
			2-4-Dimethylphenol	0.4	--	ND	1,100/10	--
			Benzoic Acid	2.0	--	ND	--	--
			bis(2-Chloroethoxy)Methane	0.4	--	ND	--	--
			2,4-Dichlorophenol	0.4	--	ND	170/10	--
			1,2,4-Trichlorobenzene	0.4	--	ND	68/100	--
			Naphthalene	0.4	--	ND	230/100	--
			4-Chloroaniline	0.4	--	ND	230	--
			Hexachlorobutadiene	0.4	--	ND	1/100	--
			4-Chloro-3-Methylphenol	0.4	--	ND	10,000/100	--
			2-Methylnaphthalene	0.4	--	ND	--	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	Hexachlorocyclopentadiene	0.4	--	ND	400/100	--
			2,4,6-Trichlorophenol	0.4	--	ND	62/10	--
			2,4,5-Trichlorophenol	2.0	--	ND	5,600/50	--
			2-Chloronaphthalene	0.4	--	ND	--	--
			2-Nitroaniline	2.0	--	ND	--	--
			Dimethyl Phthalate	0.4	--	ND	10,000/50	--
			Acenaphthylene	0.4	--	ND	--	--
			3-Nitroaniline	2.0	--	ND	--	--
			Acenaphthene	0.4	--	ND	3,400/100	--
			2,4-Dinitrophenol	2.0	--	ND	170/10	--
			4-Nitrophenol	2.0	--	ND	--	--
			Dibenzofuran	0.4	--	ND	--	--
			2,4-Dinitrotoluene	0.4	--	ND	1/10	--
			2,6-Dinitrotoluene	0.4	--	ND	1/10	--
			Diethylphthalate	0.4	--	ND	10,000/50	--
			4-Chlorophenyl-phenlyether	0.4	--	ND	--	--
			Fluorene	0.4	--	ND	2,300/100	--
			4-Nitroaniline	2.0	--	ND	--	--
			4-6-Dinitro-2-Methylphenol	2.0	--	ND	--	--
			N-Nitrosodiphenylamine	0.4	--	ND	140/100	--
			4-Bromophenyl-phenylether	0.4	--	ND	--	--
			Hexachlorobenzene	0.4	--	ND	0.66/100	--
			Pentachlorophenol	2.0	--	ND	6/100	--
			Phenanthrene	0.4	--	ND	--	--
			Anthracene	0.4	--	ND	10,000/100	--
			Di-n-Butylphthalate	0.4	--	ND	5,700/100	--
			Fluoranthene	0.4	--	ND	2,300/100	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, MAIN POST, SITE DD
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)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	Pyrene	0.4	--	0.042 J	1,700/100	--
			Butylbenzylphthalate	0.4	--	ND	1,100/100	--
			3,3-Dichlorobenzidine	0.8	--	ND	2/100	--
			Benzo(a)Anthracene	0.4	--	ND	0.9/500	--
			Bis(2-Ethylhexyl)Phthalate	0.4	--	0.073 JB	49/100	--
			Chrysene	0.4	--	ND	9/500	--
			Di-n-Octyl Phthalate	0.4	--	ND	1,100/100	--
			Benzo(b)Fluoranthene	0.4	--	ND	0.9/50	--
			Benzo(k)Fluoranthene	0.4	--	ND	0.9/500	--
			Benzo(a)Pyrene	0.4	--	ND	0.66/100	--
			Indeno(1,2,3-cd)Pyrene	0.4	--	ND	0.9/500	--
			Dibenzo(a,h)Anthracene	0.4	--	ND	0.66/100	--
			Benzo(g,h,i)Perylene	0.4	--	ND	--	--
			Benzidine	0.8	--	ND	--	--

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	Alpha-BHC	0.006	--	ND	--	--
			Beta-BHC	0.006	--	ND	--	--
			Delta-BHC	0.006	--	ND	--	--
			Gamma-BHC	0.006	--	ND	--	--
			Heptachlor	0.006	--	ND	0.15/50	--
			Aldrin	0.006	--	ND	--	--
			Heptachlor Epoxide	0.006	--	ND	--	--
			Endosulfan I	0.006	--	ND	--	--
			Dieldrin	0.006	--	ND	0.042/50	--
			4,4 - DDE	0.006	--	ND	2/50	--
			Endrin	0.006	--	ND	17/50	--
			Endosulfan II	0.012	--	ND	--	--
			4,4' - DDD	0.012	--	ND	3/50	--
			Endosulfan Sulfate	0.012	--	ND	--	--
			4,4' - DOT	0.012	--	ND	--	--
			Methoxychlor	0.3	--	ND	280/50	--
			Endrin Aldehyde	0.012	--	ND	--	--
			Chlordane	0.3	--	ND	--	--
			Toxaphene	0.6	--	ND	0.10/50	--

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS (Continued)

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	Arochlor-1016	0.3	--	ND	--	--
			Arochlor-1221	0.3	--	ND	--	--
			Arochlor-1232	0.3	--	ND	--	--
			Arochlor-1242	0.3	--	ND	--	--
			Arochlor-1248	0.3	--	ND	--	--
			Arochlor-1254	0.3	--	ND	--	--
			Arochlor-1260	0.3	--	ND	--	--
			Total PCBs	--	--	--	0.49/50	--

Note:

*	Residential Direct Contact / Impact to Groundwater
--	Not applicable / does not exceed criteria
(J)	Indicates detected below sample quantitation limit
(B)	Indicates also present in blank
(ND)	Indicates compound not detected

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, SITE DD
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID/Depth	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
DD/3.5-4.0'	03-12-93	03-17-93	Ethane, 1,1,2-trichloro	--	--	0.36	--	--
			Ethane 1,1,2,2-tetrachloro	--	--	1.00	--	--
			Unknown (Total)	--	--	0.84	--	--
			Total TICS	--	--	2.20	10,000	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-16-93	Antimony	5	--	ND
			Arsenic	5	--	ND
			Beryllium	10	--	ND
			Cadmium	10	--	ND
			Chromium	10	--	ND
			Copper	10	--	ND
			Lead	50	--	ND
			Mercury	0.5	--	ND
			Nickel	50	--	ND
			Selenium	5	--	ND
			Silver	10	--	ND
			Thallium	10	--	ND
			Zinc	10	--	ND

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-16-93	Acrolein	50	--	ND
			Acrylonitrile	50	--	ND
			Chloromethane	10	--	ND
			Bromomethane	10	--	ND
			Vinyl Chloride	10	--	ND
			Chloroethane	10	--	ND
			Acetone	10	--	6.2 JB
			1,1-Dichloroethene	5	--	ND
			Carbon Disulfide	10	--	ND
			Methylene Chloride	5	--	3.5 J
			1,2-Dichloroethene (trans)	5	--	ND
			1,1-Dichloroethane	5	--	ND
			Vinyl Acetate	5	--	ND
			2-Butanone	10	--	ND
			Chloroform	5	--	ND
			1,1,1-Trichloroethane	5	--	ND
			Carbon Tetrachloride	5	--	ND
			1,2-Dichloroethane	5	--	ND
			Benzene	5	--	ND
			Trichloroethene	5	--	ND
			1,2-Dichloropropane	5	--	ND
			Bromodichloromethane	5	--	ND
			2-Chloroethylvinylether	10	--	ND
			2-Hexanone	10	--	ND
			trans-1,3-Dichloropropene	5	--	ND
			Toluene	5	--	ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-16-93	cis-1,3-Dichloropropene	5	--	ND
			1,1,2,2-Tetrachloroethane	5	--	ND
			1,1,2-Trichloroethane	5	--	ND
			4-Methyl-2-pentanone	10	--	ND
			Tetrachloroethene	5	--	ND
			Dibromochloromethane	5	--	ND
			Chlorobenzene	5	--	ND
			Ethylbenzene	5	--	ND
			Xylenes (Total)	5	--	ND
			Styrene	5	--	ND
			Bromoform	5	--	ND
			m-Dichlorobenzene	5	--	ND
			p-Dichlorobenzene	5	--	ND
			o-Dichlorobenzene	5	--	ND

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-16-93	N-Nitrosodiethylamine	10	--	ND
			Phenol	10	--	ND
			bis(2 chloroethyl)Ether	10	--	ND
			2-Cholorophenol	10	--	ND
			1,3-Dichlorobenzene	10	--	ND
			1,4-Dichlorobenzene	10	--	ND
			Benzyl Alcohol	10	--	ND
			1,2-Dichlorobenzene	10	--	ND
			2-Methylphenol	10	--	ND
			bis(2-chloroisopropyl)Ether	10	--	ND
			4-Methylphenol	10	--	ND
			N-Nitroso-Di-n-propylamine	10	--	ND
			Hexachloroethane	10	--	ND
			Nitrobenzene	10	--	ND
			Isophorone	10	--	ND
			2-Nitrophenol	10	--	ND
			2-4-Dimethylphenol	10	--	ND
			Benzoic Acid	50	--	ND
			bis(2-Chloroethoxy)Methane	10	--	ND
			2,4-Dichlorophenol	10	--	ND
			1,2,4-Trichlorobenzene	10	--	ND
			Naphthalene	10	--	ND
			4-Chloroaniline	10	--	ND
			Hexachlorobutadiene	10	--	ND
			4-Chloro-3-Methylphenol	10	--	ND
			2-Methylnaphthalene	10	--	ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, 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)
Field Blank	03-12-93	03-16-93	Hexachlorocyclopentadiene	10	--	ND
			2,4,6-Trichlorophenol	10	--	ND
			2,4,5-Trichlorophenol	50	--	ND
			2-Chloronaphthalene	10	--	ND
			2-Nitroaniline	50	--	ND
			Dimethyl Phthalate	10	--	ND
			Acenaphthylene	10	--	ND
			3-Nitroaniline	50	--	ND
			Acenaphthene	10	--	ND
			2,4-Dinitrophenol	50	--	ND
			4-Nitrophenol	50	--	ND
			Dibenzofuran	10	--	ND
			2,4-Dinitrotoluene	10	--	ND
			2,6-Dinitrotoluene	10	--	ND
			Diethylphthalate	10	--	ND
			4-Chlorophenyl-phenlyether	10	--	ND
			Fluorene	10	--	ND
			4-Nitroaniline	50	--	ND
			4-6-Dinitro-2-Methylphenol	50	--	ND
			N-Nitrosodiphenylamine	10	--	ND
			4-Bromophenyl-phenylether	10	--	ND
			Hexachlorobenzene	10	--	ND
			Pentachlorophenol	50	--	ND
			Phenanthrene	10	--	ND
			Anthracene	10	--	ND
			Di-n-Butylphthalate	10	--	ND
			Fluoranthene	10	--	ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BIULDING 161, 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)
Field Blank	03-12-93	03-16-93	Pyrene	10	--	ND
			Butylbenzylphthalate	10	--	ND
			3,3-Dichlorobenzidine	20	--	ND
			Benzo(a)Anthracene	10	--	ND
			Bis(2-Ethylhexyl)Phthalate	10	--	ND
			Chrysene	10	--	ND
			Di-n-Octyl Phthalate	10	--	ND
			Benzo(b)Fluoranthene	10	--	ND
			Benzo(k)Fluoranthene	10	--	ND
			Benzo(a)Pyrene	10	--	ND
			Indeno(1,2,3-cd)Pyrene	10	--	ND
			Dibenzo(a,h)Anthracene	10	--	ND
			Benzo(g,h,i)Perylene	10	--	ND
			Benzidine	20	--	ND

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-17-93	Alpha-BHC	0.25	--	ND
			Beta-BHC	0.25	--	ND
			Delta-BHC	0.25	--	ND
			Gamma-BHC	0.25	--	ND
			Heptachlor	0.25	--	ND
			Aldrin	0.25	--	ND
			Heptachlor Epoxide	0.25	--	ND
			Endosulfan I	0.25	--	ND
			Dieldrin	0.25	--	ND
			4,4 - DDE	0.25	--	ND
			Endrin	0.25	--	ND
			Endosulfan II	0.5	--	ND
			4,4' - DDD	0.5	--	ND
			Endosulfan Sulfate	0.5	--	ND
			4,4' - DOT	0.5	--	ND
			Methoxychlor	13	--	ND
			Endrin Aldehyde	0.5	--	ND
			Chlordane	13	--	ND
			Toxaphene	25	--	ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCBS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	03-12-93	03-17-93	Arochlor-1016	13	--	ND
			Arochlor-1221	13	--	ND
			Arochlor-1232	13	--	ND
			Arochlor-1242	13	--	ND
			Arochlor-1248	13	--	ND
			Arochlor-1254	13	--	ND
			Arochlor-1260	13	--	ND
			Total PCBs	--	--	--

Note:

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, Trip Blank
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	03-12-93	03-16-93	Acrolein	50	--	ND
			Acrylonitrile	50	--	ND
			Chloromethane	10	--	ND
			Bromomethane	10	--	ND
			Vinyl Chloride	10	--	ND
			Chloroethane	10	--	ND
			Acetone	10	--	5.3 JB
			1,1-Dichloroethene	5	--	ND
			Carbon Disulfide	10	--	ND
			Methylene Chloride	5	--	ND
			1,2-Dichloroethene (trans)	5	--	ND
			1,1-Dichloroethane	5	--	ND
			Vinyl Acetate	5	--	ND
			2-Butanone	10	--	ND
			Chloroform	5	--	ND
			1,1,1-Trichloroethane	5	--	ND
			Carbon Tetrachloride	5	--	ND
			1,2-Dichloroethane	5	--	ND
			Benzene	5	--	ND
			Trichloroethene	5	--	ND
			1,2-Dichloropropane	5	--	ND
			Bromodichloromethane	5	--	ND
			2-Chloroethylvinylether	10	--	ND
			2-Hexanone	10	--	ND
			trans-1,3-Dichloropropene	5	--	ND
			Toluene	5	--	ND

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161, MAIN POST, Trip Blank
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	03-12-93	03-16-93	cis-1,3-Dichloropropene	5	--	ND
			1,1,2,2-Tetrachloroethane	5	--	ND
			1,1,2-Trichloroethane	5	--	ND
			4-Methyl-2-pentanone	10	--	ND
			Tetrachloroethene	5	--	ND
			Dibromochloromethane	5	--	ND
			Chlorobenzene	5	--	ND
			Ethylbenzene	5	--	ND
			Xylenes (Total)	5	--	ND
			Styrene	5	--	ND
			Bromoform	5	--	ND
			m-Dichlorobenzene	5	--	ND
			p-Dichlorobenzene	5	--	ND
			o-Dichlorobenzene	5	--	ND

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 161
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg) *	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg) *	Exceeds Cleanup Criteria
AA/3.5-4.0'	A1261	03-12-93	03-17-93	Cyanide	0.10	--	ND	1,100	--
				Phenol	0.50	--	ND	10,000/50	--
BB/3.5-4.0'	A1262	03-12-93	03-17-93	Cyanide	0.10	--	0.16	1,100	--
				Phenol	0.50	--	ND	10,000/50	--
CC/3.5-4.0'	A1263	03-12-93	03-17-93	Cyanide	0.10	--	ND	1,100	--
				Phenol	0.50	--	ND	10,000/50	--
DD/3.5-4.0	A1264	03-12-93	03-17-93	Cyanide	0.10	--	0.15	1,100	--
				Phenol	0.50	--	ND	10,000/50	--
Field Blank	A1265	03-12-93	03-17-93	Cyanide	10 ug/l	--	ND ug/l	200 ug/l	--
				Phenol	50 ug/l	--	ND ug/l	4,000 ug/l	--

Note:

*	Unless noted otherwise
**	Residential Direct Contact / Impact to Groundwater
--	Not applicable / does not exceed criteria
(J)	Indicates detected below sample quantitation limit
(B)	Indicates also present in blank
(ND)	Indicates compound not detected

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/01/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			Methylene Chloride	0.50	--	0.80 B	2	--
			1,2-Dichloroethene (trans)	0.50	--	ND	100*	--
			1,1-Dichloroethene	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1-Dichloropropene	0.50	--	ND	--	--
			1,2-Dichloroethane	0.50	--	ND	2	--
			1,1,1-Trichloroethane	0.50	--	ND	30	--
			Dibromomethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			Bromodichloromethane	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			cis-1,3-Dichloropropene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	--	--
			Trichloroethene	0.50	--	ND	1	--
			Dibromochloromethane	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/01/95	1,1,2-Trichloroethane	0.50	--	ND	3	--
			Benzene	0.50	--	ND	1	--
			trans-1,3-Dichloropropene	0.50	--	ND	NA	--
			Bromoform	0.50	--	ND	4	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	10	--
			Tetrachloroethene	0.50	--	ND	1*	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	2	--
			Toluene	0.50	--	ND	1,000	--
			1,2-Dibromoethane	0.50	--	ND	--	--
			Chlorobenzene	0.50	--	ND	4	--
			Ethylbenzene	0.50	--	ND	700	--
			Xylenes (Total)	0.50	--	ND	40	--
			Styrene	0.50	--	ND	100	--
			Isopropylbenzene	0.50	--	ND	--	--
			Bromobenzene	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	0.50	--	ND	--	--
			4-Chlorotoluene	0.50	--	ND	--	--
			1,3,5-Trimethylbenzene	0.50	--	ND	--	--
			tert-Butylbenzene	0.50	--	ND	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	0.50	--	ND	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			1,4-Dichlorobenzene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/01/95	4-Isopropyltoluene	0.50	--	ND	--	--
			1,2-Dichlorobenzene	0.50	--	ND	600	--
			n-Butylbenzene	0.50	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.50	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.50	--	ND	9	--
			Hexachlorobutadiene	0.50	--	ND	1	--
			Naphthalene	0.50	--	ND	--	--
			1,2,3-Trichlorobenzene	0.50	--	ND	--	--

Notes:

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

-- Not applicable / does not exceed criteria

(J) Indicates detected below sample quantitation limit

(B) Indicates also present in blank

(ND) Indicates compound not detected

(NA) Not available for this constituent

GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/01/95	NO TICS FOUND	--	--	--	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/02/95	N-Nitrosodiethylamine	2	--	ND	20	--
			bis(2 chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)Ether	5	--	ND	300	--
			N-Nitroso-Di-n-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)Methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	--	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalene	1	--	ND	--	--
			Dimethyl Phthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2		ND	NA	
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenlyether	3	--	ND	--	--
			N-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine	6	--	ND	0.04	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/02/95	Anthracene	2	--	ND	2,000	--
			Di-n-butylphthalate	5	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	100	--
			Benzo(a)Anthracene	2	--	ND	NA	--
			3,3-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	4	--	ND	30	--
			Di-n-Octyl Phthalate	2	--	ND	100	--
			Benzo(b)Fluoranthene	1	--	ND	NA	--
			Benzo(k)Fluoranthene	2	--	ND	NA	--
			Benzo(a)Pyrene	2	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	NA	--
			Dibenzo(a,h)anthracene	3	--	ND	NA	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/02/95	Unknown	--	--	12.0 J	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/18/95	6/01/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	5.1 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/18/95	6/01/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.50	--	ND
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.50	--	ND
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/18/95	6/01/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/18/95	6/01/95	NO TICS FOUND	--	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/01/95	Dichlorodifluoromethane	0.50	--	ND
			Chloromethane	0.50	--	ND
			Bromomethane	0.50	--	ND
			Vinyl Chloride	0.50	--	ND
			Chloroethane	0.50	--	ND
			Trichlorofluoromethane	0.50	--	ND
			Methylene Chloride	0.50	--	5.1 B
			1,2-Dichloroethene (trans)	0.50	--	ND
			1,1-Dichloroethene	0.50	--	ND
			1,1 Dichloroethane	0.50	--	ND
			2,2-Dichloropropane	0.50	--	ND
			Bromochloromethane	0.50	--	ND
			cis-1,2-Dichloroethene	0.50	--	ND
			Chloroform	0.50	--	ND
			1,1-Dichloropropene	0.50	--	ND
			1,2-Dichloroethane	0.50	--	ND
			1,1,1-Trichloroethane	0.50	--	ND
			Dibromomethane	0.50	--	ND
			Carbon Tetrachloride	0.50	--	ND
			Bromodichloromethane	0.50	--	ND
			1,2-Dichloropropane	0.50	--	ND
			cis-1,3-Dichloropropene	0.50	--	ND
			1,3-Dichloropropane	0.50	--	ND
			Trichloroethene	0.50	--	ND
			Dibromochloromethane	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/01/95	1,1,2-Trichloroethane	0.50	--	ND
			Benzene	0.50	--	ND
			trans-1,3-Dichloropropene	0.50	--	ND
			Bromoform	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Tetrachloroethene	0.50	--	ND
			1,1,2,2-Tetrachloroethane	0.50	--	ND
			Toluene	0.50	--	ND
			1,2-Dibromoethane	0.50	--	ND
			Chlorobenzene	0.50	--	ND
			Ethylbenzene	0.50	--	ND
			Xylenes (Total)	0.50	--	ND
			Styrene	0.50	--	ND
			Isopropylbenzene	0.50	--	ND
			Bromobenzene	0.50	--	ND
			1,2,3-Trichloropropane	0.50	--	ND
			n-Propylbenzene	0.50	--	ND
			2-Chlorotoluene	0.50	--	ND
			4-Chlorotoluene	0.50	--	ND
			1,3,5-Trimethylbenzene	0.50	--	ND
			tert-Butylbenzene	0.50	--	ND
			1,2,4-Trimethylbenzene	0.50	--	ND
			sec-Butylbenzene	0.50	--	ND
			1,3-Dichlorobenzene	0.50	--	ND
			1,4-Dichlorobenzene	0.50	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/01/95	4-Isopropyltoluene	0.50	--	ND
			1,2-Dichlorobenzene	0.50	--	ND
			n-Butylbenzene	0.50	--	ND
			1,2-Dibromo-3-chloropropane	0.50	--	ND
			1,2,4-Trichlorobenzene	0.50	--	ND
			Hexachlorobutadiene	0.50	--	ND
			Naphthalene	0.50	--	ND
			1,2,3-Trichlorobenzene	0.50	--	ND

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/01/95	NO TICS FOUND	--	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/02/95	N-Nitrosodiethylamine	2	--	ND
			bis(2 chloroethyl)Ether	1	--	ND
			1,3-Dichlorobenzene	2	--	ND
			1,4-Dichlorobenzene	1	--	ND
			1,2-Dichlorobenzene	2	--	ND
			bis(2-chloroisopropyl)Ether	5	--	ND
			N-Nitroso-Di-n-propylamine	2	--	ND
			Hexachloroethane	1	--	ND
			Nitrobenzene	2	--	ND
			Isophorone	1	--	ND
			bis(2-Chloroethoxy)Methane	3	--	ND
			1,2,4-Trichlorobenzene	2	--	ND
			Naphthalene	2	--	ND
			Hexachlorobutadiene	2	--	ND
			Hexachlorocyclopentadiene	12	--	ND
			2-Chloronaphthalene	1	--	ND
			Dimethyl Phthalate	1	--	ND
			Acenaphthylene	5	--	ND
			2,6-Dinitrotoluene	2		ND
			Acenaphthene	3	--	ND
			2,4-Dinitrotoluene	3	--	ND
			Diethylphthalate	1	--	ND
			Fluorene	3	--	ND
			4-Chlorophenyl-phenlyether	3	--	ND
			N-Nitrosodiphenylamine	6	--	ND
			1,2-Diphenylhydrazine	6	--	ND
			4-Bromophenyl-phenylether	2	--	ND
			Hexachlorobenzene	2	--	ND
			Phenanthrene	2	--	ND

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/02/95	Anthracene	2	--	ND
			Di-n-butylphthalate	55	--	ND
			Fluoranthene	1	--	ND
			Benzidine	1	--	ND
			Pyrene	2	--	ND
			Butylbenzylphthalate	9	--	ND
			Benzo(a)Anthracene	2	--	ND
			3,3-Dichlorobenzidine	15	--	ND
			Chrysene	2	--	ND
			bis(2-Ethylhexyl)Phthalate	4	--	ND
			Di-n-Octyl Phthalate	2	--	ND
			Benzo(b)Fluoranthene	1	--	ND
			Benzo(k)Fluoranthene	2	--	ND
			Benzo(a)Pyrene	2	--	ND
			Indeno(1,2,3-cd)pyrene	2	--	ND
			Dibenzo(a,h)anthracene	3	--	ND
			Benzo(g,h,i)perylene	2	--	ND

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/18/95	6/02/95	Unknown	--	--	14.0 J

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			Methylene Chloride	0.50	--	2.1 B	2	yes
			1,2-Dichloroethene (trans)	0.50	--	ND	100*	--
			1,1-Dichloroethene	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1-Dichloropropene	0.50	--	ND	--	--
			1,2-Dichloroethane	0.50	--	ND	2	--
			1,1,1-Trichloroethane	0.50	--	ND	30	--
			Dibromomethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			Bromodichloromethane	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			cis-1,3-Dichloropropene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	--	--
			Trichloroethene	0.50	--	ND	1	--
			Dibromochloromethane	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	1,1,2-Trichloroethane	0.50	--	ND	3	--
			Benzene	0.50	--	ND	1	--
			trans-1,3-Dichloropropene	0.50	--	ND	NA	--
			Bromoform	0.50	--	ND	4	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	10	--
			Tetrachloroethene	0.50	--	ND	1*	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	2	--
			Toluene	0.50	--	ND	1,000	--
			1,2-Dibromoethane	0.50	--	ND	--	--
			Chlorobenzene	0.50	--	ND	4	--
			Ethylbenzene	0.50	--	ND	700	--
			Xylenes (Total)	0.50	--	ND	40	--
			Styrene	0.50	--	ND	100	--
			Isopropylbenzene	0.50	--	ND	--	--
			Bromobenzene	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	0.50	--	ND	--	--
			4-Chlorotoluene	0.50	--	ND	--	--
			1,3,5-Trimethylbenzene	0.50	--	ND	--	--
			tert-Butylbenzene	0.50	--	ND	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	0.50	--	ND	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			1,4-Dichlorobenzene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	4-Isopropyltoluene	0.50	--	ND	--	--
			1,2-Dichlorobenzene	0.50	--	ND	600	--
			n-Butylbenzene	0.50	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.50	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.50	--	ND	9	--
			Hexachlorobutadiene	0.50	--	ND	1	--
			Naphthalene	0.50	--	ND	--	--
			1,2,3-Trichlorobenzene	0.50	--	ND	--	--

Notes:
* The tetrachloroethene, 1,2-Dichloroethene(trans), 1,1-Dichloroethene, and cis-1,2-Dichloroethene results were compared to the GWQC for their respective synonym (tetrachlororethylene, 1,2-Dichloroethylene(trans), 1,1-Dichloroethylene, and cis-1,2-Dichloroethylene).
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
(B) Indicates also present in blank
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	NO TICS FOUND	--	--	--	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

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

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/26/95	Ethanol,2,2'-[oxybis(2,1-et	--	--	7.0 J	--	--

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

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

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

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

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FT. MONMOUTH, NEW JERSEY
VOLATILE ORGANICS

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE ORGANICS (Continued)

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

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES TICS

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

Notes:

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

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

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

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 161, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES TICS

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

Notes:

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

The depth to the water table on May 18, 1995 was 6.65, and the depth to the water table on June 13, 1995 was 7.28 feet below grade. No product or sheen was observed in MW-1 on either of the sampling dates.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 161 were below the most stringent applicable NJDEP soil cleanup criteria.

Based on the post-excavation soil sampling results, soils with contaminant concentrations exceeding the most stringent applicable NJDEP soil cleanup criteria do not remain in the former location of the UST.

Based on the analytical results of the groundwater samples collected on May 18, 1995 and June 13, 1995, groundwater quality at the Building 161 UST closure site complies with the New Jersey Groundwater Quality Criteria for VOCs, and BNCs. The trace concentrations of methylene chloride detected during both sampling rounds is attributed to sampling and/or analytical interference, based on the detection of methylene chloride, a common source of laboratory interference, in the sampling blanks.

No further action is proposed in regard to the closure and site assessment of UST No. 090010-14 and 090010-68 at Building 161.

SMITH

APPENDIX A

NJDEP BUST CLOSURE APPROVAL

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-91-28389 UST# 0090010

U.S. Army Fort Monmouth
Fort Monmouth Building 161
Fort Monmouth

(Monmouth County)

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: 1- 1000 gallon fuel oil storage tank

Site assessment: Five (5) soil samples will be taken from the tank, and one (1) for every 15 feet of piping; samples will be collected and analyzed as per the Technical Guidance Document (TPHC).

ON-SITE MANAGER: Dinkerrai Desai TELEPHONE: 908 532-1475

OWNER: U. S. Army TELEPHONE:

EFFECTIVE DATE: February 20, 1992

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

Michael S Kelly (for KG)

KENNETH GOLDSTEIN, P.E., CHIEF
BUREAU OF UNDERGROUND STORAGE TANKS

UST-011 GREEN-APPLICANT COPY-APPLICANT COPY-LCO COPY-TMS COPY-R&B

SMITH

APPENDIX B

CERTIFICATIONS

UST-014
2/91

FOR STATE USE ONLY
UST # _____
Date Rec'd _____
TMS # _____
Staff _____

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

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

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

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

INSTRUCTIONS:

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

Date of Submission _____

Bldg. 161

0090010-14, 68
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

U.S. Army, Fort Monmouth, New Jersey
Directorate of Engineering and Housing, Building 167
Fort Monmouth, New Jersey County Monmouth
Telephone No. (908) 532-6224

OWNER'S NAME AND ADDRESS, if different from above

_____
_____
_____

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? X Yes ___ No If Yes, Case No. 93-3-12-2158-30
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) fuel oil (from 0090010-14 UST)

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

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No. C-91-2838

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

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

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

B. Scaled Site Diagrams

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

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

C. Soil samples and borings (check appropriate answer)

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

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

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

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed 1

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

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

V. SOIL CONTAMINATION

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

B. The highest soil contamination still remaining in the ground has been determined to be:
1. 0.037 ppb total BTEX, 0.02 ppb total non-targeted VOC
2. 0.076 ppb total B/N, 1.00 ppb total non-targeted B/N
3. 313.000 ppm TPHC
4. 70.1 ppb Metals (zinc) (for non-petroleum substance)
(See Table 2 for other parameters)

C. Remediation of free product contaminated soils

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

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

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

VI. GROUND WATER CONTAMINATION

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

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

C. Result(s) of well search

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

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

D. Proximity of wells and contaminant plume

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

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

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

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

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

G. Delineation of contamination

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

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

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

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-6.3(b) &9.5(a)3]

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

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

NAME (Print or Type) Charles M. Appleby SIGNATURE _____

COMPANY NAME U.S. ARmy, Fort Monmouth DATE 3/14/96
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION NJDEP CERTIFICATION NUMBER 2056

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____
(Performer of Tank Decommissioning)

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

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

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

NAME (Print or Type) James Ott SIGNATURE James Ott

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

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: U.S. ARMY
Name of Facility: FORT MONMOUTH
Location: MONMOUTH COUNTY, NJ
~~NJPDES~~ Number: 93-3-12-2158-30
Dear

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 29-31775-
This number must be permanently affixed to the well casing.

Longitude (to nearest second): West 74°01'40.46"

Latitude (to nearest second): North 40°19'04.68"

Elevation of Top of Inner Casing (cap off) (one-hundredth of a foot): 11.21

Elevation of ground level (1/100th ft.) 8.54

Source of elevation datum (benchmark, nail, etc.) and year. (If an alternate datum has been approved by the Department, identify here, assume datum of 100', and give approximated actual elevation.) Source: MON FM-6

☒ 1927 ☐ 1983

Elev.:

Owners Well Number (As shown on application or plans): BLDG 161 MW-1

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

AUTHENTICATION

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

Wayne W. Burgett
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

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

SEAL

31654
PROFESSIONAL LAND SURVEYOR'S LICENSE #

SOIL REMEDIATION of Philadelphia, Inc.

3201 South 61st Street
Philadelphia, PA 19153
Pennsylvania Department of Environmental Resources Permitted Facility

CERTIFICATE OF SOIL REMEDIATION

Soil Remediation of Philadelphia, Inc. certifies that 2422.69 tons of non-hazardous petroleum contaminated soil delivered by ALLIED ENVIRONMENTAL and identified as lot # 471 has been processed to destroy the hydrocarbon contamination. This soil has been remediated to meet Level A Protection as established by the Pennsylvania Department of Environmental Resources Cleanup Standards issued October 18, 1991. This states that the hydrocarbons are removed so that they are non-detectable thereby allowing the soil to be considered clean fill.

Certificate Issued To: US ARMY FORT MONMOUTH

Authorized Signature: [signature]

Date: 8-3-93

SMITH

APPENDIX C

WASTE MANIFEST

HW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

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

Form Approved. OMB No. 2050-0039. Expires

UNIFORM HAZARDOUS WASTE MANIFEST

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

3. Generator's Name and Mailing Address: US ARMY COMMUNICATIONS ELECTRONICS COMMAND, MAIN POST AREA, C/O JAMES SHIRGHIO, BLDG [illegible], ATTN: [illegible] AMSEL-EM-MS, FORT MONMOUTH NJ 07703

A. State Manifest Document Number [redacted]

B. State Generator's ID SAME

4. Generator's Phone (908) 532-9911

5. Transporter 1 Company Name: Casie/Protank — 6. US EPA ID Number: NJD045929390

C. State Trans. ID [illegible]

D. Transporter's Phone 609-696-4401

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: Casie Ecology Oil Salvage, 3209 N. Mill Rd, Vineland, NJ 08360 — 10. US EPA ID Number: NJD045929390

G. State Facility's ID [illegible]

H. Facility's Phone 609-696-4401

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Combustible Liquid, N.O.S. (Petroleum) Combustible Liquid, NA1993	X	001	TT	XX850	G	X 7 [illegible]
b. ~~Waste Combustible Liquid, N.O.S. (Petroleum) Combustible Liquid, NA1993~~						
c.						
d.						

J. Additional Descriptions for Materials Listed Above [illegible]

K. Handling Codes for Wastes Listed Above [illegible]

15. Special Handling Instructions and Additional Information
24 hour emergency response phone# 908-532-4911 JAMES SHIRGHIO Bldg 161
CH# 0092F2 E.R.G. #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: Joseph M. Fallon — Signature: Joseph M. Fallon — Month Day: 03 [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Tim VKASKY [illegible] — Signature: [illegible] — Month Day: 03 [illegible]

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

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

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

SMITH

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

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 #: 1163.1+.2
Sample Rec'd: 03/12/93
Analysis Start: 03/17/93
Analysis Comp: 03/17/93

Analysis: 418.1 (TPH)
Matrix: Aqueous
Analyst: S. Hubbard

NJDEPE UST Reg.#: XXXXXXX-XX,XX,XX,XX
Closure Approval #: X-XX-XXXX/XX
NJDEPE Case #: XX-XX-XX-XXXX
Building #: 161

Lab ID.	Description		Result (mg/L)	MDL
1163.1	Rinse #1		153.	1.0
1163.2	Rinse #2		134.	1.0
M Bl.	Method Blank		ND	1.0

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

Brian K. McKee
Laboratory Director

SERV-AIR, INC.
An E-SYSTEMS Company

CHAIN OF CUSTODY RECORD

CLIENT: U.S. Army Environmental Lab
PROJECT ID: Bldg 161
ADDRESS: Fort Monmouth
SAMPLER: C. Appleby DEH - Sub Surface
CITY/STATE: N.J.
PHONE #: 532-6147

LAB ID #	SAMPLE ID	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE GRAB	SOIL	COMP	NO. OF BOTTLES	ANALYSIS REQUESTED
1163.1	Rinsate #1	3/12/93	1:45	X Ag				TPHC
1163.2	Rinsate #2	3/12/93	1:49	X Ag				TPHC
								- From Rinsed Containers

SAMPLE COLLECTED BY: C. Appleby	DATE	TIME	PRESERVED WITH: NaOH	H2SO4	HNO3	NONE	OTHER
RELINQUISHED BY:	3/13/93	16:30 hrs	RECEIVED BY:				

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 #: 1162.1-.7
Sample Rec'd: 03/11/93
Analysis Start: 03/16/93
Analysis Comp: 03/16/93

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

NJDEPE UST Reg.#: XXXXXXX-XX,XX,XX,XX
Closure Approval #: X-XX-XXXX/XX
NJDEPE Case #: XX-XX-XX-XXXX
Building #: 161

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1162.1	S #AA	82	ND	3.3
1162.2	S #BB	90	ND	3.3
1162.3	S #CC	86	ND	3.3
1162.4	S #DD	83	ND	3.3
1162.5	S #EE	82	ND	3.3
1162.6	S #FF	82	ND	3.3
1162.7	S #GG	83	313.	3.3
1162.7	Duplicate	83	315.	3.3
1162.7	Spike	83	557.	3.3
M. Bl.	Method Blank	--	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
% Duplication = 99%
% Spike Recovery = 64%

Brian K. McKee
Laboratory Director

Semi-AlloyIC.
An E-SYSTEMS Company

CHAIN OF CUSTODY RECORD

CLIENT: U.S. Army Environmental Lab PROJECT ID: 161

ADDRESS: Fort Monmouth, N.J. SAMPLER: Appleby / Rockkovsky

CITY/STATE: PHONE #:

LAB ID #	SAMPLE ID	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE GRAB	SAMPLE TYPE SOIL	SAMPLE TYPE COMP	NO. OF BOTTLES	ANALYSIS REQUESTED
1162.1	AA	3/11	1520		X		1	21.789 18.006 82% TPHC.
1162.2	BB	↓	1513		X		1	17.027 15.389 90%
1162.3	CC	↓	1530		↓		1	14.864 12.729 86% *
1162.4	DD	↓	1538		↓		1	18.997 15.758 83%
1162.5	EE	↓	1525		↓		1	27.161 22.150 82% *
1162.6	FF	↓	1527		↓		1	26.131 21.541 82%
1162.7	GG	↓	1530		X		1	21.195 17.623 83% *
1167.8	Field Blank							19.463 16.188 83% Sample dup *
1167.9	Trip Blank							

Silica Gel

SAMPLE COLLECTED BY: Appleby / Rockkovsky — DATE: 3/11 — TIME: 1600

PRESERVED WITH: NaOH H2SO4 HNO3 NONE OTHER

RELINQUISHED BY: Rockkovsky — 3/11 — 1600

RECEIVED BY: S Hubbard

* Note samples CC and GG are not duplicate samples.

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E-SYSTEMS

PROJECT: UST-BLG 161

US ARMY FORT MONMOUTH, NJ

ANALYSIS NO:	CLIENT ID:
A 1261	Site AA
A 1262	Site BB
A 1263	Site CC
A 1264	Site DD
A 1265	Field Blank
A 1266	Trip Blank

DATE RECEIVED: MARCH15, 1993

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

TABLE OF CONTENTS

NARRATIVE

All extractions and analysis were completed within proper hold times for this batch of samples (A1261 to A1266). Please note that 1,1,2,2-Tetrachloroethane and 1,1,2-Trichloroethane were found in several semi-volatile searches. We believe this is a breakdown byproduct of methylene chloride caused during sonication.

A1261 to A1266

00002

CLIENT: E-Systems
ADDRESS:
CITY:
STATE: ZIP:
ATTN:

PROJECT DESCRIPTION:
UST - Bldg 161

P.O.#

ANALYSES REQUESTED

SAMPLE IDENTIFICATION	MATRIX	SAMPLE DATE	SAMPLE TIME	TYPE GR	TYPE C	PRESERV.	# OF CONT.	Priority Pollutants (+40)	VOA (TCS)								REMARKS
Site AA	Soil	3/12/93	1520	✓		4°C	5	✓									
Site BB	↓	↓	1513	✓		↓	5	✓									
Site CC			1530	✓			5	✓									
Site DD	↓		1535	✓			5	✓									
Field Blank	water	↓	1545	✓		HNO3 (metals)	7	✓									
Trip Blank	↓	N/A	N/A	✓		↓	2		✓								
(Same TB as Bldg 750)																	

	SAMPLED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
SIG:	[signature]	3/12/93	[signature]	3/15/93	[signature]	3/15/93	
PRINT:	Charles M. Appleby	(see	Mark D. Fetchko	1600	Mark D Fetchko	1730	
COMPANY:	U.S. Army	above)	21st Cent Env		21st Cent Env		

	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR LAB:
SIG:		3-15-93	
PRINT:		1730	
COMPANY:			21st Cent Env

DATA DELIVERABLES
[X] Tier II
[ ] Results only
[ ] Other

TURNAROUND TIME
[X] STANDARD (2-3 wks.)
The following need prior lab authorization:
[ ] 1 wk. [ ] 72 hrs.
[X] 48 hrs. [ ] 24 hrs.
AUTHORIZED BY:
DATE:

PRELIM RESULTS

DELIVERY METHOD:
[ ] In Person; [ ] UPS; [ ] Fed Ex; [X] Lab Courier;

Acid Extractables Base Neutrals	U.S.E.P.S. Method 625 - This method covers the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. This is a gas chromatography/mass spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants". A HP5970 was used with a DB-5 FSCC. Method detection limits are as stated. Soil samples were prepared for analysis as prescribed in Method 3550 and analyzed as prescribed in Method 8270 from SW846.
Cyanide	Analysis performed according to U.S.E.P.A. 335.2 (Spectrophotometric with distillation). Sample is reacted with Chloramine-T to produce Cyanogen, Chloride, CNCl. Red color develops when combined with Pyridine/Barbituric Acid Reagent; which is read at 578nm. Soil samples are prepared for analysis as prescribed in Method 9010 from SW846.
Phenols	Analysis performed according to U.S.E.P.A. 420.1 (Spectrophotometric, Manual 4AAP with distillation). Phenolic materials react with four (4) Aminoantipyrine and Potassium Ferricyanide at pH 10. Red color is read at 510 nm. Soil samples are prepared for analysis as prescribed in Method 9067 from SW346.

Metals

Soil samples for metal analysis were run in accordance with the methods prescribed in SW846. This includes a nitric acid digestion followed by either Furnace, Flame Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 March 1983.

Pesticides/PCB's

U.S.E.P.A. Method 608 - This method covers the determination of pesticides and PCB's in samples by extraction/concentration with organic solvents and subsequent qualification/quantification by Gas Chromatography. The gas chromatograph utalized an electron capture detector (ECD) which is applicable for the determination of the compounds listed for the method in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

Soil samples were prepared as prescribed in Method 3550 and analyzed as prescribed in Method 8080 from SW846.

Purgeables

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

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

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240 from SW846.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 3/15/93

ORGANICS
EXTRACTION

1. Acids 3/15/93
2. Base/Neutrals 3/15/93
3. Pesticides/PCB's/Herbicides 3/15/93 - 3/16/93
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles 3/16/93 - 3/24/93
2. Acids 3/16/93 - 3/17/93
3. Base/Neutrals 3/16/93 - 3/17/93
4. Pesticides/PCB's/Herbicides 3/16/93 - 3/17/93
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor
Review & Approval Jeffrey L Martin

INORGANICS

1. Metals 3/16/93 - 3/17/93
2. Cyanides 3/17/93
3. Phenols 3/17/93

OTHER ANALYTES

Section Supervisor
Review & Approval Mari Lewis

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Rymer

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

RESULT SUMMARY

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1261

CLIENT ID: Site AA

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	N.D.
PHENOL	0.50	N.D.

00007

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1261

CLIENT ID: Site AA

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	9.30
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	40.3
COPPER	1.00	2.91
LEAD	5.00	6.88
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.83
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	21.8

BATCH 032

00008

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1261	DILUTION FACTOR	1.00
CLIENT ID	SITE AA BLDG 161	QA BATCH	
DATA FILE	>A1108	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL
Acrolein	ND		60
Acrylonitrile	ND		60
Chloromethane	ND		12
Bromomethane	ND		12
Vinyl Chloride	ND		12
Chloroethane	ND		12
Acetone	22	B	12
1,1-Dichloroethene	ND		6
Carbon Disulfide	ND		12
Methylene Chloride	ND	B	6
1,2-Dichloroethene(trans)	ND		6
1,1-Dichloroethane	ND		6
Vinyl Acetate	ND		6
2-Butanone	ND		12
Chloroform	ND		6
1,1,1-Trichloroethane	ND		6
Carbon Tetrachloride	ND		6
1,2-Dichloroethane	ND		6
Benzene	ND		6
Trichloroethene	ND		6
1,2-Dichloropropane	ND		6

COMPOUND	UG/KG	MDL
Bromodichloromethane	ND	6
2-Chloroethylvinylether	ND	12
2-Hexanone	ND	12
trans-1,3-Dichloropropene	ND	6
Toluene	13	6
cis-1,3-Dichloropropene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
1,1,2-Trichloroethane	ND	6
4-Methyl-2-pentanone	ND	12
Tetrachloroethene	ND	6
Dibromochloromethane	ND	6
Chlorobenzene	ND	6
Ethylbenzene	6.0	6
m&p-Xylenes	25	6
o-Xylene	12	6
Styrene	ND	6
Bromoform	ND	6
m-Dichlorobenzene	ND	6
p-Dichlorobenzene	ND	6
o-Dichlorobenzene	ND	6

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	105	70 - 121	OK
Toluene-d8	98.1	81 - 117	OK
Bromofluorobenzene	93.7	74 - 121	OK

Percent Solid of 83.0 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
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1261	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE AA	QA BATCH	
DATA FILE	>C0750	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		400	Acenaphthene	ND		400
Phenol	ND		400	2,4-Dinitrophenol	ND		2000
bis(-2-Chloroethyl)Ether	ND		400	4-Nitrophenol	ND		2000
2-Cholorophenol	ND		400	Dibenzofuran	ND		400
1,3-Dichlorobenzene	ND		400	2,4-Dinitrotoluene	ND		400
1,4-Dichlorobenzene	ND		400	2,6-Dinitrotoluene	ND		400
Benzyl Alcohol	ND		400	Diethylphthalate	ND		400
1,2-Dichlorobenzene	ND		400	4-Chlorophenyl-phenlyether	ND		400
2-Methylphenol	ND		400	Fluorene	ND		400
bis(2-chloroisopropyl)Ether	ND		400	4-Nitroaniline	ND		2000
4-Methylphenol	ND		400	4,6-Dinitro-2-Methylphenol	ND		2000
N-Nitroso-Di-n-Propylamine	ND		400	N-Nitrosodiphenylamine	ND		400
Hexachloroethane	ND		400	4-Bromophenyl-phenylether	ND		400
Nitrobenzene	ND		400	Hexachlorobenzene	ND		400
Isophorone	ND		400	Pentachlorophenol	ND		2000
2-Nitrophenol	ND		400	Phenanthrene	ND		400
2,4-Dimethylphenol	ND		400	Anthracene	ND		400
Benzoic Acid	ND		2000	Di-n-Butylphthalate	ND		400
bis(-2-Chloroethoxy)Methane	ND		400	Fluoranthene	ND		400
2,4-Dichlorophenol	ND		400	Pyrene	ND		400
1,2,4-Trichlorobenzene	ND		400	Butylbenzylphthalate	ND		400
Naphthalene	ND		400	3,3'-Dichlorobenzidine	ND		800
4-Chloroaniline	ND		400	Benzo(a)Anthracene	ND		400
Hexachlorobutadiene	ND		400	Bis(2-Ethylhexyl)Phthalate	40	JB	400
4-Chloro-3-Methylphenol	ND		400	Chrysene	ND		400
2-Methylnaphthalene	ND		400	Di-n-Octyl Phthalate	ND		400
Hexachlorocyclopentadiene	ND		400	Benzo(b)Fluoranthene	ND		400
2,4,6-Trichlorophenol	ND		400	Benzo(k)Fluoranthene	ND		400
2,4,5-Trichlorophenol	ND		2000	Benzo(a)Pyrene	ND		400
2-Chloronaphthalene	ND		400	Indeno(1,2,3-cd)Pyrene	ND		400
2-Nitroaniline	ND		2000	Dibenzo(a,h)Anthracene	ND		400
Dimethyl Phthalate	ND		400	Benzo(g,h,i)Perylene	ND		400
Acenaphthylene	ND		400	Benzidine	ND		800
3-Nitroaniline	ND		2000				

Percent Solid of 83.0 is used for all Target compounds.

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

Lab Sample ID:
A1261

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1
SITE AA

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/16/93 22:47
Conc/Dil Factor: 10.05g/10ml
Percent Moisture: 17

GPC Cleanup __Yes ✓No
Sep. Funnel Extraction __Yes
Continuous Liq-Liq Ext. __Yes

C.A.S. Number		ug/L or (ug/Kg)	
319-84-6	Alpha-BHC	6.0	U
319-87-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC	6.0	U
58-89-9	Gamma-BHC (Lindane)	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde	12	U
57-74-9	Chlordane	300	U
8001-35-2	Toxaphene	600	U
12674-11-2	Arochlor-1016	300	U
11104-28-2	Arochlor-1221	300	U
11141-16-5	Arochlor-1232	300	U
53469-21-9	Arochlor-1242	300	U
12672-29-6	Arochlor-1248	300	U
11097-69-1	Arochlor-1254	300	U
11096-82-5	Arochlor-1260	300	U

U Undetected J Estimated value below detection level

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE AA

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) SOIL

Lab Sample ID: A1261

Sample wt/vol: 5 (g/mL) G

Lab File ID: >A1108

Level: LOW

Date Received: 03/15/93

% Moisture: 17

Date Analyzed 03/24/93

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	3.16	12
2		UNKNOWN	8.80	8
3	620144	Benzene, 1-ethyl-3-methyl- (9CI)	18.17	10
4	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.02	10

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE AA

Matrix: (soil/water) SOIL

Lab Sample ID: A1261

Client Name: US Army, Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0750

Level: LOW

Date Received: NA

% Moisture: 17

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.15	280
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.64	800
3		UNKNOWN	31.07	440

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1262

CLIENT ID: Site BB

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.16
PHENOL	0.50	N.D.

00014

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1262

CLIENT ID: Site BB

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	4.74
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	38.5
COPPER	1.00	3.66
LEAD	5.00	8.84
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	N.D.
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	70.1

BATCH 032

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1262	DILUTION FACTOR	1.00
CLIENT ID	SITE BB BLDG 161	QA BATCH	
DATA FILE	>A1109	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL
Acrolein	ND		57
Acrylonitrile	ND		57
Chloromethane	ND		11
Bromomethane	ND		11
Vinyl Chloride	ND		11
Chloroethane	ND		11
Acetone	17	B	11
1,1-Dichloroethene	ND		6
Carbon Disulfide	ND		11
Methylene Chloride	ND	B	6
1,2-Dichloroethene(trans)	ND		6
1,1-Dichloroethane	ND		6
Vinyl Acetate	ND		6
2-Butanone	ND		11
Chloroform	ND		6
1,1,1-Trichloroethane	ND		6
Carbon Tetrachloride	ND		6
1,2-Dichloroethane	ND		6
Benzene	ND		6
Trichloroethene	ND		6
1,2-Dichloropropane	ND		6

COMPOUND	UG/KG	MDL
Bromodichloromethane	ND	6
2-Chloroethylvinylether	ND	11
2-Hexanone	ND	11
trans-1,3-Dichloropropene	ND	6
Toluene	ND	6
cis-1,3-Dichloropropene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
1,1,2-Trichloroethane	ND	6
4-Methyl-2-pentanone	ND	11
Tetrachloroethene	ND	6
Dibromochloromethane	ND	6
Chlorobenzene	ND	6
Ethylbenzene	ND	6
m&p-Xylenes	ND	6
o-Xylene	ND	6
Styrene	ND	6
Bromoform	ND	6
m-Dichlorobenzene	ND	6
p-Dichlorobenzene	ND	6
o-Dichlorobenzene	ND	6

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	70 - 121	OK
Toluene-d8	99.1	81 - 117	OK
Bromofluorobenzene	95.8	74 - 121	OK

Percent Solid of 88.0 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
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1262	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE BB	QA BATCH	
DATA FILE	>C0751	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		380	Acenaphthene	ND		380
Phenol	ND		380	2,4-Dinitrophenol	ND		1900
bis(-2-Chloroethyl)Ether	ND		380	4-Nitrophenol	ND		1900
2-Cholorophenol	ND		380	Dibenzofuran	ND		380
1,3-Dichlorobenzene	ND		380	2,4-Dinitrotoluene	ND		380
1,4-Dichlorobenzene	ND		380	2,6-Dinitrotoluene	ND		380
Benzyl Alcohol	ND		380	Diethylphthalate	ND		380
1,2-Dichlorobenzene	ND		380	4-Chlorophenyl-phenlyether	ND		380
2-Methylphenol	ND		380	Fluorene	ND		380
bis(2-chloroisopropyl)Ether	ND		380	4-Nitroaniline	ND		1900
4-Methylphenol	ND		380	4,6-Dinitro-2-Methylphenol	ND		1900
N-Nitroso-Di-n-Propylamine	ND		380	N-Nitrosodiphenylamine	ND		380
Hexachloroethane	ND		380	4-Bromophenyl-phenylether	ND		380
Nitrobenzene	ND		380	Hexachlorobenzene	ND		380
Isophorone	ND		380	Pentachlorophenol	ND		1900
2-Nitrophenol	ND		380	Phenanthrene	ND		380
2,4-Dimethylphenol	ND		380	Anthracene	ND		380
Benzoic Acid	ND		1900	Di-n-Butylphthalate	ND		380
bis(-2-Chloroethoxy)Methane	ND		380	Fluoranthene	ND		380
2,4-Dichlorophenol	ND		380	Pyrene	ND		380
1,2,4-Trichlorobenzene	ND		380	Butylbenzylphthalate	ND		380
Naphthalene	ND		380	3,3'-Dichlorobenzidine	ND		750
4-Chloroaniline	ND		380	Benzo(a)Anthracene	ND		380
Hexachlorobutadiene	ND		380	Bis(2-Ethylhexyl)Phthalate	76	JB	380
4-Chloro-3-Methylphenol	ND		380	Chrysene	ND		380
2-Methylnaphthalene	ND		380	Di-n-Octyl Phthalate	ND		380
Hexachlorocyclopentadiene	ND		380	Benzo(b)Fluoranthene	ND		380
2,4,6-Trichlorophenol	ND		380	Benzo(k)Fluoranthene	ND		380
2,4,5-Trichlorophenol	ND		1900	Benzo(a)Pyrene	ND		380
2-Chloronaphthalene	ND		380	Indeno(1,2,3-cd)Pyrene	ND		380
2-Nitroaniline	ND		1900	Dibenzo(a,h)Anthracene	ND		380
Dimethyl Phthalate	ND		380	Benzo(g,h,i)Perylene	ND		380
Acenaphthylene	ND		380	Benzidine	ND		750
3-Nitroaniline	ND		1900				

Percent Solid of 88.0 is used for all Target compounds.

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

Lab Name : 21ST CENTURY ENVIRONMENTAL
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 161
SITE BB

Lab Sample ID:
A1262

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/17/93 11:03
Conc/Dil Factor: 10.02g/10ml
Percent Moisture: 12

GPC Cleanup __ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC.	5.7	U
319-87-7	Beta-BHC	5.7	U
319-86-8	Delta-BHC.	5.7	U
58-89-9	Gamma-BHC (Lindane). . .	5.7	U
76-44-8	Heptachlor	5.7	U
309-00-2	Aldrin	5.7	U
1024-57-3	Heptachlor Epoxide . . .	5.7	U
959-98-8	Endosulfan I	5.7	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	5.7	U
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II.	11	U
72-54-8	4,4'-DDD	11	U
1031-07-8	Endosulfan Sulfate . . .	11	U
50-29-3	4,4'-DDT	11	U
72-43-5	Methoxychlor	280	U
7421-93-4	Endrin Aldehyde.	11	U
57-74-9	Chlordane.	280	U
8001-35-2	Toxaphene.	570	U
12674-11-2	Arochlor-1016.	280	U
11104-28-2	Arochlor-1221.	280	U
11141-16-5	Arochlor-1232.	280	U
53469-21-9	Arochlor-1242.	280	U
12672-29-6	Arochlor-1248.	280	U
11097-69-1	Arochlor-1254.	280	U
11096-82-5	Arochlor-1260.	280	U

U Undetected J Estimated value below detection level

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE BB

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1262

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1109

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 12

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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E1 EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE BB

Matrix: (soil/water) SOIL

Lab Sample ID: A1262

Client Name: US Army, Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0751

Level: LOW

Date Received: NA

% Moisture: 12

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.12	270
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.62	760
3		UNKNOWN	27.58	340
4		UNKNOWN	31.05	610

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1263

CLIENT ID: Site CC

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	N.D.
PHENOL	0.50	N.D.

00021

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1263

CLIENT ID: Site CC

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	8.58
ARSENIC	0.25	3.88
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	50.7
COPPER	1.00	4.09
LEAD	5.00	7.71
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.46
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	31.7

BATCH 032

00022

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1263	DILUTION FACTOR	1.00
CLIENT ID	SITE CC BLDG 161	QA BATCH	
DATA FILE	>A1110	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG	MDL
Acrolein	ND		60	Bromodichloromethane	ND	6
Acrylonitrile	ND		60	2-Chloroethylvinylether	ND	12
Chloromethane	ND		12	2-Hexanone	ND	12
Bromomethane	ND		12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND		12	Toluene	ND	6
Chloroethane	ND		12	cis-1,3-Dichloropropene	ND	6
Acetone	11	JB	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND		6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND		12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	ND	B	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND		6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND		6	Chlorobenzene	ND	6
Vinyl Acetate	ND		6	Ethylbenzene	ND	6
2-Butanone	ND		12	m&p-Xylenes	ND	6
Chloroform	ND		6	o-Xylene	ND	6
1,1,1-Trichloroethane	ND		6	Styrene	ND	6
Carbon Tetrachloride	ND		6	Bromoform	ND	6
1,2-Dichloroethane	ND		6	m-Dichlorobenzene	ND	6
Benzene	ND		6	p-Dichlorobenzene	ND	6
Trichloroethene	ND		6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND		6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	70 - 121	OK
Toluene-d8	97.2	81 - 117	OK
Bromofluorobenzene	95.1	74 - 121	OK

Percent Solid of 84.0 is used for all Target compounds.

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

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1263	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE CC	QA BATCH	
DATA FILE	>C0752	DATE ANALYZED	03/17/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
N-Nitrosodimethylamine	ND	390	Acenaphthene	ND	390
Phenol	ND	390	2,4-Dinitrophenol	ND	2000
bis(-2-Chloroethyl)Ether	ND	390	4-Nitrophenol	ND	2000
2-Cholorophenol	ND	390	Dibenzofuran	ND	390
1,3-Dichlorobenzene	ND	390	2,4-Dinitrotoluene	ND	390
1,4-Dichlorobenzene	ND	390	2,6-Dinitrotoluene	ND	390
Benzyl Alcohol	ND	390	Diethylphthalate	ND	390
1,2-Dichlorobenzene	ND	390	4-Chlorophenyl-phenlyether	ND	390
2-Methylphenol	ND	390	Fluorene	ND	390
bis(2-chloroisopropyl)Ether	ND	390	4-Nitroaniline	ND	2000
4-Methylphenol	ND	390	4,6-Dinitro-2-Methylphenol	ND	2000
N-Nitroso-Di-n-Propylamine	ND	390	N-Nitrosodiphenylamine	ND	390
Hexachloroethane	ND	390	4-Bromophenyl-phenylether	ND	390
Nitrobenzene	ND	390	Hexachlorobenzene	ND	390
Isophorone	ND	390	Pentachlorophenol	ND	2000
2-Nitrophenol	ND	390	Phenanthrene	ND	390
2,4-Dimethylphenol	ND	390	Anthracene	ND	390
Benzoic Acid	ND	2000	Di-n-Butylphthalate	ND	390
bis(-2-Chloroethoxy)Methane	ND	390	Fluoranthene	ND	390
2,4-Dichlorophenol	ND	390	Pyrene	ND	390
1,2,4-Trichlorobenzene	ND	390	Butylbenzylphthalate	ND	390
Naphthalene	ND	390	3,3'-Dichlorobenzidine	ND	780
4-Chloroaniline	ND	390	Benzo(a)Anthracene	ND	390
Hexachlorobutadiene	ND	390	Bis(2-Ethylhexyl)Phthalate	ND B	390
4-Chloro-3-Methylphenol	ND	390	Chrysene	ND	390
2-Methylnaphthalene	ND	390	Di-n-Octyl Phthalate	ND	390
Hexachlorocyclopentadiene	ND	390	Benzo(b)Fluoranthene	ND	390
2,4,6-Trichlorophenol	ND	390	Benzo(k)Fluoranthene	ND	390
2,4.5-Trichlorophenol	ND	2000	Benzo(a)Pyrene	ND	390
2-Chloronaphthalene	ND	390	Indeno(1,2,3-cd)Pyrene	ND	390
2-Nitroaniline	ND	2000	Dibenzo(a,h)Anthracene	ND	390
Dimethyl Phthalate	ND	390	Benzo(g,h,i)Perylene	ND	390
Acenaphthylene	ND	390	Benzidine	ND	780
3-Nitroaniline	ND	2000			

Percent Solid of 84.0 is used for all Target compounds.

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

Lab Name : 21ST CENTURY ENVIRONMENTAL
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 161
SITE CC

Lab Sample ID:
A1263

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/17/93 00:11
Conc/Dil Factor: 10.05g/10ml
Percent Moisture: 16

GPC Cleanup __ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC.	6.0	U
319-87-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC.	6.0	U
58-89-9	Gamma-BHC (Lindane). . .	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide . . .	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II.	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate . . .	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde.	12	U
57-74-9	Chlordane.	300	U
8001-35-2	Toxaphene.	600	U
12674-11-2	Arochlor-1016.	300	U
11104-28-2	Arochlor-1221.	300	U
11141-16-5	Arochlor-1232.	300	U
53469-21-9	Arochlor-1242.	300	U
12672-29-6	Arochlor-1248.	300	U
11097-69-1	Arochlor-1254.	300	U
11096-82-5	Arochlor-1260.	300	U

U Undetected J Estimated value below detection level

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE CC

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1263

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1110

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 16

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE CC

Matrix: (soil/water) SOIL

Lab Sample ID: A1263

Client Name: US Army, Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0752

Level: LOW

Date Received: NA

% Moisture: 16

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.08	360
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.58	910
3		UNKNOWN	31.05	360

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1264

CLIENT ID: Site DD

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.15
PHENOL	0.50	N.D.

00028

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1264

CLIENT ID: Site DD

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	5.28
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	53.7
COPPER	1.00	7.25
LEAD	5.00	18.4
MERCURY	0.10	N.D.
NICKEL	5.00	4.53
SELENIUM	0.25	0.42
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	45.7

BATCH 032

00029

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1264	DILUTION FACTOR	1.00
CLIENT ID	SITE DD BLDG 161	QA BATCH	
DATA FILE	>A1111	DATE ANALYZED	03/24/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	60	Bromodichloromethane	ND	6
Acrylonitrile	ND	60	2-Chloroethylvinylether	ND	12
Chloromethane	ND	12	2-Hexanone	ND	12
Bromomethane	ND	12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND	12	Toluene	3.1 J	6
Chloroethane	ND	12	cis-1,3-Dichloropropene	ND	6
Acetone	11 JB	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	4.2 JB	6	Tetrachloroethene	2.9 J	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	1.2 J	6
2-Butanone	ND	12	m&p-Xylenes	3.3 J	6
Chloroform	ND	6	o-Xylene	2.0 J	6
1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	96.8	81 - 117	OK
Bromofluorobenzene	91.1	74 - 121	OK

Percent Solid of 83.0 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
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH,NJ	MATRIX	Soil
SAMPLE NUMBER	A1264	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE DD	QA BATCH	
DATA FILE	>C0753	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		400
Phenol	ND		400
bis(-2-Chloroethyl)Ether	ND		400
2-Cholorophenol	ND		400
1,3-Dichlorobenzene	ND		400
1,4-Dichlorobenzene	ND		400
Benzyl Alcohol	ND		400
1,2-Dichlorobenzene	ND		400
2-Methylphenol	ND		400
bis(2-chloroisopropyl)Ether	ND		400
4-Methylphenol	ND		400
N-Nitroso-Di-n-Propylamine	ND		400
Hexachloroethane	ND		400
Nitrobenzene	ND		400
Isophorone	ND		400
2-Nitrophenol	ND		400
2,4-Dimethylphenol	ND		400
Benzoic Acid	ND		2000
bis(-2-Chloroethoxy)Methane	ND		400
2,4-Dichlorophenol	ND		400
1,2,4-Trichlorobenzene	ND		400
Naphthalene	ND		400
4-Chloroaniline	ND		400
Hexachlorobutadiene	ND		400
4-Chloro-3-Methylphenol	ND		400
2-Methylnaphthalene	ND		400
Hexachlorocyclopentadiene	ND		400
2,4,6-Trichlorophenol	ND		400
2,4,5-Trichlorophenol	ND		2000
2-Chloronaphthalene	ND		400
2-Nitroaniline	ND		2000
Dimethyl Phthalate	ND		400
Acenaphthylene	ND		400
3-Nitroaniline	ND		2000

COMPOUND	UG/KG		MDL
Acenaphthene	ND		400
2,4-Dinitrophenol	ND		2000
4-Nitrophenol	ND		2000
Dibenzofuran	ND		400
2,4-Dinitrotoluene	ND		400
2,6-Dinitrotoluene	ND		400
Diethylphthalate	ND		400
4-Chlorophenyl-phenlyether	ND		400
Fluorene	ND		400
4-Nitroaniline	ND		2000
4,6-Dinitro-2-Methylphenol	ND		2000
N-Nitrosodiphenylamine	ND		400
4-Bromophenyl-phenylether	ND		400
Hexachlorobenzene	ND		400
Pentachlorophenol	ND		2000
Phenanthrene	ND		400
Anthracene	ND		400
Di-n-Butylphthalate	ND		400
Fluoranthene	ND		400
Pyrene	42	J	400
Butylbenzylphthalate	ND		400
3,3'-Dichlorobenzidine	ND		800
Benzo(a)Anthracene	ND		400
Bis(2-Ethylhexyl)Phthalate	73	JB	400
Chrysene	ND		400
Di-n-Octyl Phthalate	ND		400
Benzo(b)Fluoranthene	ND		400
Benzo(k)Fluoranthene	ND		400
Benzo(a)Pyrene	ND		400
Indeno(1,2,3-cd)Pyrene	ND		400
Dibenzo(a,h)Anthracene	ND		400
Benzo(g,h,i)Perylene	ND		400
Benzidine	ND		800

Percent Solid of 83.0 is used for all Target compounds.

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

Lab Sample ID:
A1264

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1 SITE DD

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: (Low) Medium (Circle One) GPC Cleanup __Yes _/No
Date Extracted/Prepared: 03/15/93 Sep. Funnel Extraction __Yes
Date Analyzed: 03/17/93 00:53 Continuous Liq-Liq Ext. __Yes
Conc/Dil Factor: 10.09g/10ml
Percent Moisture: 17

C.A.S. Number		ug/Kg	
319-84-6	Alpha-BHC.	6.0	U
319-85-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC.	6.0	U
58-89-9	Gamma-BHC (Lindane). . .	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide . . .	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II.	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate . . .	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde.	12	U
57-74-9	Chlordane.	300	U
8001-35-2	Toxaphene.	600	U
12674-11-2	Aroclor-1016.	300	U
11104-28-2	Aroclor-1221.	300	U
11141-16-5	Aroclor-1232.	300	U
53469-21-9	Aroclor-1242.	300	U
12672-29-6	Aroclor-1248.	300	U
11097-69-1	Aroclor-1254.	300	U
11096-82-5	Aroclor-1260.	300	U

U Undetected J Estimated value below detection level

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE DD

Lab Name:21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1264

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1111

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 17

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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1/87 Rev.

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE DD

Matrix: (soil/water) SOIL

Lab Sample ID: A1264

Client Name: US Army, Ft.Monmouth, NJ

Client ID: A1264

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0753

Level: LOW

Date Received: NA

% Moisture: 17

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.12	360
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.60	1000
3		UNKNOWN	27.52	320
4		UNKNOWN	31.03	520

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1265

CLIENT ID: Field Blank

PARAMETER	MDL (mg/L)	RESULT (mg/L)
CYANIDE	0.01	N.D.
PHENOL	0.05	N.D.

00035

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1265

CLIENT ID: Field Blank

METALS	MDL (mg/L)	RESULT (mg/L)
ANTIMONY	0.005	N.D.
ARSENIC	0.005	N.D.
BERYLLIUM	0.01	N.D.
CADMIUM	0.01	N.D.
CHROMIUM	0.01	N.D.
COPPER	0.01	N.D.
LEAD	0.05	N.D.
MERCURY	0.0005	N.D.
NICKEL	0.05	N.D.
SELENIUM	0.005	N.D.
SILVER	0.01	N.D.
THALLIUM	0.010	N.D.
ZINC	0.01	N.D.

00036

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1265	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 161	QA BATCH	
DATA FILE	>A1059	DATE ANALYZED	03/16/93

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	6.2 JB	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	3.5 J	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	110	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

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

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1265	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161 FIELD BLANK	QA BATCH	
DATA FILE	>C0733	DATE ANALYZED	03/16/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	Acenaphthene	ND	10
Phenol	ND	10	2,4-Dinitrophenol	ND	50
bis(-2-Chloroethyl)Ether	ND	10	4-Nitrophenol	ND	50
2-Cholorophenol	ND	10	Dibenzofuran	ND	10
1,3-Dichlorobenzene	ND	10	2,4-Dinitrotoluene	ND	10
1,4-Dichlorobenzene	ND	10	2,6-Dinitrotoluene	ND	10
Benzyl Alcohol	ND	10	Diethylphthalate	ND	10
1,2-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
2-Methylphenol	ND	10	Fluorene	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Nitroaniline	ND	50
4-Methylphenol	ND	10	4,6-Dinitro-2-Methylphenol	ND	50
N-Nitroso-Di-n-Propylamine	ND	10	N-Nitrosodiphenylamine	ND	10
Hexachloroethane	ND	10	4-Bromophenyl-phenylether	ND	10
Nitrobenzene	ND	10	Hexachlorobenzene	ND	10
Isophorone	ND	10	Pentachlorophenol	ND	50
2-Nitrophenol	ND	10	Phenanthrene	ND	10
2,4-Dimethylphenol	ND	10	Anthracene	ND	10
Benzoic Acid	ND	50	Di-n-Butylphthalate	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Fluoranthene	ND	10
2,4-Dichlorophenol	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	ND	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
4-Chloro-3-Methylphenol	ND	10	Chrysene	ND	10
2-Methylnaphthalene	ND	10	Di-n-Octyl Phthalate	ND	10
Hexachlorocyclopentadiene	ND	10	Benzo(b)Fluoranthene	ND	10
2,4,6-Trichlorophenol	ND	10	Benzo(k)Fluoranthene	ND	10
2,4,5-Trichlorophenol	ND	50	Benzo(a)Pyrene	ND	10
2-Chloronaphthalene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
2-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Dimethyl Phthalate	ND	10	Benzo(g,h,i)Perylene	ND	10
Acenaphthylene	ND	10	Benzidine	ND	20
3-Nitroaniline	ND	50			

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

Lab Sample ID:
A1265

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1
FIELD BLANK

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 03/16/93
Date Analyzed: 03/17/93 03:42
Conc/Dil Factor: 100mL/5mL
Percent Moisture: N/A

GPC Cleanup __Yes /No
Sep. Funnel Extraction /Yes
Continuous Liq-Liq Ext. __Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC	0.25	U
319-87-7	Beta-BHC	0.25	U
319-86-8	Delta-BHC	0.25	U
58-89-9	Gamma-BHC (Lindane)	0.25	U
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	0.25	U
72-55-9	4,4'-DDE	0.25	U
72-20-8	Endrin	0.25	U
33213-65-9	Endosulfan II	0.5	U
72-54-8	4,4'-DDD	0.5	U
1031-07-8	Endosulfan Sulfate	0.5	U
50-29-3	4,4'-DDT	0.5	U
72-43-5	Methoxychlor	13	U
7421-93-4	Endrin Aldehyde	0.5	U
57-74-9	Chlordane	13	U
8001-35-2	Toxaphene	25	U
12674-11-2	Arochlor-1016	13	U
11104-28-2	Arochlor-1221	13	U
11141-16-5	Arochlor-1232	13	U
53469-21-9	Arochlor-1242	13	U
12672-29-6	Arochlor-1248	13	U
11097-69-1	Arochlor-1254	13	U
11096-82-5	Arochlor-1260	13	U

U Undetected J Estimated value below detection level

00039

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FIELD BLANK

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Water

Lab Sample ID: A1265

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1059

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: NA

Date Analyzed: 03/16/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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1/87 Rev.

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD BLANK

Matrix: (soil/water) SOIL

Lab Sample ID: A1265

Client: US Army, Ft.Monmouth, NJ

Client ID: Bldg 161

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C0733

Level: LOW

Date Received: NA

% Moisture: 100

Date Analyzed 03/16/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1266	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 161	QA BATCH	
DATA FILE	>A1060	DATE ANALYZED	03/16/93

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	5.3 JB	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	ND	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	106	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Water

Lab Sample ID: A1266

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1060

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: NA

Date Analyzed: 03/16/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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DATA PACKAGE

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1261

CLIENT ID: Site AA

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	N.D.
PHENOL	0.50	N.D.

00045

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1261

CLIENT ID: Site AA

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	9.30
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	40.3
COPPER	1.00	2.91
LEAD	5.00	6.88
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.83
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	21.8

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1261	DILUTION FACTOR	1.00
CLIENT ID	SITE AA BLDG 161	QA BATCH	
DATA FILE	>A1108	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG	MDL
Acrolein	ND		60	Bromodichloromethane	ND	6
Acrylonitrile	ND		60	2-Chloroethylvinylether	ND	12
Chloromethane	ND		12	2-Hexanone	ND	12
Bromomethane	ND		12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND		12	Toluene	13	6
Chloroethane	ND		12	cis-1,3-Dichloropropene	ND	6
Acetone	22	B	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND		6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND		12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	ND	B	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND		6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND		6	Chlorobenzene	ND	6
Vinyl Acetate	ND		6	Ethylbenzene	6.0	6
2-Butanone	ND		12	m&p-Xylenes	25	6
Chloroform	ND		6	o-Xylene	12	6
1,1,1-Trichloroethane	ND		6	Styrene	ND	6
Carbon Tetrachloride	ND		6	Bromoform	ND	6
1,2-Dichloroethane	ND		6	m-Dichlorobenzene	ND	6
Benzene	ND		6	p-Dichlorobenzene	ND	6
Trichloroethene	ND		6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND		6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	105	70 - 121	OK
Toluene-d8	98.1	81 - 117	OK
Bromofluorobenzene	93.7	74 - 121	OK

Percent Solid of 83.0 is used for all Target compounds.

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

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

SITE AA

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) SOIL

Lab Sample ID: A1261

Sample wt/vol: 5 (g/mL) G

Lab File ID: >A1108

Level: LOW

Date Received: 03/15/93

% Moisture: 17

Date Analyzed 03/24/93

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	3.16	12
2		UNKNOWN	8.80	8
3	620144	Benzene, 1-ethyl-3-methyl- (9CI)	18.17	10
4	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.02	10

QUANT REPORT

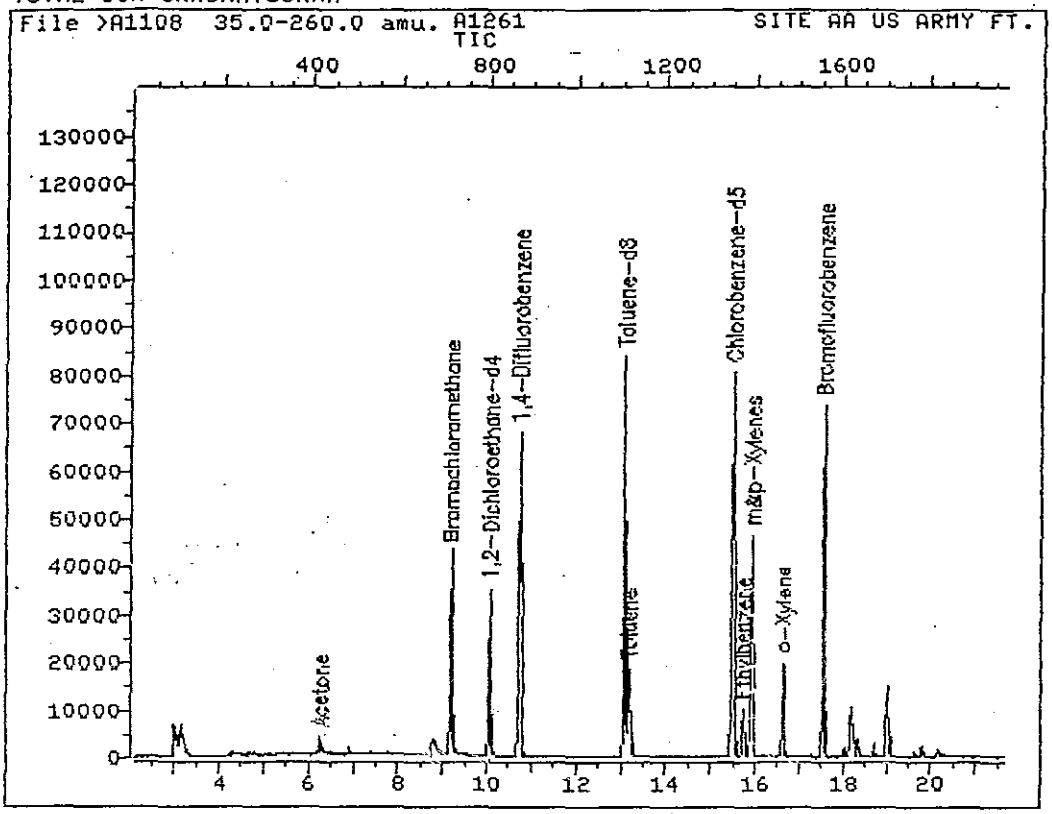
perator ID: JEFF Quant Rev: 6 Quant Time: 930324 19:52
utput File: ^A1108::QT Injected at: 930324 19:22
ata File: >A1108::D2 Dilution Factor: 1.00000
ame: A1261
isc: SITE AA US ARMY FT. MONMOUTH 5.0g/5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.18	713	22963	50.00	UG/L	100
9)	Acetone	6.27	419	7696	18.36	UG/L	81
1)	1,2-Dichloroethane-d4	10.06	802	48347	52.68	UG/L	100
22)	*1,4-Difluorobenzene	10.73	870	107027	50.00	UG/L	100
1)	Toluene-d8	13.07	1106	110475	49.04	UG/L	100
2)	Toluene	13.18	1117	25623	10.75	UG/L	98
3)	*Chlorobenzene-d5	15.49	1350	85406	50.00	UG/L	100
1)	Ethylbenzene	15.72	1374	14813	5.03	UG/L	81
2)	m&p-Xylenes	15.92	1394	56532	21.07	UG/L	95
3)	o-Xylene	16.62	1464	23869	9.90	UG/L	90
46)	Bromofluorobenzene	17.54	1557	51557	46.83	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1108::D2 Quant Output File: ^A1108::QT
Name: A1261
Misc: SITE AA US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

Operator ID: JEFF
Quant Time: 930324 19:52
Injected at: 930324 19:22

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1261	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE AA	QA BATCH	
DATA FILE	>C0750	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		400	Acenaphthene	ND		400
Phenol	ND		400	2,4-Dinitrophenol	ND		2000
bis(-2-Chloroethyl)Ether	ND		400	4-Nitrophenol	ND		2000
2-Cholorophenol	ND		400	Dibenzofuran	ND		400
1,3-Dichlorobenzene	ND		400	2,4-Dinitrotoluene	ND		400
1,4-Dichlorobenzene	ND		400	2,6-Dinitrotoluene	ND		400
Benzyl Alcohol	ND		400	Diethylphthalate	ND		400
1,2-Dichlorobenzene	ND		400	4-Chlorophenyl-phenlyether	ND		400
2-Methylphenol	ND		400	Fluorene	ND		400
bis(2-chloroisopropyl)Ether	ND		400	4-Nitroaniline	ND		2000
4-Methylphenol	ND		400	4,6-Dinitro-2-Methylphenol	ND		2000
N-Nitroso-Di-n-Propylamine	ND		400	N-Nitrosodiphenylamine	ND		400
Hexachloroethane	ND		400	4-Bromophenyl-phenylether	ND		400
Nitrobenzene	ND		400	Hexachlorobenzene	ND		400
Isophorone	ND		400	Pentachlorophenol	ND		2000
2-Nitrophenol	ND		400	Phenanthrene	ND		400
2,4-Dimethylphenol	ND		400	Anthracene	ND		400
Benzoic Acid	ND		2000	Di-n-Butylphthalate	ND		400
bis(-2-Chloroethoxy)Methane	ND		400	Fluoranthene	ND		400
2,4-Dichlorophenol	ND		400	Pyrene	ND		400
1,2,4-Trichlorobenzene	ND		400	Butylbenzylphthalate	ND		400
Naphthalene	ND		400	3,3'-Dichlorobenzidine	ND		800
4-Chloroaniline	ND		400	Benzo(a)Anthracene	ND		400
Hexachlorobutadiene	ND		400	Bis(2-Ethylhexyl)Phthalate	40	JB	400
4-Chloro-3-Methylphenol	ND		400	Chrysene	ND		400
2-Methylnaphthalene	ND		400	Di-n-Octyl Phthalate	ND		400
Hexachlorocyclopentadiene	ND		400	Benzo(b)Fluoranthene	ND		400
2,4,6-Trichlorophenol	ND		400	Benzo(k)Fluoranthene	ND		400
2,4,5-Trichlorophenol	ND		2000	Benzo(a)Pyrene	ND		400
2-Chloronaphthalene	ND		400	Indeno(1,2,3-cd)Pyrene	ND		400
2-Nitroaniline	ND		2000	Dibenzo(a,h)Anthracene	ND		400
Dimethyl Phthalate	ND		400	Benzo(g,h,i)Perylene	ND		400
Acenaphthylene	ND		400	Benzidine	ND		800
3-Nitroaniline	ND		2000				

Percent Solid of 83.0 is used for all Target compounds.

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

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE AA

Matrix: (soil/water) SOIL

Lab Sample ID: A1261

Client Name: US Army, Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0750

Level: LOW

Date Received: NA

% Moisture: 17

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.15	280
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.64	800
3		UNKNOWN	31.07	440

QUANT REPORT

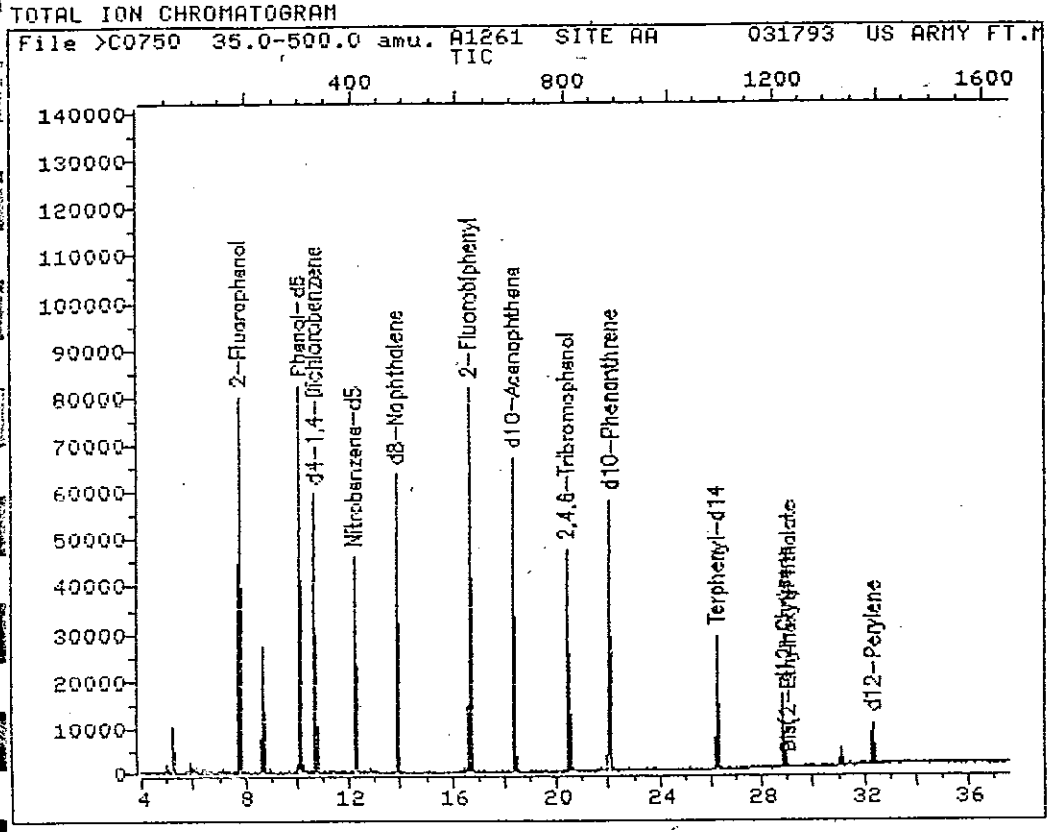
erator ID: JEFF Quant Rev: 6 Quant Time: 930317 18:03
Output File: ^C0750::QT Injected at: 930317 17:23
ata File: >C0750::DA Dilution Factor: 1.00000
me: A1261 SITE AA
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 2

File: ID0317::D5
tle: hSL BNA STD
Last Calibration: 930317 17:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.66	328	27827	40.00	UG/L	99
)	2-Fluorophenol	7.74	185	42100	101.25	UG/L	92
)	Phenol-d5	10.07	299	63470	103.50	UG/L	88
18)	*d8-Naphthalene	13.82	483	64466	40.00	UG/L	90
)	Nitrobenzene-d5	12.19	403	30616	45.68	UG/L	91
)	*d10-Acenaphthene	18.30	703	38503	40.00	UG/L	96
38)	2-Fluorobiphenyl	16.63	621	60497	45.80	UG/L	95
73)	*d10-Phenanthrene	22.06	887	56624	40.00	UG/L	97
)	2,4,6-Tribromophenol	20.36	804	12051	77.07	UG/L	95
6)	*d12-Chrysene	28.85	1220	15303	40.00	UG/L	97
67)	Terphenyl-d14	26.17	1089	27506	50.77	UG/L	86
)	Bis(2-Ethylhexyl)Phthalate	29.01	1228	631	1.46	UG/L	95
)	*d12-Perylene	32.29	1389	11095	40.00	UG/L	94

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0750::DA Quant Output File: ^C0750::QT
Name: A1261 SITE AA
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 2

Id File: ID0317::D5
Title: HSL BNA STD
Last Calibration: 930317 17:01

Operator ID: JEFF
Quant Time: 930317 18:03
Injected at: 930317 17:23

Lab Sample ID:
A1261

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 16
SITE AA

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/16/93 22:47
Conc/Dil Factor: 10.05g/10ml
Percent Moisture: 17

GPC Cleanup __Yes ✓No
Sep. Funnel Extraction __Yes
Continuous Liq-Liq Ext. __Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC	6.0	U
319-87-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC	6.0	U
58-89-9	Gamma-BHC (Lindane)	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde	12	U
57-74-9	Chlordane	300	U
8001-35-2	Toxaphene	600	U
12674-11-2	Arochlor-1016	300	U
11104-28-2	Arochlor-1221	300	U
11141-16-5	Arochlor-1232	300	U
53469-21-9	Arochlor-1242	300	U
12672-29-6	Arochlor-1248	300	U
11097-69-1	Arochlor-1254	300	U
11096-82-5	Arochlor-1260	300	U

U Undetected J Estimated value below detection level

Instrument: PE-1
Column: SP 2250/2401

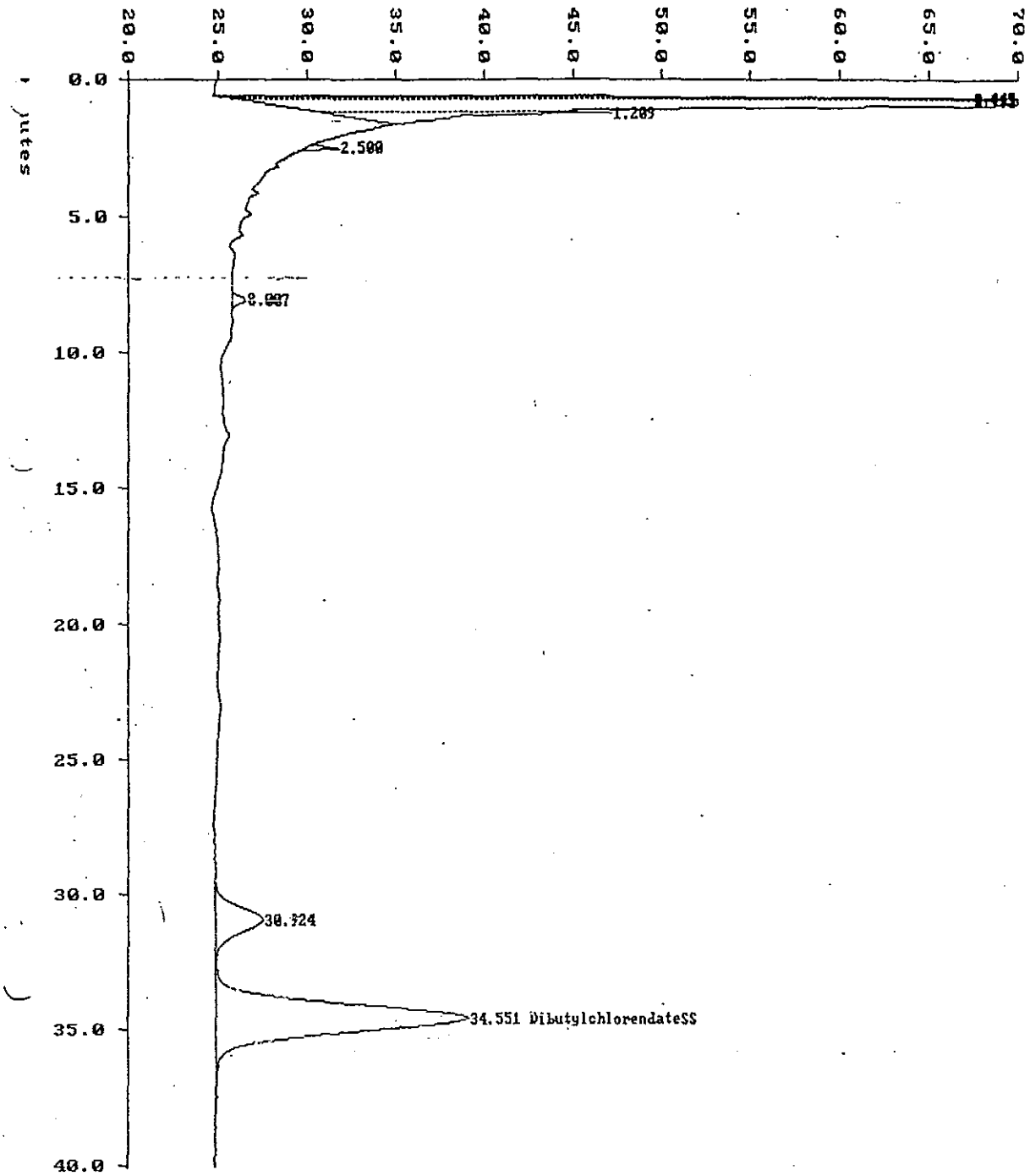
File : AS96__01.R01 A1261 10.05g Keegan
Run : 01 Queue : PEST Set Number : 1 Type : Sample
Path : C:\PP2
Collection : 22:47:27 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Integration: 08:27:35 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Report : 17:20:09 Apr 13 1993 Method : PPP-DBC [17:01:05 Apr 12 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.647	320154	T		0.0000	unknown
2	0.723	916842	T		0.0000	unknown
3	0.791	5586896	T		0.0000	unknown
4	1.209	185854			0.0000	unknown
5	2.500	10210			0.0000	unknown
				2.647		alpha-BHC
				3.311		Lindane
				3.753		beta-BHC
				4.081		Heptachlor
				4.372		delta-BHC
				4.921		Aldrin
				7.199		Heptachlor epoxide
6	8.007	13270			0.0000	unknown
				9.023		Endosulfan I
				10.617		ppp-DDE
				10.959		Dieldrin
				13.343		Endrin
				16.052		pp-DDD/Endosulfan II
				19.433		pp-DDT
				20.511		Endrin aldehyde
				24.479		Endosulfan sulfate
7	30.924	177941	T		0.0000	unknown
8	34.551	1022810		34.271	0.4001	DibutylchlorendateSS
				37.385		Methoxychlor

(AS96__01.R01) mV



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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1262

CLIENT ID: Site BB

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.16
PHENOL	0.50	N.D.

00058

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1262

CLIENT ID: Site BB

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	4.74
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	38.5
COPPER	1.00	3.66
LEAD	5.00	8.84
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	N.D.
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	70.1

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1262	DILUTION FACTOR	1.00
CLIENT ID	SITE 88 BLDG 161	QA BATCH	
DATA FILE	>A1109	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG		MDL
Acrolein	ND		57	Bromodichloromethane	ND		6
Acrylonitrile	ND		57	2-Chloroethylvinylether	ND		11
Chloromethane	ND		11	2-Hexanone	ND		11
Bromomethane	ND		11	trans-1,3-Dichloropropene	ND		6
Vinyl Chloride	ND		11	Toluene	ND		6
Chloroethane	ND		11	cis-1,3-Dichloropropene	ND		6
Acetone	17	B	11	1,1,2,2-Tetrachloroethane	ND		6
1,1-Dichloroethene	ND		6	1,1,2-Trichloroethane	ND		6
Carbon Disulfide	ND		11	4-Methyl-2-pentanone	ND		11
Methylene Chloride	ND	B	6	Tetrachloroethene	ND		6
1,2-Dichloroethene(trans)	ND		6	Dibromochloromethane	ND		6
1,1-Dichloroethane	ND		6	Chlorobenzene	ND		6
Vinyl Acetate	ND		6	Ethylbenzene	ND		6
2-Butanone	ND		11	m&p-Xylenes	ND		6
Chloroform	ND		6	o-Xylene	ND		6
1,1,1-Trichloroethane	ND		6	Styrene	ND		6
Carbon Tetrachloride	ND		6	Bromoform	ND		6
1,2-Dichloroethane	ND		6	m-Dichlorobenzene	ND		6
Benzene	ND		6	p-Dichlorobenzene	ND		6
Trichloroethene	ND		6	o-Dichlorobenzene	ND		6
1,2-Dichloropropane	ND		6				

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	70 - 121	OK
Toluene-d8	99.1	81 - 117	OK
Bromofluorobenzene	95.8	74 - 121	OK

Percent Solid of 88.0 is used for all Target compounds.

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE BB

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1262

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1109

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 12

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC

1/87 Rev.

QUANT REPORT

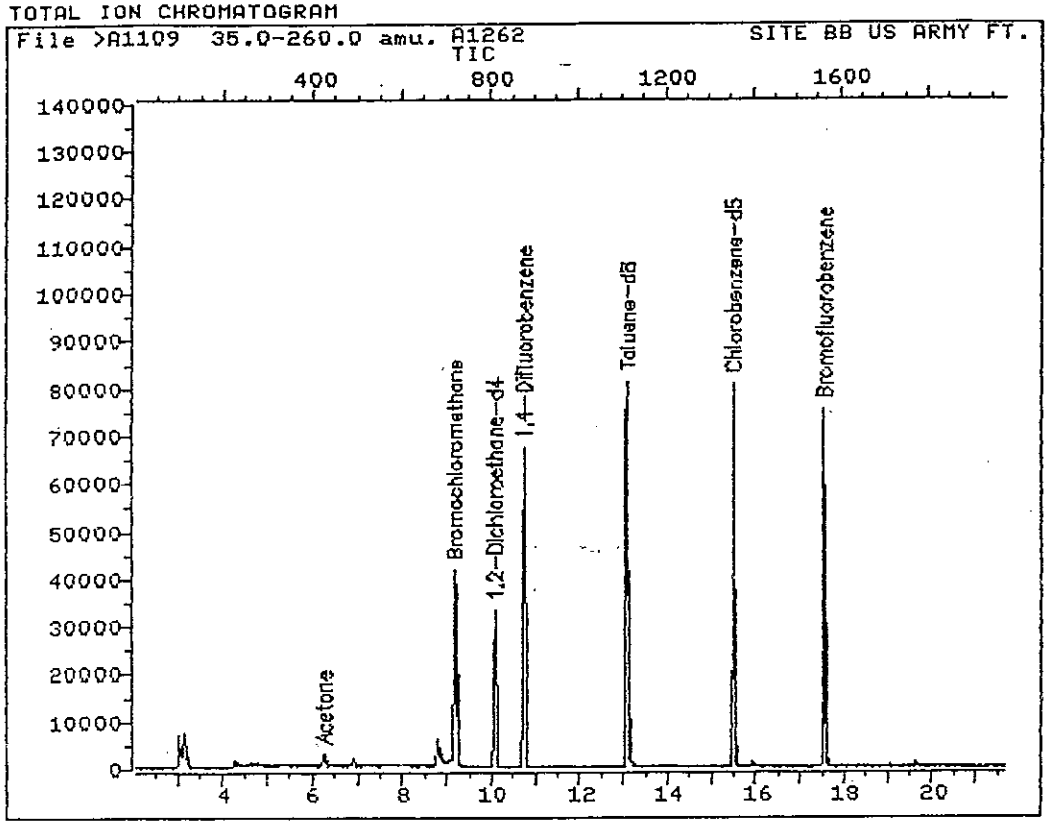
Operator ID: JEFF Quant Rev: 6 Quant Time: 930324 20:27
Output File: ^A1109::QT Injected at: 930324 19:57
Data File: >A1109::D2 Dilution Factor: 1.00000
Name: A1262
Misc: SITE BB US ARMY FT. MONMOUTH 5.0g/5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.18	720	21750	50.00	UG/L	100
2)	Acetone	6.25	424	6109	15.39	UG/L	80
21)	1,2-Dichloroethane-d4	10.07	810	46521	53.52	UG/L	100
22)	*1,4-Difluorobenzene	10.73	877	100903	50.00	UG/L	100
41)	Toluene-d8	13.07	1113	105288	49.57	UG/L	100
55)	*Chlorobenzene-d5	15.48	1356	85685	50.00	UG/L	100
56)	Bromofluorobenzene	17.53	1563	52908	47.90	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1109::D2 Quant Output File: ^A1109::QT
Name: A1262
Misc: SITE BB US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

Operator ID: JEFF
Quant Time: 930324 20:27
Injected at: 930324 19:57

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1262	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE 88	QA BATCH	
DATA FILE	>C0751	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		380
Phenol	ND		380
bis(-2-Chloroethyl)Ether	ND		380
2-Cholorophenol	ND		380
1,3-Dichlorobenzene	ND		380
1,4-Dichlorobenzene	ND		380
Benzyl Alcohol	ND		380
1,2-Dichlorobenzene	ND		380
2-Methylphenol	ND		380
bis(2-chloroisopropyl)Ether	ND		380
4-Methylphenol	ND		380
N-Nitroso-Di-n-Propylamine	ND		380
Hexachloroethane	ND		380
Nitrobenzene	ND		380
Isophorone	ND		380
2-Nitrophenol	ND		380
2,4-Dimethylphenol	ND		380
Benzoic Acid	ND		1900
bis(-2-Chloroethoxy)Methane	ND		380
2,4-Dichlorophenol	ND		380
1,2,4-Trichlorobenzene	ND		380
Naphthalene	ND		380
4-Chloroaniline	ND		380
Hexachlorobutadiene	ND		380
4-Chloro-3-Methylphenol	ND		380
2-Methylnaphthalene	ND		380
Hexachlorocyclopentadiene	ND		380
2,4,6-Trichlorophenol	ND		380
2,4,5-Trichlorophenol	ND		1900
2-Chloronaphthalene	ND		380
2-Nitroaniline	ND		1900
Dimethyl Phthalate	ND		380
Acenaphthylene	ND		380
3-Nitroaniline	ND		1900

COMPOUND	UG/KG		MDL
Acenaphthene	ND		380
2,4-Dinitrophenol	ND		1900
4-Nitrophenol	ND		1900
Dibenzofuran	ND		380
2,4-Dinitrotoluene	ND		380
2,6-Dinitrotoluene	ND		380
Diethylphthalate	ND		380
4-Chlorophenyl-phenlyether	ND		380
Fluorene	ND		380
4-Nitroaniline	ND		1900
4,6-Dinitro-2-Methylphenol	ND		1900
N-Nitrosodiphenylamine	ND		380
4-Bromophenyl-phenylether	ND		380
Hexachlorobenzene	ND		380
Pentachlorophenol	ND		1900
Phenanthrene	ND		380
Anthracene	ND		380
Di-n-Butylphthalate	ND		380
Fluoranthene	ND		380
Pyrene	ND		380
Butylbenzylphthalate	ND		380
3,3'-Dichlorobenzidine	ND		750
Benzo(a)Anthracene	ND		380
Bis(2-Ethylhexyl)Phthalate	76	JB	380
Chrysene	ND		380
Di-n-Octyl Phthalate	ND		380
Benzo(b)Fluoranthene	ND		380
Benzo(k)Fluoranthene	ND		380
Benzo(a)Pyrene	ND		380
Indeno(1,2,3-cd)Pyrene	ND		380
Dibenzo(a,h)Anthracene	ND		380
Benzo(g,h,i)Perylene	ND		380
Benzidine	ND		750

Percent Solid of 88.0 is used for all Target compounds.

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

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE BB

Matrix: (soil/water) SOIL

Lab Sample ID: A1262

Client Name: US Army; Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0751

Level: LOW

Date Received: NA

% Moisture: 12

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.12	270
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.62	760
3		UNKNOWN	27.58	340
4		UNKNOWN	31.05	610

QUANT REPORT

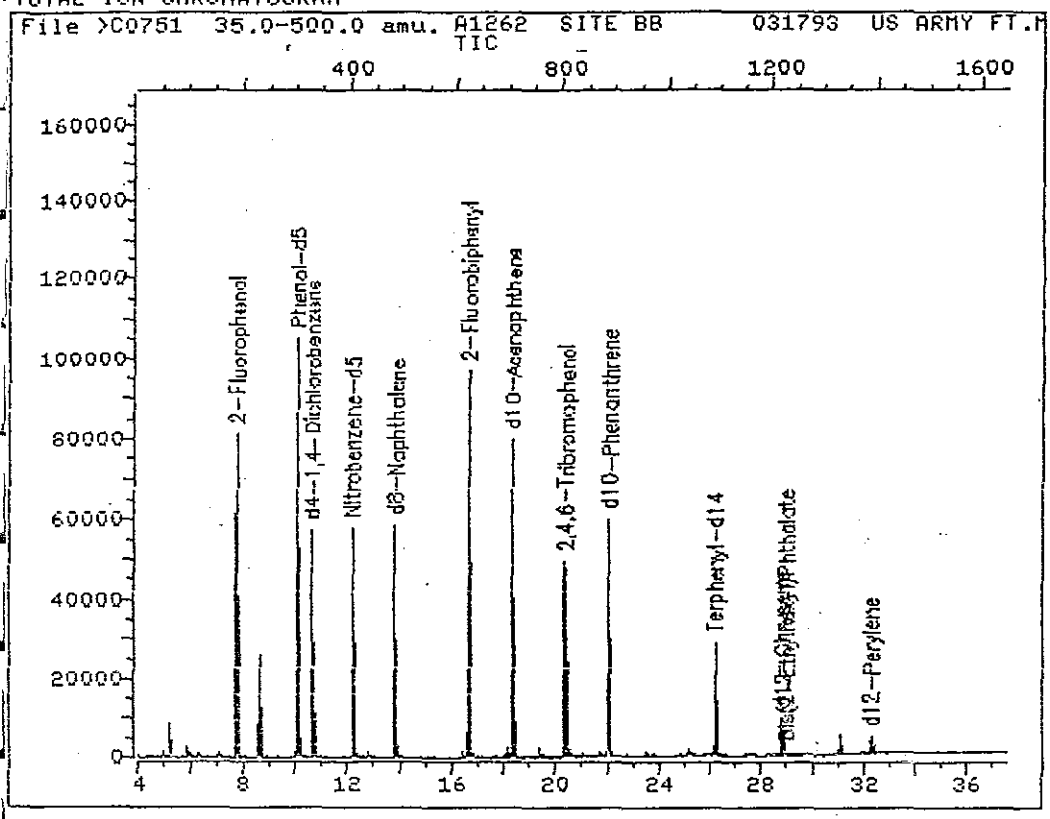
Operator ID: JEFF Quant Rev: 6 Quant Time: 930317 18:51
Output File: ^C0751::QT Injected at: 930317 18:10
Data File: >C0751::DA Dilution Factor: 1.00000
Name: A1262 SITE BB
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 3

ID File: ID0317::D5
Title: hSL BNA STD
Last Calibration: 930317 17:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.64	328	27254	40.00	UG/L	97
4)	2-Fluorophenol	7.73	185	47109	115.68	UG/L	91
5)	Phenol-d5	10.07	300	77130	128.41	UG/L	92
18)	*d8-Naphthalene	13.82	484	65791	40.00	UG/L	90
19)	Nitrobenzene-d5	12.17	403	36925	53.98	UG/L	89
36)	*d10-Acenaphthene	18.31	704	41133	40.00	UG/L	97
38)	2-Fluorobiphenyl	16.64	622	73586	52.14	UG/L	96
53)	*d10-Phenanthrene	22.04	887	54974	40.00	UG/L	97
56)	2,4,6-Tribromophenol	20.35	804	14630	96.37	UG/L	93
64)	*d12-Chrysene	28.83	1220	9184	40.00	UG/L	97
67)	Terphenyl-d14	26.18	1090	25614	78.77	UG/L	90
71)	Bis(2-Ethylhexyl)Phthalate	28.99	1228	522	2.01	UG/L	97
73)	*d12-Perylene	32.27	1389	4624	40.00	UG/L	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0751::DA Quant Output File: ^C0751::QT
Name: A1262 SITE BB
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 3

Id File: ID0317::D5
Title: hSL BNA STD
Last Calibration: 930317 17:01

Operator ID: JEFF
Quant Time: 930317 18:51
Injected at: 930317 18:10

Lab Name : 21ST CENTURY ENVIRONMENTAL

Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 161
SITE BB

Lab Sample ID:
A1262

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/17/93 11:03
Conc/Dil Factor: 10.02g/10ml
Percent Moisture: 12

GPC Cleanup __ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC.	5.7	U
319-87-7	Beta-BHC	5.7	U
319-86-8	Delta-BHC.	5.7	U
58-89-9	Gamma-BHC (Lindane). . .	5.7	U
76-44-8	Heptachlor	5.7	U
309-00-2	Aldrin	5.7	U
1024-57-3	Heptachlor Epoxide . . .	5.7	U
959-98-8	Endosulfan I	5.7	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	5.7	U
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II.	11	U
72-54-8	4,4'-DDD	11	U
1031-07-8	Endosulfan Sulfate . . .	11	U
50-29-3	4,4'-DDT	11	U
72-43-5	Methoxychlor	280	U
7421-93-4	Endrin Aldehyde.	11	U
57-74-9	Chlordane.	280	U
8001-35-2	Toxaphene.	570	U
12674-11-2	Arochlor-1016.	280	U
11104-28-2	Arochlor-1221.	280	U
11141-16-5	Arochlor-1232.	280	U
53469-21-9	Arochlor-1242.	280	U
12672-29-6	Arochlor-1248.	280	U
11097-69-1	Arochlor-1254.	280	U
11096-82-5	Arochlor-1260.	280	U

U Undetected J Estimated value below detection level

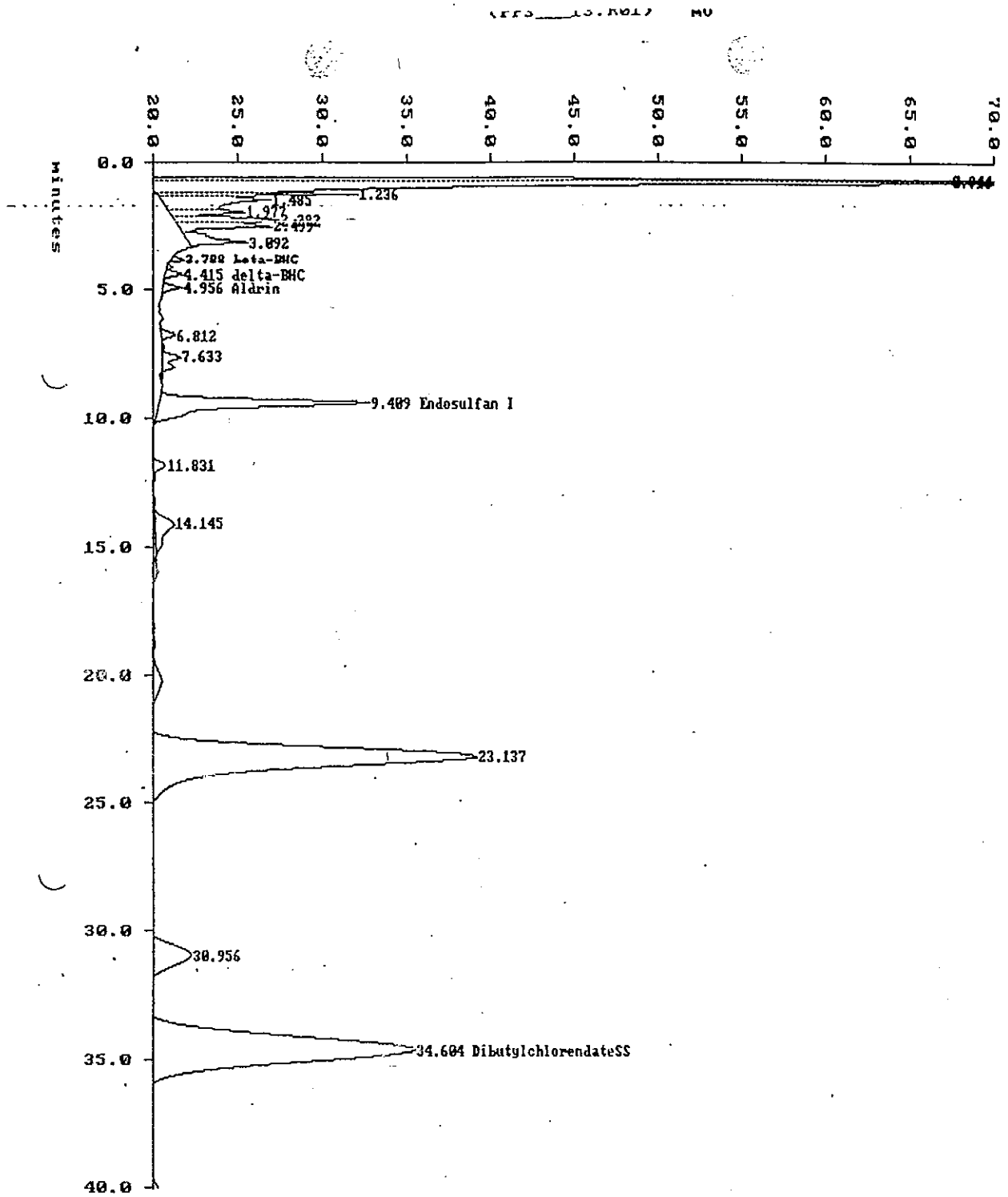
Instrument: PE-1
Column: SP 2250/2401

File : PP3___13.R01 A1262 10.02g 2ul Keegan
Run : 01 Type : Sample
Path : C:\PP3
Collection : 20:03:48 Mar 17 1993 Method : PPP-DBC [18:59:40 Mar 16 1993]
Integration: 20:43:53 Mar 16 1993 Method : PPP-DBC [18:59:40 Mar 16 1993]
Report : 17:00:33 Apr 13 1993 Method : PPP-DBC [17:01:05 Apr 12 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.644	797414	T		0.0000	unknown
2	0.716	1120004	T		0.0000	unknown
3	1.236	114291	T		0.0000	unknown
4	1.485	131277	T		0.0000	unknown
5	1.977	41848	T		0.0000	unknown
6	2.292	62016	T		0.0000	unknown
7	2.499	65816	T		0.0000	unknown
				2.647		alpha-BHC
8	3.092	47452			0.0000	unknown
				3.311		Lindane
9	3.788	7726	V	3.753	0.0067	beta-BHC
				4.081		Heptachlor
10	4.415	15222	V	4.372	0.0066	delta-BHC
11	4.956	14057		4.921	0.0050	Aldrin
12	6.812	12022			0.0000	unknown
				7.199		Heptachlor epoxide
13	7.633	25993			0.0000	unknown
14	9.409	273448		9.023	0.1138	Endosulfan I
				10.617		ppp-DDE
				10.959		Dieldrin
15	11.831	22225			0.0000	unknown
				13.343		Endrin
16	14.145	53030			0.0000	unknown
				16.052		pp-DDD/Endosulfan II
				19.433		pp-DDT
				20.511		Endrin aldehyde
17	23.137	1068052			0.0000	unknown
				24.479		Endosulfan sulfate
18	30.956	197865	T		0.0000	unknown
19	34.604	1159880		34.271	0.4537	DibutylchlorendateSS
				37.385		Methoxychlor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25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.236
3.892
3.788 beta-BHC
4.415 delta-BHC
4.956 Aldrin
6.812
7.633
9.409 Endosulfan I
11.831
14.145
23.137
30.956
34.604 DibutylchlorendateSS

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1263

CLIENT ID: Site CC

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	N.D.
PHENOL	0.50	N.D.

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1263

CLIENT ID: Site CC

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	8.58
ARSENIC	0.25	3.88
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	50.7
COPPER	1.00	4.09
LEAD	5.00	7.71
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.46
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	31.7

00072

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1263	DILUTION FACTOR	1.00
CLIENT ID	SITE CC BLDG 161	QA BATCH	
DATA FILE	>A1110	DATE ANALYZED	03/24/93

COMPOUND	UG/KG		MDL	COMPOUND	UG/KG	MDL
Acrolein	ND		60	Bromodichloromethane	ND	6
Acrylonitrile	ND		60	2-Chloroethylvinylether	ND	12
Chloromethane	ND		12	2-Hexanone	ND	12
Bromomethane	ND		12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND		12	Toluene	ND	6
Chloroethane	ND		12	cis-1,3-Dichloropropene	ND	6
Acetone	11	JB	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND		6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND		12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	ND	B	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND		6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND		6	Chlorobenzene	ND	6
Vinyl Acetate	ND		6	Ethylbenzene	ND	6
2-Butanone	ND		12	m&p-Xylenes	ND	6
Chloroform	ND		6	o-Xylene	ND	6
1,1,1-Trichloroethane	ND		6	Styrene	ND	6
Carbon Tetrachloride	ND		6	Bromoform	ND	6
1,2-Dichloroethane	ND		6	m-Dichlorobenzene	ND	6
Benzene	ND		6	p-Dichlorobenzene	ND	6
Trichloroethene	ND		6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND		6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	70 - 121	OK
Toluene-d8	97.2	81 - 117	OK
Bromofluorobenzene	95.1	74 - 121	OK

Percent Solid of 84.0 is used for all Target compounds.

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE CC

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1263

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1110

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 16

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

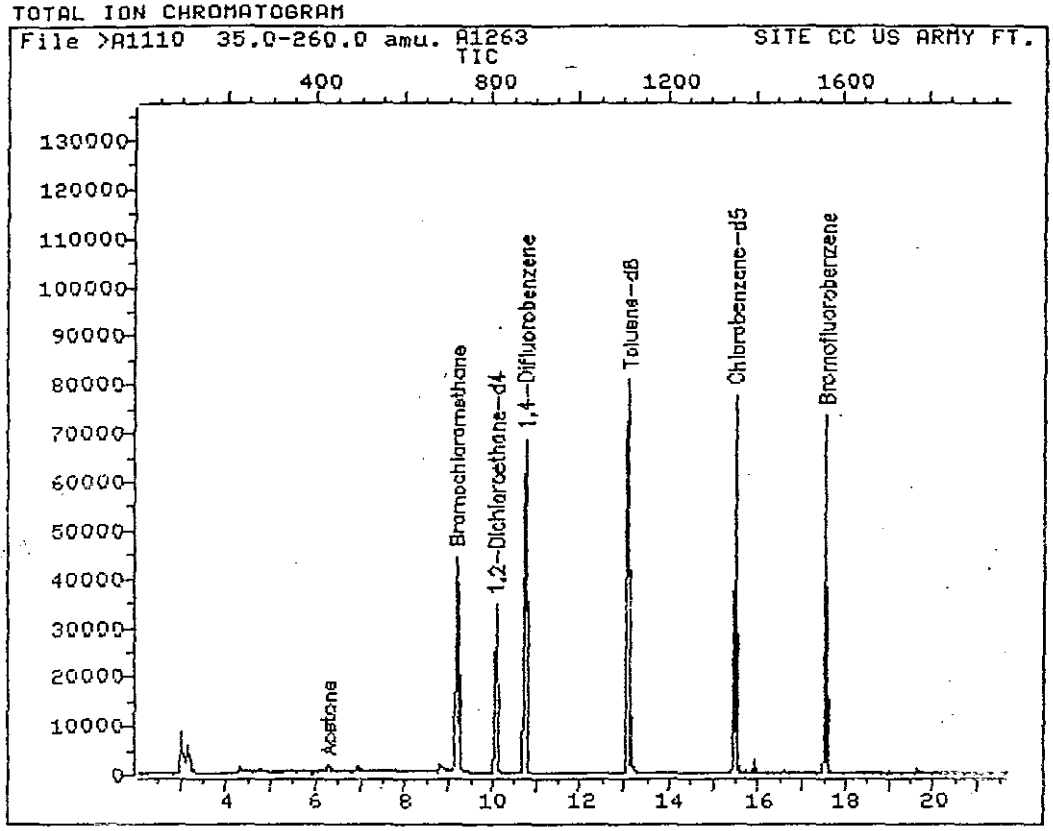
Operator ID: JEFF Quant Rev: 6 Quant Time: 930324 21:03
Output File: ^A1110::QT Injected at: 930324 20:32
Data File: >A1110::D2 Dilution Factor: 1.00000
Name: A1263
Misc: SITE CC US ARMY FT. MONMOUTH 5.0g/5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.18	720	22576	50.00	UG/L	100
9)	Acetone	6.28	427	3952	9.59	UG/L	82
21)	1,2-Dichloroethane-d4	10.07	810	47126	52.23	UG/L	100
22)	*1,4-Difluorobenzene	10.74	877	101595	50.00	UG/L	100
41)	Toluene-d8	13.07	1113	103938	48.60	UG/L	100
53)	*Chlorobenzene-d5	15.47	1355	83128	50.00	UG/L	100
46)	Bromofluorobenzene	17.52	1562	50954	47.55	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1110::D2 Quant Output File: ^A1110::QT
Name: A1263
Misc: SITE CC US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

Operator ID: JEFF
Quant Time: 930324 21:03
Injected at: 930324 20:32

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Soil
SAMPLE NUMBER	A1263	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE CC	QA BATCH	
DATA FILE	>C0752	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		390
Phenol	ND		390
bis(-2-Chloroethyl)Ether	ND		390
2-Cholorophenol	ND		390
1,3-Dichlorobenzene	ND		390
1,4-Dichlorobenzene	ND		390
Benzyl Alcohol	ND		390
1,2-Dichlorobenzene	ND		390
2-Methylphenol	ND		390
bis(2-chloroisopropyl)Ether	ND		390
4-Methylphenol	ND		390
N-Nitroso-Di-n-Propylamine	ND		390
Hexachloroethane	ND		390
Nitrobenzene	ND		390
Isophorone	ND		390
2-Nitrophenol	ND		390
2,4-Dimethylphenol	ND		390
Benzoic Acid	ND		2000
bis(-2-Chloroethoxy)Methane	ND		390
2,4-Dichlorophenol	ND		390
1,2,4-Trichlorobenzene	ND		390
Naphthalene	ND		390
4-Chloroaniline	ND		390
Hexachlorobutadiene	ND		390
4-Chloro-3-Methylphenol	ND		390
2-Methylnaphthalene	ND		390
Hexachlorocyclopentadiene	ND		390
2,4,6-Trichlorophenol	ND		390
2,4,5-Trichlorophenol	ND		2000
2-Chloronaphthalene	ND		390
2-Nitroaniline	ND		2000
Dimethyl Phthalate	ND		390
Acenaphthylene	ND		390
3-Nitroaniline	ND		2000

COMPOUND	UG/KG		MDL
Acenaphthene	ND		390
2,4-Dinitrophenol	ND		2000
4-Nitrophenol	ND		2000
Dibenzofuran	ND		390
2,4-Dinitrotoluene	ND		390
2,6-Dinitrotoluene	ND		390
Diethylphthalate	ND		390
4-Chlorophenyl-phenlyether	ND		390
Fluorene	ND		390
4-Nitroaniline	ND		2000
4,6-Dinitro-2-Methylphenol	ND		2000
N-Nitrosodiphenylamine	ND		390
4-Bromophenyl-phenylether	ND		390
Hexachlorobenzene	ND		390
Pentachlorophenol	ND		2000
Phenanthrene	ND		390
Anthracene	ND		390
Di-n-Butylphthalate	ND		390
Fluoranthene	ND		390
Pyrene	ND		390
Butylbenzylphthalate	ND		390
3,3'-Dichlorobenzidine	ND		780
Benzo(a)Anthracene	ND		390
Bis(2-Ethylhexyl)Phthalate	ND	B	390
Chrysene	ND		390
Di-n-Octyl Phthalate	ND		390
Benzo(b)Fluoranthene	ND		390
Benzo(k)Fluoranthene	ND		390
Benzo(a)Pyrene	ND		390
Indeno(1,2,3-cd)Pyrene	ND		390
Dibenzo(a,h)Anthracene	ND		390
Benzo(g,h,i)Perylene	ND		390
Benzidine	ND		780

Percent Solid of 84.0 is used for all Target compounds.

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

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE CC

Matrix: (soil/water) SOIL

Lab Sample ID: A1263

Client Name: US Army, Ft.Monmouth,NJ

Client ID: Bldg 161

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0752

Level: LOW

Date Received: NA

% Moisture: 16

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.08	360
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.58	910
3		UNKNOWN	31.05	360

QUANT REPORT

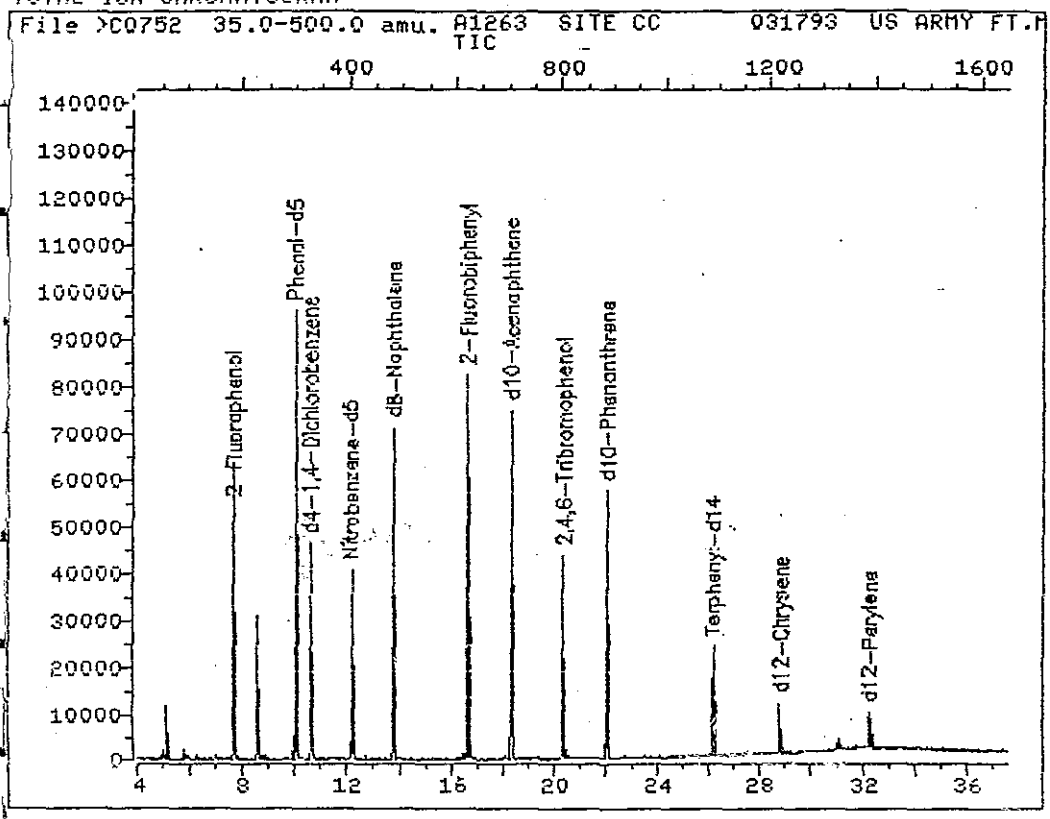
Operator ID: JEFF Quant Rev: 6 Quant Time: 930317 19:38
Output File: ^C0752::QT Injected at: 930317 18:58
Data File: >C0752::DA Dilution Factor: 1.00000
Name: A1263 SITE CC
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 4

Method File: 1D0317::D5
Title: hSL BNA STD
Last Calibration: 930317 17:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.60	326	26720	40.00	UG/L	96
)	2-Fluorophenol	7.66	182	39292	98.41	UG/L	88
)	Phenol-d5	10.03	298	62892	106.80	UG/L	91
18)	*d8-Naphthalene	13.78	482	67144	40.00	UG/L	90
)	Nitrobenzene-d5	12.13	401	30135	43.17	UG/L	84
)	*d10-Acenaphthene	18.29	703	42726	40.00	UG/L	92
38)	2-Fluorobiphenyl	16.59	620	62545	42.67	UG/L	96
)	*d10-Phenanthrene	22.02	886	52868	40.00	UG/L	97
)	2,4,6-Tribromophenol	20.32	803	11778	80.68	UG/L	96
)	*d12-Chrysene	28.81	1219	12702	40.00	UG/L	93
67)	Terphenyl-d14	26.16	1089	21420	47.63	UG/L	91
)	*d12-Perylene	32.26	1388	8992	40.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0752::DA Quant Output File: ^C0752::QT
Name: A1263 SITE CC
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 4

Id File: ID0317::D5
Title: hSL BNA STD
Last Calibration: 930317 17:01

Operator ID: JEFF
Quant Time: 930317 19:38
Injected at: 930317 18:58

Lab Name : 21ST CENTURY ENVIRONMENTAL

Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 161
SITE CC

Lab Sample ID:
A1263

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/17/93 00:11
Conc/Dil Factor: 10.05g/10ml
Percent Moisture: 16

GPC Cleanup __ Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC	6.0	U
319-87-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC	6.0	U
58-89-9	Gamma-BHC (Lindane)	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde	12	U
57-74-9	Chlordane	300	U
8001-35-2	Toxaphene	600	U
12674-11-2	Arochlor-1016	300	U
11104-28-2	Arochlor-1221	300	U
11141-16-5	Arochlor-1232	300	U
53469-21-9	Arochlor-1242	300	U
12672-29-6	Arochlor-1248	300	U
11097-69-1	Arochlor-1254	300	U
11096-82-5	Arochlor-1260	300	U

U Undetected J Estimated value below detection level

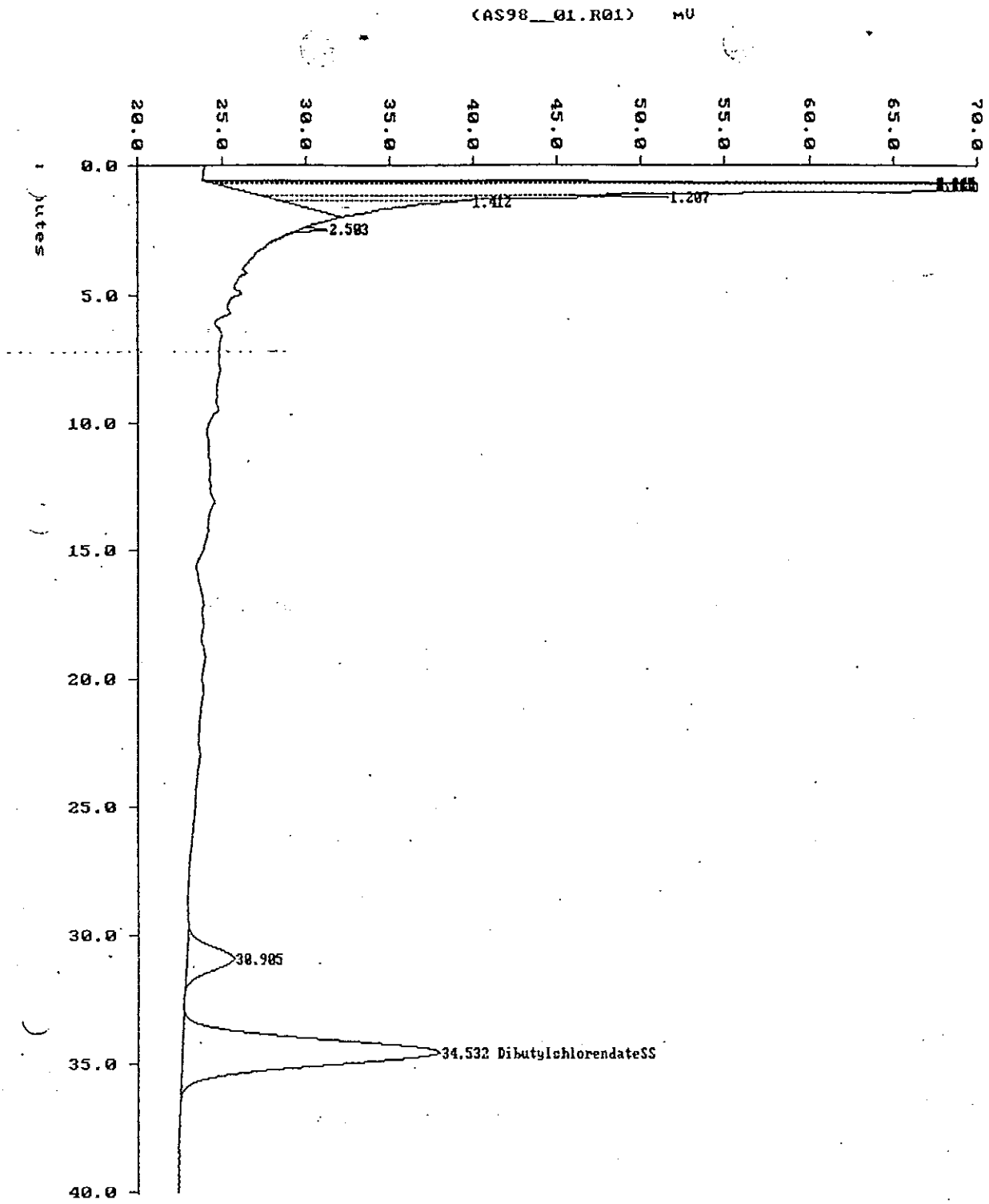
Instrument: PE-1
Column: SP 2250/2401

File : AS98__01.R01 A1263 10.05g Keegan
Run : 01 Queue : PEST Set Number : 1 Type : Sample
Path : C:\PP2
Collection : 09:11:37 Mar 17 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Integration: 09:51:45 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Report : 17:21:52 Apr 13 1993 Method : PPP-DBC [17:01:05 Apr 12 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.647	975049	T		0.0000	unknown
2	0.720	916060	T		0.0000	unknown
3	0.800	10228789	T		0.0000	unknown
4	1.207	206522	T		0.0000	unknown
5	1.412	190652			0.0000	unknown
6	2.503	8160			0.0000	unknown
				2.647		alpha-BHC
				3.311		Lindane
				3.753		beta-BHC
				4.081		Heptachlor
				4.372		delta-BHC
				4.921		Aldrin
				7.199		Heptachlor epoxide
				9.023		Endosulfan I
				10.617		ppp-DDE
				10.959		Dieldrin
				13.343		Endrin
				16.052		pp-DDD/Endosulfan II
				19.433		pp-DDT
				20.511		Endrin aldehyde
				24.479		Endosulfan sulfate
7	30.905	179945	V		0.0000	unknown
8	34.532	1091770		34.271	0.4271	DibutylchlorendateSS
				37.385		Methoxychlor


(AS98__01.R01) mV
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.412
1.207
2.583
30.905
34.532 DibutylchlorendateSS

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1264

CLIENT ID: Site DD

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.15
PHENOL	0.50	N.D.

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1264

CLIENT ID: Site DD

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	5.28
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	53.7
COPPER	1.00	7.25
LEAD	5.00	18.4
MERCURY	0.10	N.D.
NICKEL	5.00	4.53
SELENIUM	0.25	0.42
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	45.7

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	A1264	DILUTION FACTOR	1.00
CLIENT ID	SITE OD BLDG 161	QA BATCH	
DATA FILE	>A1111	DATE ANALYZED	03/24/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	60	Bromodichloromethane	ND	6
Acrylonitrile	ND	60	2-Chloroethylvinylether	ND	12
Chloromethane	ND	12	2-Hexanone	ND	12
Bromomethane	ND	12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND	12	Toluene	3.1 J	6
Chloroethane	ND	12	cis-1,3-Dichloropropene	ND	6
Acetone	11 JB	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	4.2 JB	6	Tetrachloroethene	2.9 J	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	1.2 J	6
2-Butanone	ND	12	m&p-Xylenes	3.3 J	6
Chloroform	ND	6	o-Xylene	2.0 J	6
1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	96.8	81 - 117	OK
Bromofluorobenzene	91.1	74 - 121	OK

Percent Solid of 83.0 is used for all Target compounds.

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SITE DD

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Soil

Lab Sample ID: A1264

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A1111

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: 17

Date Analyzed: 03/24/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

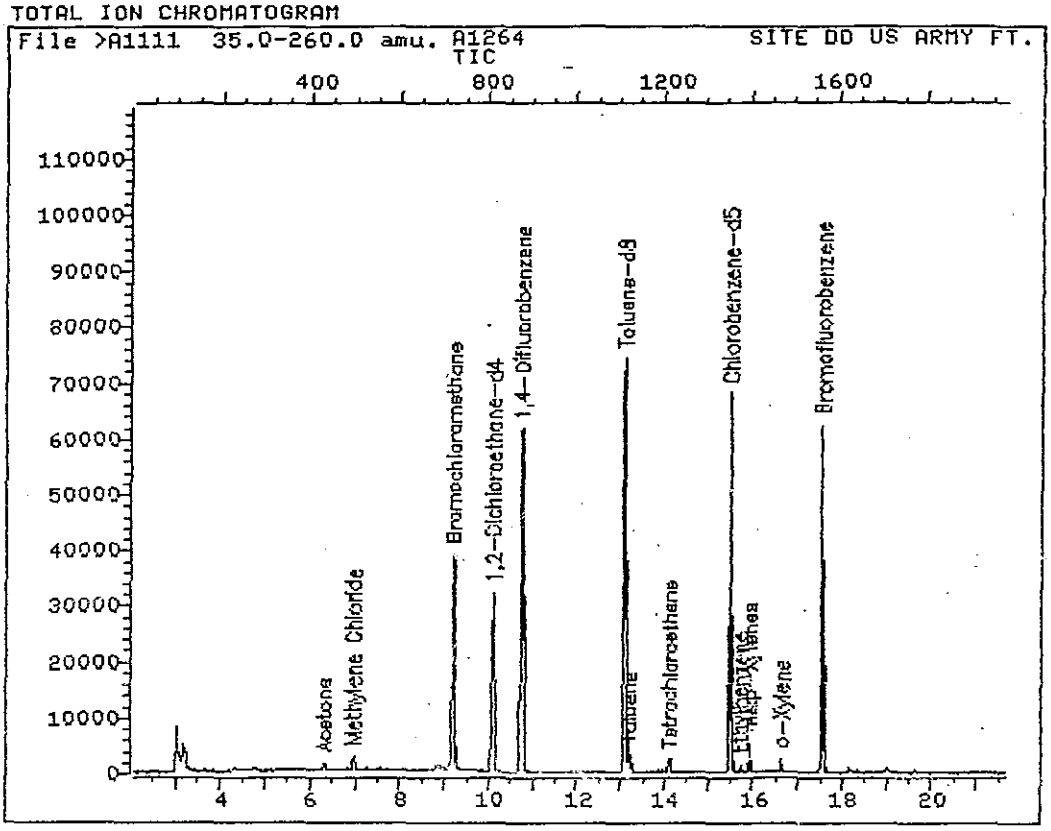
erator ID: JEFF Quant Rev: 6 Quant Time: 930324 21:38
Output File: ^A1111::QT Injected at: 930324 21:07
ta File: >A1111::D2 Dilution Factor: 1.00000
me: A1264
isc: SITE DD US ARMY FT. MONMOUTH 5.0g/5mL

File: ID0127::M1
tle: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.18	720	21723	50.00	UG/L	100
9)	Acetone	6.29	428	3740	9.43	UG/L	84
3)	Methylene Chloride	6.94	494	2881	3.46	UG/L	84
21)	1,2-Dichloroethane-d4	10.07	810	46035	53.03	UG/L	100
2)	*1,4-Difluorobenzene	10.72	876	94404	50.00	UG/L	100
1)	Toluene-d8	13.07	1113	96188	48.40	UG/L	100
32)	Toluene	13.18	1124	5484	2.61	UG/L	99
3)	*Chlorobenzene-d5	15.47	1355	73689	50.00	UG/L	100
0)	Tetrachloroethene	14.09	1216	1505	2.40	UG/L	100
1)	Ethylbenzene	15.70	1379	2623	1.03	UG/L	85
2)	m&p-Xylenes	15.91	1400	6403	2.77	UG/L	93
3)	o-Xylene	16.61	1470	3427	1.65	UG/L	89
6)	Bromofluorobenzene	17.53	1563	43259	45.54	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1111::D2 Quant Output File: ^A1111::QT
Name: A1264
Misc: SITE DD US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 15:50

Operator ID: JEFF
Quant Time: 930324 21:38
Injected at: 930324 21:07

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH,NJ	MATRIX	Soil
SAMPLE NUMBER	A1264	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161, SITE DD	QA BATCH	
DATA FILE	>C0753	DATE ANALYZED	03/17/93

COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND		400
Phenol	ND		400
bis(-2-Chloroethyl)Ether	ND		400
2-Cholorophenol	ND		400
1,3-Dichlorobenzene	ND		400
1,4-Dichlorobenzene	ND		400
Benzyl Alcohol	ND		400
1,2-Dichlorobenzene	ND		400
2-Methylphenol	ND		400
bis(2-chloroisopropyl)Ether	ND		400
4-Methylphenol	ND		400
N-Nitroso-Di-n-Propylamine	ND		400
Hexachloroethane	ND		400
Nitrobenzene	ND		400
Isophorone	ND		400
2-Nitrophenol	ND		400
2,4-Dimethylphenol	ND		400
Benzoic Acid	ND		2000
bis(-2-Chloroethoxy)Methane	ND		400
2,4-Dichlorophenol	ND		400
1,2,4-Trichlorobenzene	ND		400
Naphthalene	ND		400
4-Chloroaniline	ND		400
Hexachlorobutadiene	ND		400
4-Chloro-3-Methylphenol	ND		400
2-Methylnaphthalene	ND		400
Hexachlorocyclopentadiene	ND		400
2,4,6-Trichlorophenol	ND		400
2,4,5-Trichlorophenol	ND		2000
2-Chloronaphthalene	ND		400
2-Nitroaniline	ND		2000
Dimethyl Phthalate	ND		400
Acenaphthylene	ND		400
3-Nitroaniline	ND		2000

COMPOUND	UG/KG		MDL
Acenaphthene	ND		400
2,4-Dinitrophenol	ND		2000
4-Nitrophenol	ND		2000
Dibenzofuran	ND		400
2,4-Dinitrotoluene	ND		400
2,6-Dinitrotoluene	ND		400
Diethylphthalate	ND		400
4-Chlorophenyl-phenlyether	ND		400
Fluorene	ND		400
4-Nitroaniline	ND		2000
4,6-Dinitro-2-Methylphenol	ND		2000
N-Nitrosodiphenylamine	ND		400
4-Bromophenyl-phenylether	ND		400
Hexachlorobenzene	ND		400
Pentachlorophenol	ND		2000
Phenanthrene	ND		400
Anthracene	ND		400
Di-n-Butylphthalate	ND		400
Fluoranthene	ND		400
Pyrene	42	J	400
Butylbenzylphthalate	ND		400
3,3'-Dichlorobenzidine	ND		800
Benzo(a)Anthracene	ND		400
Bis(2-Ethylhexyl)Phthalate	73	JB	400
Chrysene	ND		400
Di-n-Octyl Phthalate	ND		400
Benzo(b)Fluoranthene	ND		400
Benzo(k)Fluoranthene	ND		400
Benzo(a)Pyrene	ND		400
Indeno(1,2,3-cd)Pyrene	ND		400
Dibenzo(a,h)Anthracene	ND		400
Benzo(g,h,i)Perylene	ND		400
Benzidine	ND		800

Percent Solid of 83.0 is used for all Target compounds.

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

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SITE DD

Matrix: (soil/water) SOIL

Lab Sample ID: A1264

Client Name: US Army, Ft.Monmouth, NJ

Client ID: A1264

Sample wt/vol: 30 (g/mL) GM

Lab File ID: >C0753

Level: LOW

Date Received: NA

% Moisture: 17

Date Analyzed 03/17/93

Extraction: (Sepf/Cont/Sonc) SONC

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	79005	Ethane, 1,1,2-trichloro- (8CI9CI)	5.12	360
2	79345	Ethane, 1,1,2,2-tetrachloro- (8CI9CI)	8.60	1000
3		UNKNOWN	27.52	320
4		UNKNOWN	31.03	520

QUANT REPORT

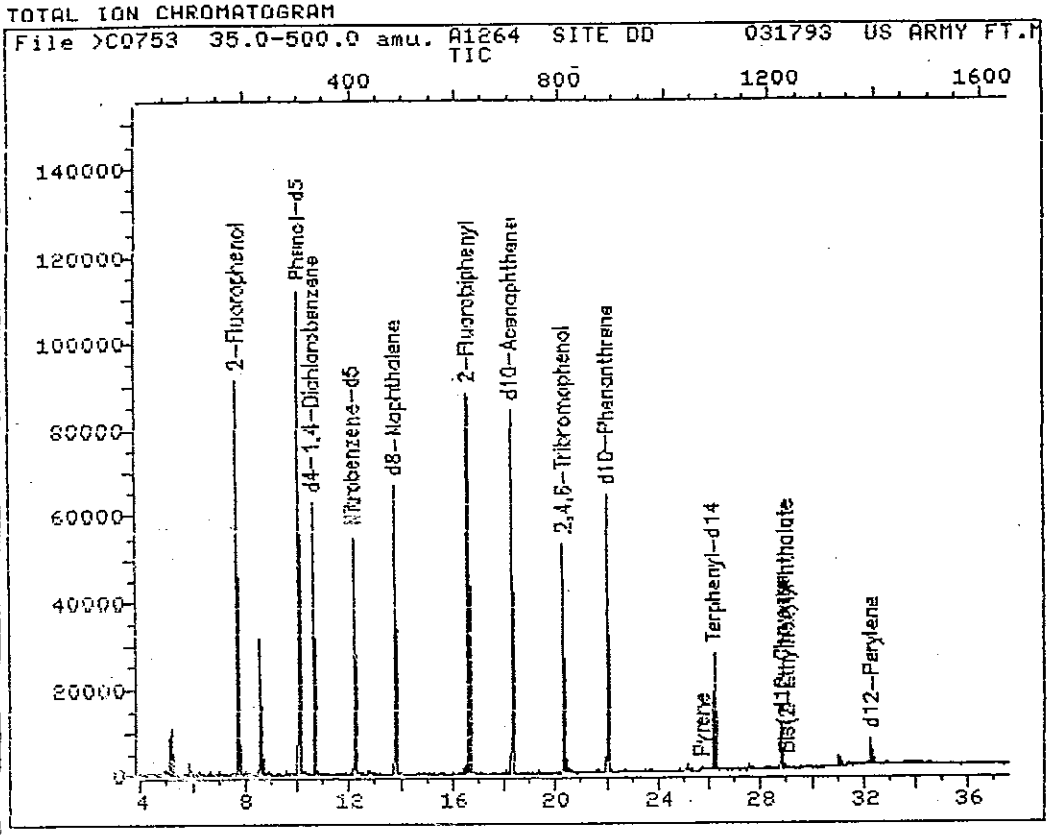
erator ID: JEFF Quant Rev: 6 Quant Time: 930317 20:25
utput File: ^C0753::QT Injected at: 930317 19:45
Data File: >C0753::DA Dilution Factor: 1.00000
me: A1264 SITE DD
sc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 5

File: ID0317::D5
tle: hSL BNA STD
ast Calibration: 930317 17:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.62	327	28986	40.00	UG/L	98
)	2-Fluorophenol	7.71	184	49339	113.92	UG/L	94
)	Phenol-d5	10.05	299	80585	126.15	UG/L	90
18)	*d8-Naphthalene	13.78	482	70585	40.00	UG/L	88
)	Nitrobenzene-d5	12.15	402	37454	51.04	UG/L	91
)	*d10-Acenaphthene	18.29	703	45477	40.00	UG/L	98
)	2-Fluorobiphenyl	16.59	620	76828	49.24	UG/L	96
)	*d10-Phenanthrene	22.02	886	58563	40.00	UG/L	99
)	2,4,6-Tribromophenol	20.33	803	15364	95.01	UG/L	95
)	*d12-Chrysene	28.81	1219	10607	40.00	UG/L	95
65)	Pyrene	25.69	1066	739	1.05	UG/L	95
)	Terphenyl-d14	26.16	1089	24676	65.71	UG/L	88
)	Bis(2-Ethylhexyl)Phthalate	28.97	1227	548	1.83	UG/L	87
)	*d12-Perylene	32.26	1388	6908	40.00	UG/L	92

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0753::DA Quant Output File: ^C0753::QT
Name: A1264 SITE DD
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 5

Id File: ID0317::D5
Title: hSL BNA STD
Last Calibration: 930317 17:01

Operator ID: JEFF
Quant Time: 930317 20:25
Injected at: 930317 19:45

Lab Sample ID:
A1264

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1(
SITE DD

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: Low Medium (Circle One) GPC Cleanup __Yes ✓No
Date Extracted/Prepared: 03/15/93 Sep. Funnel Extraction __Yes
Date Analyzed: 03/17/93 00:53 Continuous Liq-Liq Ext. __Yes
Conc/Dil Factor: 10.09g/10ml
Percent Moisture: 17

C.A.S. Number		ug/L or ug/Kg	
319-84-6	Alpha-BHC	6.0	U
319-85-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC	6.0	U
58-89-9	Gamma-BHC (Lindane)	6.0	U
76-44-8	Heptachlor	6.0	U
309-00-2	Aldrin	6.0	U
1024-57-3	Heptachlor Epoxide	6.0	U
959-98-8	Endosulfan I	6.0	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	12	U
72-54-8	4,4'-DDD	12	U
1031-07-8	Endosulfan Sulfate	12	U
50-29-3	4,4'-DDT	12	U
72-43-5	Methoxychlor	300	U
7421-93-4	Endrin Aldehyde	12	U
57-74-9	Chlordane	300	U
8001-35-2	Toxaphene	600	U
12674-11-2	Arochlor-1016	300	U
11104-28-2	Arochlor-1221	300	U
11141-16-5	Arochlor-1232	300	U
53469-21-9	Arochlor-1242	300	U
12672-29-6	Arochlor-1248	300	U
11097-69-1	Arochlor-1254	300	U
11096-82-5	Arochlor-1260	300	U

U Undetected J Estimated value below detection level

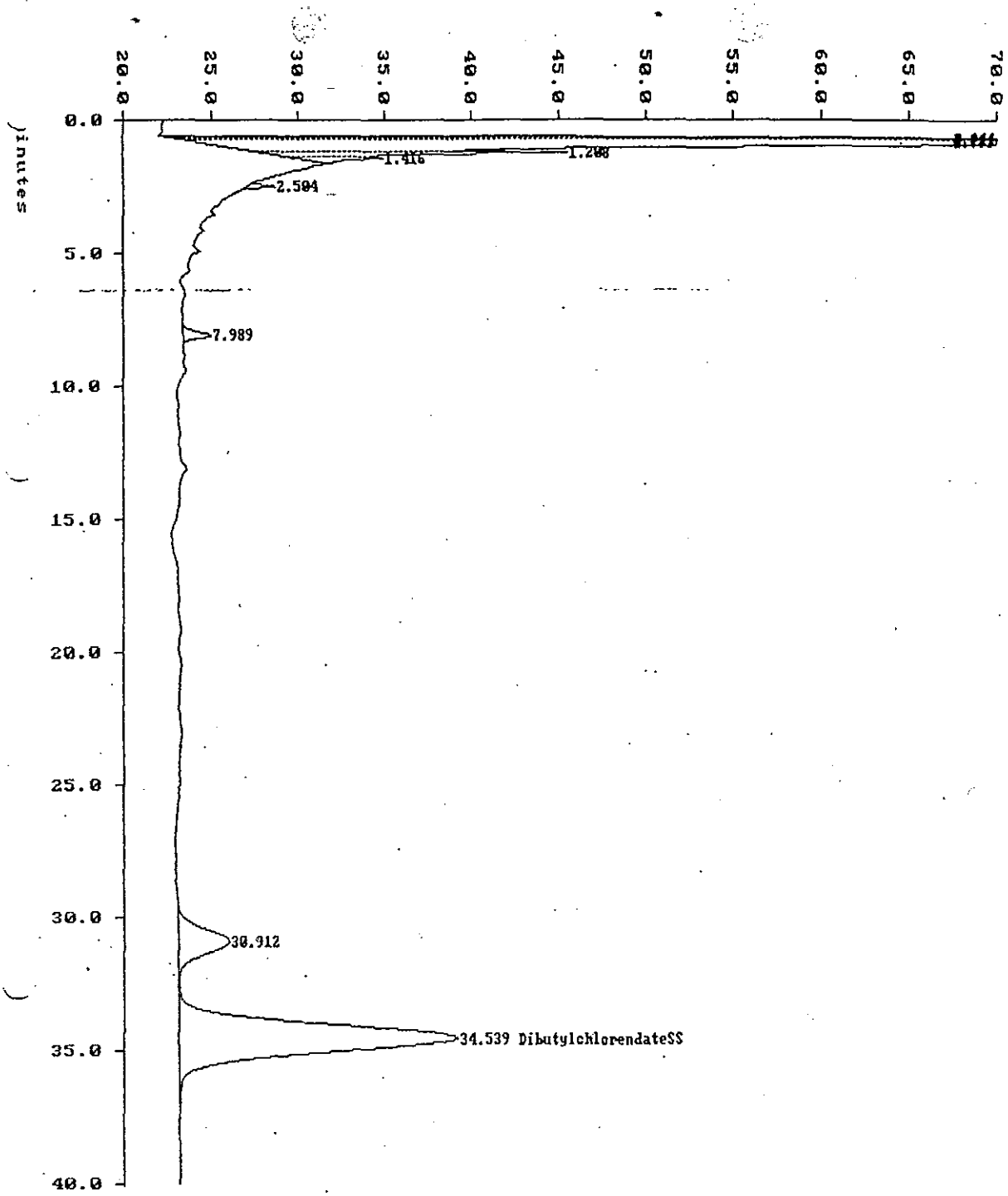
Instrument: PE-1
Column: SP 2250/2401

File : AS99__01.R01 A1264 10.09g Keega
Run : 01 Queue : PEST Set Number : 1 Type : Sampl
Path : C:\PP2
Collection : 09:53:42 Mar 18 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Integration: 10:33:51 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Report : 17:01:54 Apr 13 1993 Method : PPP-DBC [17:01:05 Apr 12 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.644	309039	T		0.0000	unknown
2	0.721	724069	T		0.0000	unknown
3	0.793	6890985	T		0.0000	unknown
4	1.208	130603	T		0.0000	unknown
5	1.416	44566			0.0000	unknown
6	2.504	9275			0.0000	unknown
				2.647		alpha-BHC
				3.311		Lindane
				3.753		beta-BHC
				4.081		Heptachlor
				4.372		delta-BHC
				4.921		Aldrin
				7.199		Heptachlor epoxide
7	7.989	28296			0.0000	unknown
				9.023		Endosulfan I
				10.617		ppp-DDE
				10.959		Dieldrin
				13.343		Endrin
				16.052		pp-DDD/Endosulfan II
				19.433		pp-DDT
				20.511		Endrin aldehyde
				24.479		Endosulfan sulfate
8	30.912	193310	T		0.0000	unknown
9	34.539	1157989		34.271	0.4530	DibutylchlorendateSS
				37.385		Methoxychlor


20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.416
1.208
2.504
7.989
30.912
34.539 DibutylchlorendateSS

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US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1265

CLIENT ID: Field Blank

PARAMETER	MDL (mg/L)	RESULT (mg/L)
CYANIDE	0.01	N.D.
PHENOL	0.05	N.D.

US ARMY FORT MONMOUTH, NJ UST-BLDG 161

CERTIFICATE OF ANALYSIS

PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1265

CLIENT ID: Field Blank

METALS	MDL (mg/L)	RESULT (mg/L)
ANTIMONY	0.005	N.D.
ARSENIC	0.005	N.D.
BERYLLIUM	0.01	N.D.
CADMIUM	0.01	N.D.
CHROMIUM	0.01	N.D.
COPPER	0.01	N.D.
LEAD	0.05	N.D.
MERCURY	0.0005	N.D.
NICKEL	0.05	N.D.
SELENIUM	0.005	N.D.
SILVER	0.01	N.D.
THALLIUM	0.010	N.D.
ZINC	0.01	N.D.

00098

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1265	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 161	QA BATCH	
DATA FILE	>A1059	DATE ANALYZED	03/16/93

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	6.2 JB	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	3.5 J	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	110	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FIELD BLANK

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Water

Lab Sample ID: A1265

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1059

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: NA

Date Analyzed: 03/16/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00100

QUANT REPORT

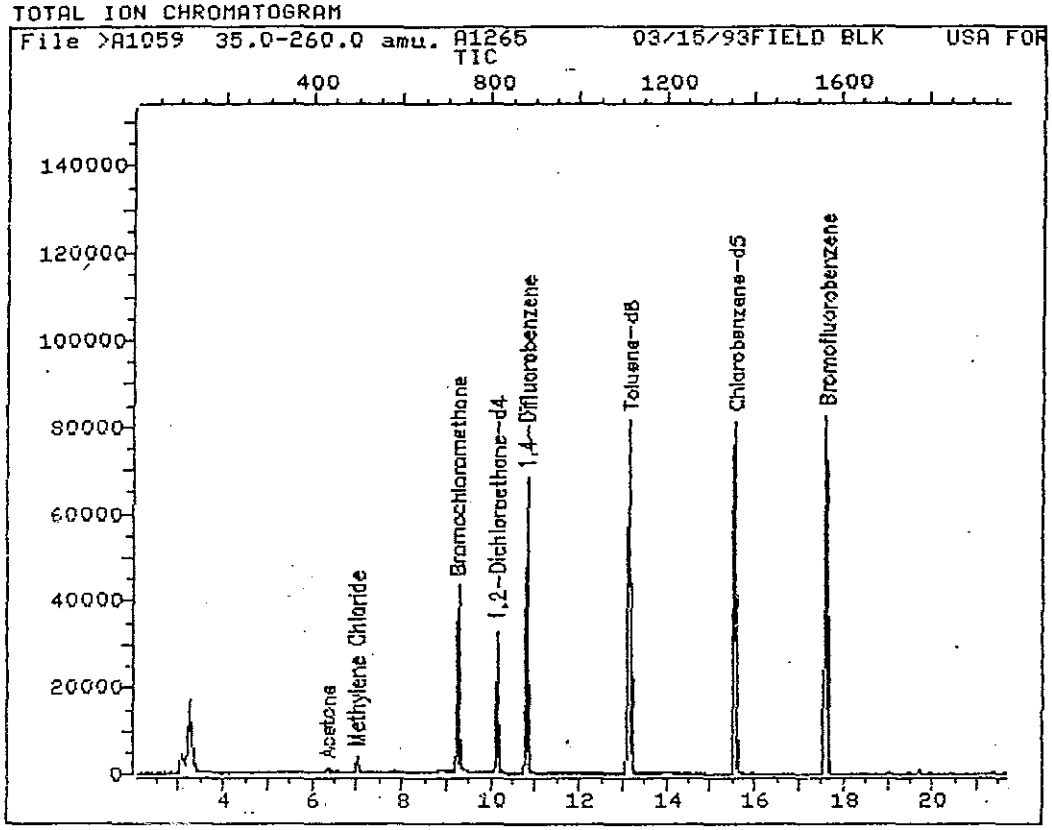
perator ID: JEFF Quant Rev: 6 Quant Time: 930316 18:52
utput File: ^A1059::QT Injected at: 930316 18:22
ata File: >A1059::D2 Dilution Factor: 1.00000
ame: A1265 03/15/93
isc: FIELD BLK USA FORT MONMOUTH 5ml

D File: ID0127::M1
itle: USEPA 624 VOLATILES
Last Calibration: 930316 15:48

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.24	725	23025	50.00	UG/L	100
9)	Acetone	6.34	432	1749	6.19	UG/L	80
3)	Methylene Chloride	6.99	498	3296	3.53	UG/L	83
21)	1,2-Dichloroethane-d4	10.13	815	48152	54.86	UG/L	100
2)	*1,4-Difluorobenzene	10.80	882	106433	50.00	UG/L	100
1)	Toluene-d8	13.13	1118	106896	50.48	UG/L	100
33)	*Chlorobenzene-d5	15.54	1361	90049	50.00	UG/L	100
6)	Bromofluorobenzene	17.59	1568	55907	50.15	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1059::D2 Quant Output File: ^A1059::QT
Name: A1265 03/15/93
Misc: FIELD BLK USA FORT MONMOUTH 5ml

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930316 15:48

Operator ID: JEFF
Quant Time: 930316 18:52
Injected at: 930316 18:22

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT.MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1265	DILUTION FACTOR	1.00
CLIENT ID	BLDG 161 FIELD BLANK	QA BATCH	
DATA FILE	>C0733	DATE ANALYZED	03/16/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	Acenaphthene	ND	10
Phenol	ND	10	2,4-Dinitrophenol	ND	50
bis(-2-Chloroethyl)Ether	ND	10	4-Nitrophenol	ND	50
2-Cholorophenol	ND	10	Dibenzofuran	ND	10
1,3-Dichlorobenzene	ND	10	2,4-Dinitrotoluene	ND	10
1,4-Dichlorobenzene	ND	10	2,6-Dinitrotoluene	ND	10
Benzyl Alcohol	ND	10	Diethylphthalate	ND	10
1,2-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
2-Methylphenol	ND	10	Fluorene	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Nitroaniline	ND	50
4-Methylphenol	ND	10	4,6-Dinitro-2-Methylphenol	ND	50
N-Nitroso-Di-n-Propylamine	ND	10	N-Nitrosodiphenylamine	ND	10
Hexachloroethane	ND	10	4-Bromophenyl-phenylether	ND	10
Nitrobenzene	ND	10	Hexachlorobenzene	ND	10
Isophorone	ND	10	Pentachlorophenol	ND	50
2-Nitrophenol	ND	10	Phenanthrene	ND	10
2,4-Dimethylphenol	ND	10	Anthracene	ND	10
Benzoic Acid	ND	50	Di-n-Butylphthalate	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Fluoranthene	ND	10
2,4-Dichlorophenol	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	ND	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
4-Chloro-3-Methylphenol	ND	10	Chrysene	ND	10
2-Methylnaphthalene	ND	10	Di-n-Octyl Phthalate	ND	10
Hexachlorocyclopentadiene	ND	10	Benzo(b)Fluoranthene	ND	10
2,4,6-Trichlorophenol	ND	10	Benzo(k)Fluoranthene	ND	10
2,4,5-Trichlorophenol	ND	50	Benzo(a)Pyrene	ND	10
2-Chloronaphthalene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
2-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Dimethyl Phthalate	ND	10	Benzo(g,h,i)Perylene	ND	10
Acenaphthylene	ND	10	Benzidine	ND	20
3-Nitroaniline	ND	50			

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

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD BLANK

Matrix: (soil/water) SOIL

Lab Sample ID: A1265

Client: US Army, Ft.Monmouth, NJ

Client ID: Bldg 161

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C0733

Level: LOW

Date Received: NA

% Moisture: 100

Date Analyzed 03/16/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 03/15/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

QUANT REPORT

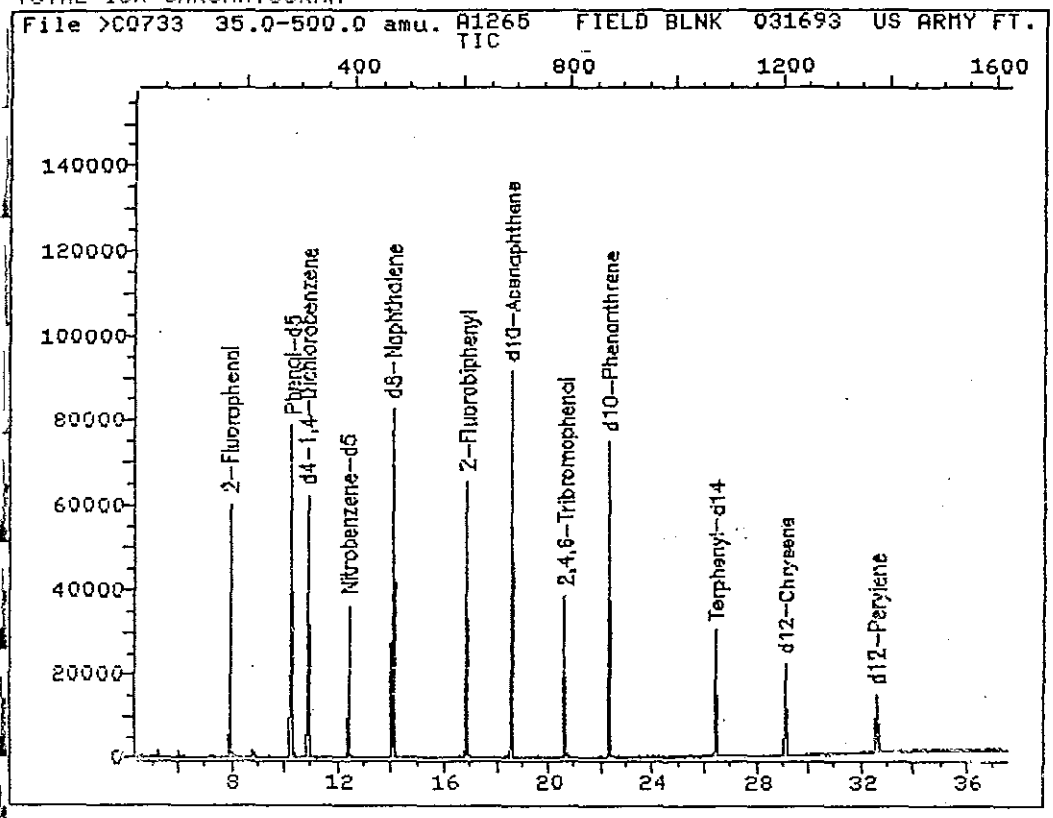
erator ID: JEFF Quant Rev: 6 Quant Time: 930316 20:12
Output File: ^C0733::QT Injected at: 930316 19:32
Data File: >C0733::D2 Dilution Factor: 1.00000
Name: A1265 FIELD BLNK
Misc: 031693 US ARMY FT. MONMOUTH 1000ML/1.0ML BTL# 2

File: ID0316::D5
Title: hSL BNA STD
Last Calibration: 930316 18:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.82	313	33348	40.00	UG/L	98
)	2-Fluorophenol	7.91	170	33787	73.63	UG/L	96
)	Phenol-d5	10.23	284	48889	75.36	UG/L	95
18)	*d8-Naphthalene	14.00	469	77946	40.00	UG/L	91
)	Nitrobenzene-d5	12.35	388	23740	28.72	UG/L	92
)	*d10-Acenaphthene	18.51	690	46839	40.00	UG/L	93
38)	2-Fluorobiphenyl	16.82	607	44997	28.53	UG/L	95
5)	*d10-Phenanthrene	22.26	874	71109	40.00	UG/L	99
)	2,4,6-Tribromophenol	20.56	791	8958	53.30	UG/L	96
6)	*d12-Chrysene	29.06	1208	23368	40.00	UG/L	96
67)	Terphenyl-d14	26.39	1077	26466	35.53	UG/L	89
)	*d12-Perylene	32.53	1378	15913	40.00	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0733::D2 Quant Output File: ^C0733::QT
Name: A1265 FIELD BLNK
Misc: 031693 US ARMY FT. MONMOUTH 1000ML/1.0ML BTL# 2

Id File: ID0316::D5
Title: hSL BNA STD
Last Calibration: 930316 18:19

Operator ID: JEFF
Quant Time: 930316 20:12
Injected at: 930316 19:32

Lab Sample ID:
A1265

Lab Name: 21ST Century Environmental
Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1
FIELD BLANK

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Pesticides/PCBs

Concentration: (Low) Medium (Circle One) GPC Cleanup __Yes /No
Date Extracted/Prepared: 03/16/93 Sep. Funnel Extraction /Yes
Date Analyzed: 03/17/93 03:42 Continuous Liq-Liq Ext. __Yes
Conc/Dil Factor: 100mL/5mL
Percent Moisture: N/A

C.A.S. Number		(ug/L or ug/Kg)	
319-84-6	Alpha-BHC	0.25	U
319-87-7	Beta-BHC	0.25	U
319-86-8	Delta-BHC	0.25	U
58-89-9	Gamma-BHC (Lindane)	0.25	U
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	0.25	U
72-55-9	4,4'-DDE	0.25	U
72-20-8	Endrin	0.25	U
33213-65-9	Endosulfan II	0.5	U
72-54-8	4,4'-DDD	0.5	U
1031-07-8	Endosulfan Sulfate	0.5	U
50-29-3	4,4'-DDT	0.5	U
72-43-5	Methoxychlor	13	U
7421-93-4	Endrin Aldehyde	0.5	U
57-74-9	Chlordane	15	U
8001-35-2	Toxaphene	25	U
12674-11-2	Arochlor-1016	13	U
11104-28-2	Arochlor-1221	13	U
11141-16-5	Arochlor-1232	13	U
53469-21-9	Arochlor-1242	13	U
12672-29-6	Arochlor-1248	13	U
11097-69-1	Arochlor-1254	13	U
11096-82-5	Arochlor-1260	13	U

U Undetected J Estimated value below detection level

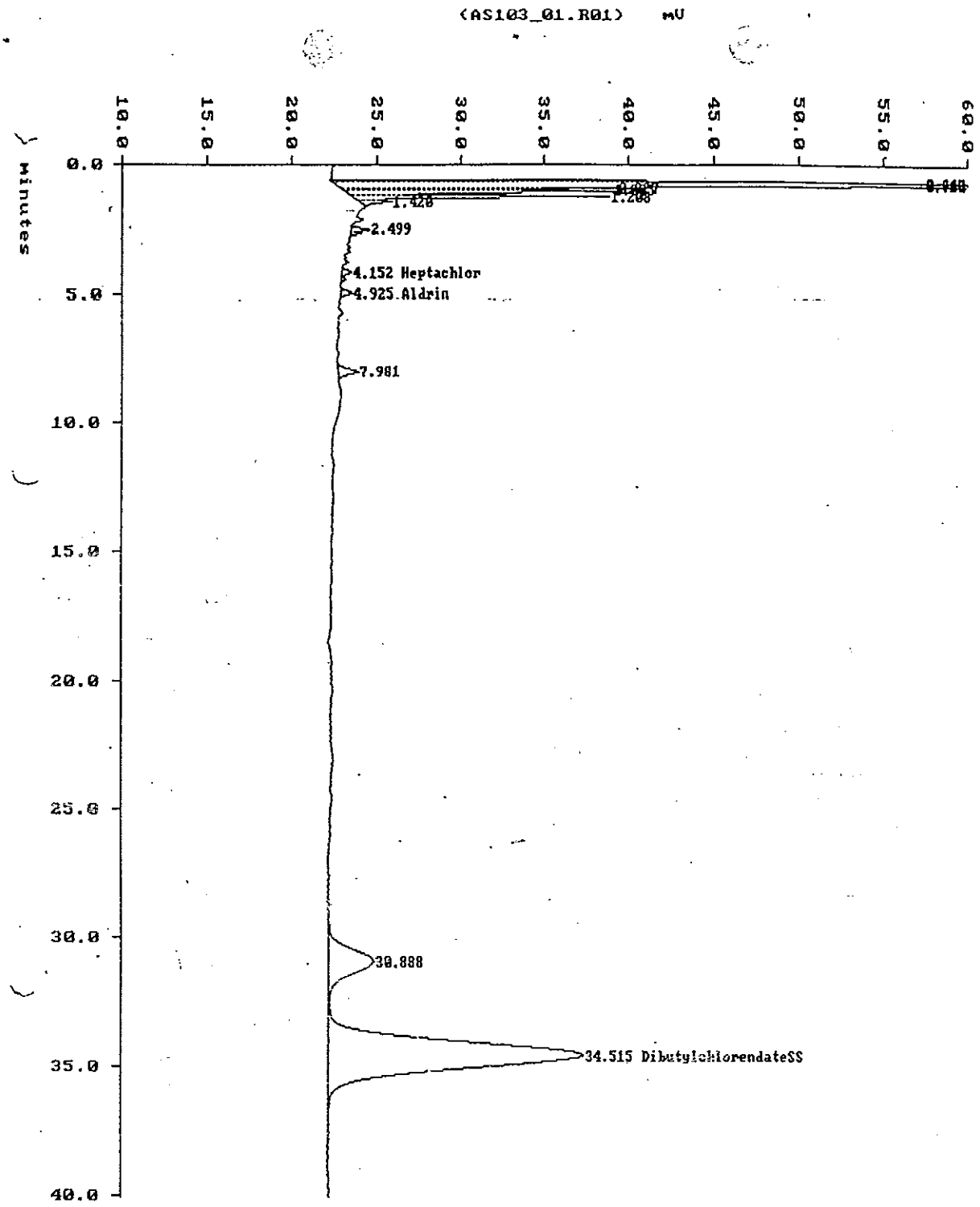
Instrument: PE-1
Column: SP 2250/2401

File : AS103_01.R01 A1265 100ml-5ml Keegan
Run : 01 Queue : PEST Set Number : 1 Type : Sample
Path : C:\PP2
Collection : 03:42:04 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Integration: 13:22:13 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Report : 19:28:51 Mar 16 1993 Method : PPP-DBC [18:59:40 Mar 16 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.647	910765	T		0.0000	unknown
2	0.720	1416469	T		0.0000	unknown
3	0.927	63512	T		0.0000	unknown
4	1.005	105850	T		0.0000	unknown
5	1.208	74555	T		0.0000	unknown
6	1.420	12119			0.0000	unknown
7	2.499	10674			0.0000	unknown
				2.677		alpha-BHC
				3.341		Lindane
				3.781		beta-BHC
8	4.152	7952		4.117	0.0020	Heptachlor
				4.403		delta-BHC
9	4.925	7154		4.960	0.0017	Aldrin
				7.251		Heptachlor epoxide
10	7.981	19147			0.0000	unknown
				9.085		Endosulfan I
				10.680		ppp-DDE
				11.032		Dieldrin
				13.427		Endrin
				16.136		pp-DDD/Endosulfan II
				19.517		pp-DDT
				20.616		Endrin aldehyde
				24.627		Endosulfan sulfate
11	30.888	177023	T		0.0000	unknown
12	34.515	1090464		34.461	0.2931	DibutylchlorendateSS
				37.533		Methoxychlor


(AS103_01.R01) mV
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.420
2.499
4.152 Heptachlor
4.925 Aldrin
7.981
30.888
34.515 DibutylChlorendateSS

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1266	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 161	QA BATCH	
DATA FILE	>A1060	DATE ANALYZED	03/16/93

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	5.3 JB	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	ND	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	106	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name:21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 161

Matrix: (soil/water) Water

Lab Sample ID: A1266

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1060

Level: (low/med) LOW

Date Received: 03/15/93

% Moisture: NA

Date Analyzed: 03/16/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

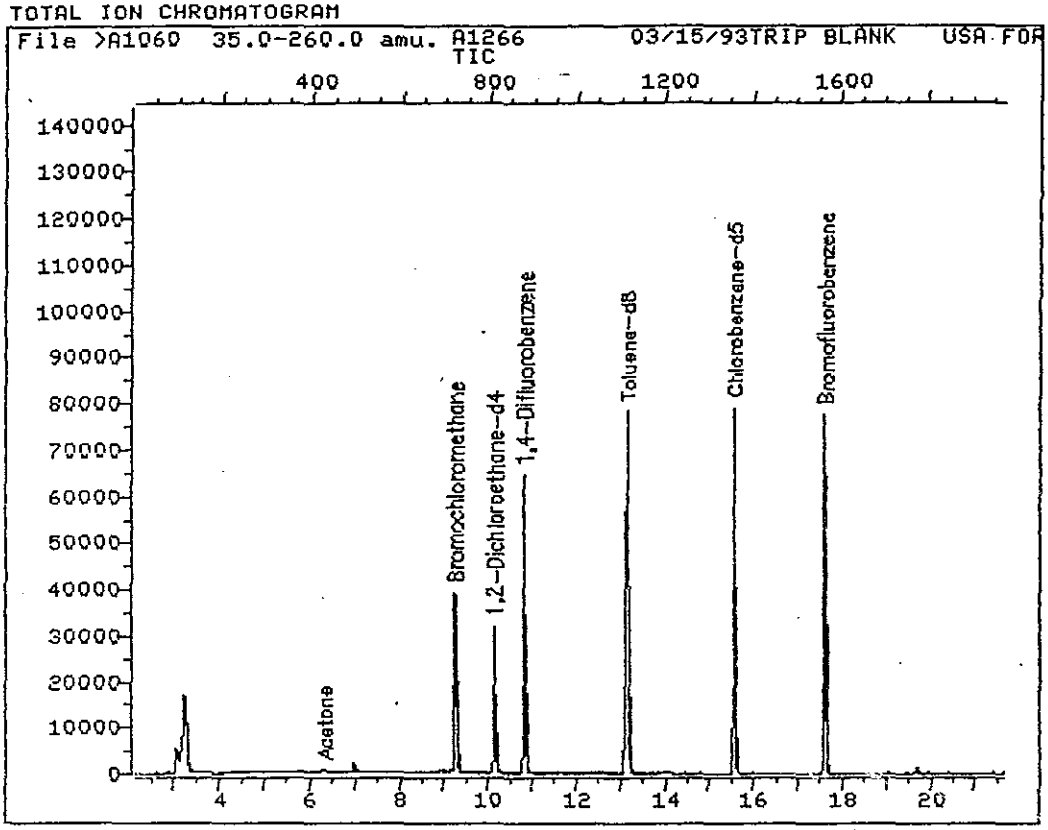
perator ID: JEFF Quant Rev: 6 Quant Time: 930316 19:27
utput File: ^A1060::QT Injected at: 930316 18:56
ata File: >A1060::D2 Dilution Factor: 1.00000
ame: A1266 03/15/93
isc: TRIP BLANK USA FORT MONMOUTH 5ml

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930316 15:48

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.24	720	22640	50.00	UG/L	100
9)	Acetone	6.33	426	1470	5.29	UG/L	82
1)	1,2-Dichloroethane-d4	10.13	810	45932	53.22	UG/L	100
22)	*1,4-Difluorobenzene	10.80	878	100244	50.00	UG/L	100
1)	Toluene-d8	13.14	1114	102113	51.19	UG/L	100
3)	*Chlorobenzene-d5	15.55	1357	86325	50.00	UG/L	100
46)	Bromofluorobenzene	17.60	1564	53600	50.16	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1060::D2 Quant Output File: ^A1060::QT
Name: A1266 03/15/93
Misc: TRIP BLANK USA FORT MONMOUTH 5ml

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930316 15:48

Operator ID: JEFF
Quant Time: 930316 19:27
Injected at: 930316 18:56

Q C RESULTS

21ST CENTURY ENVIRONMENTAL

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

QUALITY CONTROL DATA

Cyanide

A 0917	Spike	95	% Recovery
A 0917	Spike Duplicate	98	% Recovery
Method Blank		<0.10	mg/kg

Phenol

A 0917	Spike	95	% Recovery
A 0917	Spike Duplicate	89	% Recovery
Method Blank		<0.50	mg/kg

QUALITY CONTROL DATA

ANALYSIS NO: A 1254

BATCH NO: M 032

MATRIX: Soil

METAL	AMOUNT OF SPIKE (ug)	% SPIKE RECOVERY
ANTIMONY	1000	57
ARSENIC	80	57
BERYLLIUM	100	104
CADMIUM	100	123
CHROMIUM	1000	102
COPPER	500	98
LEAD	1000	112
MERCURY	1.0	77
NICKEL	1000	107
SILVER	100	111
THALLIUM	100	93
VANADIUM	1000	99

00119

QUALITY CONTROL DATA

BATCH NO: M 032

MATRIX: Soil

METAL	METHOD BLANK (mg/L)	AMOUNT OF SPIKE (ug/L)	% SPIKE RECOVERY
ANTIMONY	N.D.	21.3	230
ARSENIC	N.D.	34.2	55
BERYLLIUM	N.D.	58.1	110
CADMIUM	N.D.	70.3	121
CHROMIUM	N.D.	182	93
COPPER	N.D.	92.7	108
LEAD	N.D.	44.5	118
MERCURY	N.D.	13.7	61.9
NICKEL	N.D.	137	117
SILVER	N.D.	64.4	124
THALLIUM	N.D.	140	98
VANADIUM	N.D.	40.1	92

00117

21ST CENTURY ENVIRONMENTAL
WATER VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	105	102	102	0
A1265	110	101	100	0
A1266	106	102	100	0

	QC LIMITS
S1 (DCE) = 1,2-Dichloroethane-d4	76-114
S2 (TOL) = Toluene-d8	88-110
S3 (BFB) = Bromofluorobenzene	86-115

Column used to flag surrogate recovery values

21st Century Environmental Inc
SOIL VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	105	102	102	0
A1265	110	101	100	0
A1266	106	102	100	0
BLANK	101	98	98	0
A1261	105	98	94	0
A1262	107	99	96	0
A1263	104	97	95	0
A1264	106	97	91	0
A1262MS	103	98	97	0
A1262MSD	107	97	97	0

	QC LIMITS
S1 (DCE) = 1,2-Dichloroethane-d4	70-121
S2 (TOL) = Toluene-d8	81-117
S3 (BFB) = Bromofluorobenzene	74-121

Column used to flag surrogate recovery values

21ST CENTURY ENVIRONMENTAL INC.
WATER semi-VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (FPH)#	S6 (TBP)#	TOT OUT
AQ BLK 3/15	58	58	78	72	73	59	0
A1265	57	57	71	75	74	53	0

** Values out due to matrix interference

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10-94)
S5 (FPH) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Column used to flag surrogate recovery values

21ST CENTURY ENVIRONMENTAL, INC.
SOIL semi-VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (FPH)#	S6 (TBP)#	TOT OUT
NA BLK	102	100	115	135*	119	99	1
A1261	91	92	102	104	101	77	0
A1262	108	104	158*	128*	116	96	2
A1263	86	85	95	107	98	81	0
A1264	102	98	131	126*	114	95	1
A1263MS	94	105	108	99	88	102	0
A1263MSD	94	108	114	99	94	111	0

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (FPH) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Column used to flag surrogate recovery values

2E
WATER PCB/PESTICIDE SURROGATE RECOVERY

Lab Name: 21ST Century Environmental Contract:N/A

Lab Code: NJ 08031 Case No.: N/A SAS No.: N/A SDG No.: N/A

	EPA SAMPLE NO.	S1 (DBC)#	OTHER 2.4-DB
01	PBLK 0316	40	
02	A1265	59	
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchlorendate

Column used to flag recovery values

* Values outside of QC limits

00122

2F

SOIL PCB/PESTICIDE SURROGATE RECOVERY

Lab. Name: 21ST Century Environmental Contract:N/A

Lab Code: NJ 08031 Case No.: N/A SAS No.: N/A SDG No.: N/A

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (DBC)#	OTHER 2.4-DB
01	PBLK 0315	81	
02	A1254	77	
03	A1255	82	
04	A1256	80	
05	A1257	85	
06	A1258	89	
07	A1259	83	
08	A1261	80	
09	A1262	91	
10	A1263	85	
11	A1264	91	
12	A1254MS	54	
13	A1254MSD	65	
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

Column used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Contract:N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix Spike - EPA Sample No.: A1262 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	ND	44.1	88	59-172
Trichloroethene	50.0	ND	45.4	91	62-137
Benzene	50.0	ND	50.0	100	66-142
Toluene	50.0	ND	47.2	94	59-139
Chlorobenzene	50.0	ND	46.8	94	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	45.3	91	3	22	59-172
Trichloroethene	50.00	47.6	95	4	24	62-137
Benzene	50.00	52.7	105	5	21	66-142
Toluene	50.00	49.7	99	5	21	59-139
Chlorobenzene	50.00	49.7	99	5	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

Values outside of qc limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

QUANT REPORT

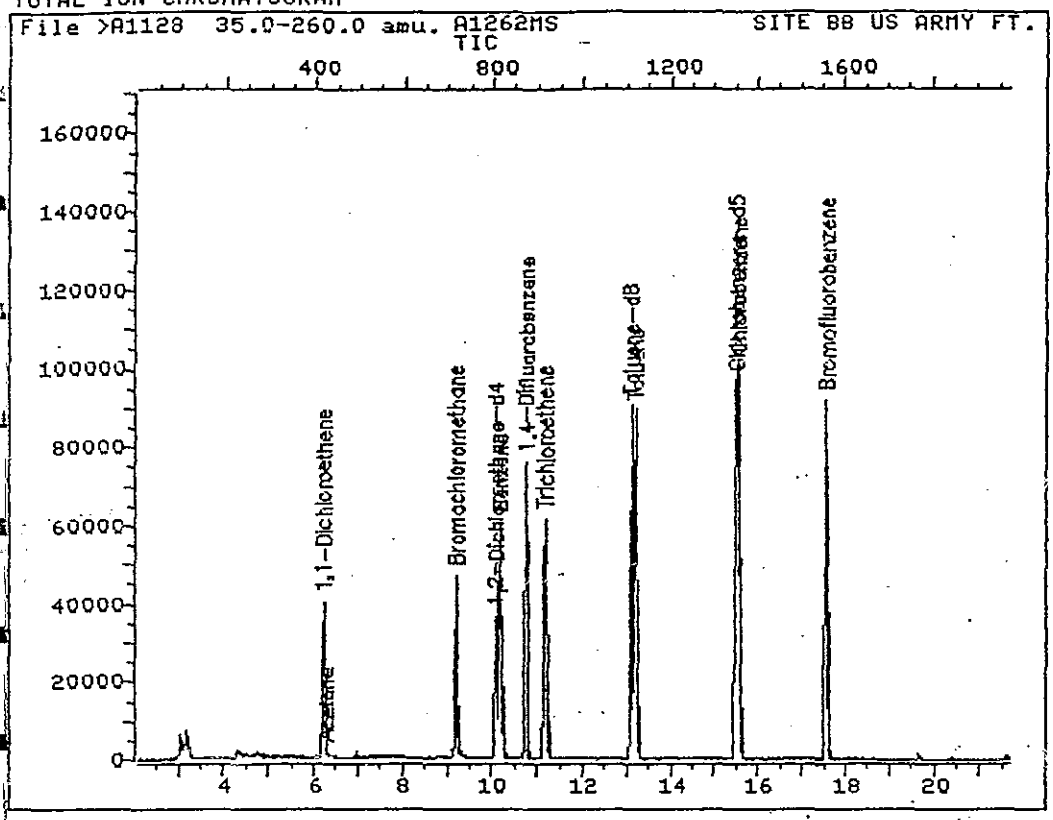
Operator ID: JEFF Quant Rev: 6 Quant Time: 930326 18:55
Output File: ^A1128::QT Injected at: 930326 18:25
Data File: >A1128::D2 Dilution Factor: 1.00000
Name: A1262MS
Misc: SITE BB US ARMY FT. MONMOUTH 5G/5mL

Method File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930326 16:54

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.17	714	25305	50.00	UG/L	100
)	Acetone	6.28	422	2487	6.40	UG/L	79
1)	1,1-Dichloroethene	6.19	413	52500	44.11	UG/L	100
1)	1,2-Dichloroethane-d4	10.07	804	52143	51.68	UG/L	100
)	*1,4-Difluorobenzene	10.73	871	118318	50.00	UG/L	100
)	Benzene	10.17	814	101802	49.97	UG/L	100
2)	Trichloroethene	11.15	913	39066	45.36	UG/L	82
)	Toluene-d8	13.07	1106	120766	48.78	UG/L	100
)	Toluene	13.18	1117	126018	47.17	UG/L	97
3)	*Chlorobenzene-d5	15.47	1348	101778	50.00	UG/L	100
0)	Chlorobenzene	15.52	1353	95620	46.82	UG/L	95
)	Bromofluorobenzene	17.54	1556	62977	48.26	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1128::D2 Quant Output File: ^A1128::QT
Name: A1262MS
Misc: SITE BB US ARMY FT. MONMOUTH 5G/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930326 16:54

Operator ID: JEFF
Quant Time: 930326 18:55
Injected at: 930326 18:25

QUANT REPORT

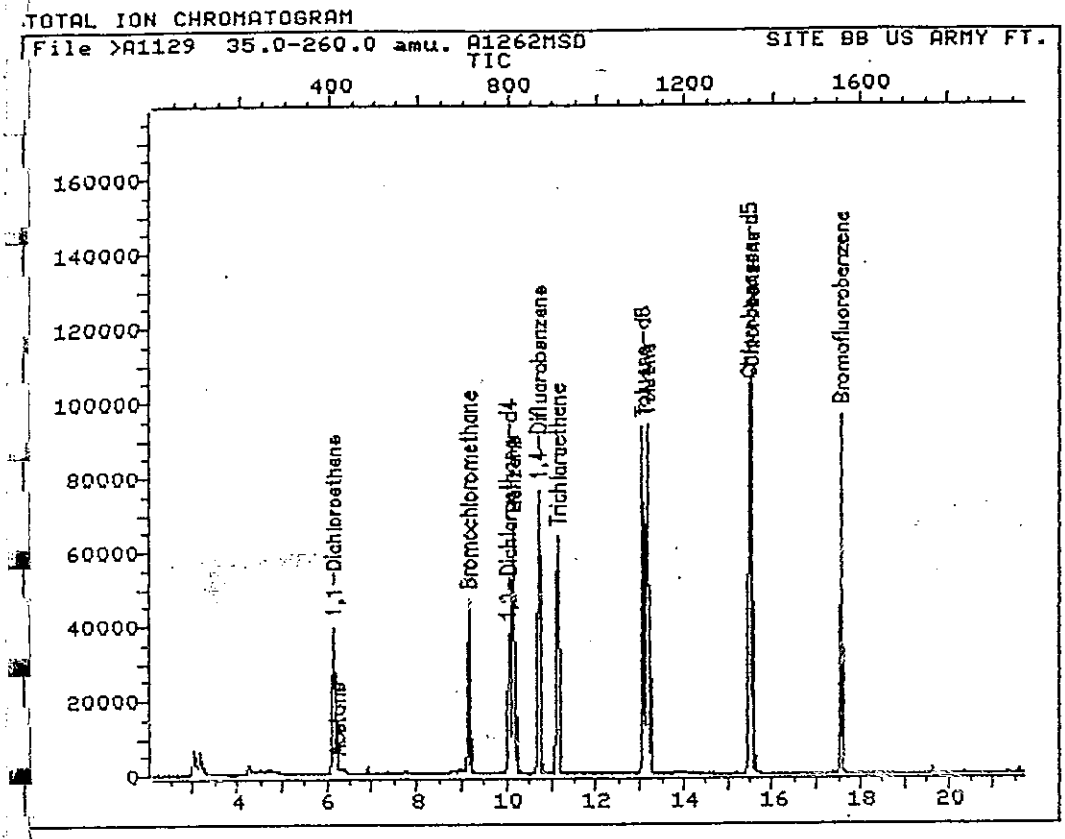
Operator ID: JEFF Quant Rev: 6 Quant Time: 930326 19:30
Output File: ^A1129::QT Injected at: 930326 19:00
Data File: >A1129::D2 Dilution Factor: 1.00000
Name: A1262MSD
Misc: SITE 88 US ARMY FT. MONMOUTH 5G/5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930326 16:54

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.15	710	25563	50.00	UG/L	100
)	Acetone	6.23	416	2559	6.52	UG/L	80
1)	1,1-Dichloroethene	6.14	407	54487	45.32	UG/L	100
21)	1,2-Dichloroethane-d4	10.03	799	54323	53.30	UG/L	100
2)	*1,4-Difluorobenzene	10.71	867	120765	50.00	UG/L	100
2)	Benzene	10.14	810	109557	52.69	UG/L	100
29)	Trichloroethene	11.14	910	41804	47.55	UG/L	81
31)	Toluene-d8	13.05	1103	123050	48.70	UG/L	100
3)	Toluene	13.16	1114	135534	49.70	UG/L	98
39)	*Chlorobenzene-d5	15.48	1347	103910	50.00	UG/L	100
40)	Chlorobenzene	15.53	1352	103602	49.69	UG/L	95
4)	Bromofluorobenzene	17.54	1555	64592	48.48	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1129::D2 Quant Output File: ^A1129::QT
Name: A1262MSD
Misc: SITE BB US ARMY FT. MONMOUTH 5G/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930326 16:54

Operator ID: JEFF
Quant Time: 930326 19:30
Injected at: 930326 19:00

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21st Century Environmental Contract No.:
Lab Code: Case No: SAS No.: SDG No.:
MATRIX SPIKE- EPA SAMPLE NO.:A1263

COMPOUND NAME	SPIKE ADDED UG/KG	MS CONC UG/KG	SAMP CONC UG/KG	MS % REC#	QC LIMITS RECOVERY
Phenol	100	71.7	ND	72	26-90
2-Chlorophenol	100	77.2	ND	77	25-102
1,-4-Dichlorobenzene	50	39.3	ND	79	28-104
N-Nitroso-di-n-prop. (1)	50	28.2	ND	56	41-126
1,2,4-Trichlorobenzene	50	39.8	ND	80	38-107
4-Chloro-3-methylphenol	100	80.4	ND	80	26-103
Acenapthene	50	41.8	ND	84	31-137
4-Nitrophenol	100	74.1	ND	74	11-114
2,4-Dinitrotoluene	50	36.0	ND	72	28-89
Pentachlorophenol	100	91.7	ND	92	17-109
Pyrene	50	42.9	ND	86	35-142

COMPOUND NAME	SPIKE ADDED UG/KG	MSD CONC UG/KG	MSD % REC.	% RPD	QC LIMITS RPD	QC LIMITS RECOV
Phenol	100	70.2	70	2	35	26-90
2-Cholrophenol	100	76.1	76	1	50	25-102
1,-4-Dichlorobenzene	50	38.9	78	1	27	28-104
n-Nitroso-di-n-prop.	50	28.0	56	<1	38	41-126
1,2,4-Trichlorobenzene	50	37.6	75	6	23	38-107
4-Chloro-3-Methylphenol	100	78.8	79	2	33	26-103
Acenaphthene	50	41.0	82	2	19	31-137
4-Nitrophenol	100	69.9	70	6	50	11-114
2,4-Dinitrotoluene	50	36.7	73	2	47	28-89
Pentachlorophenol	100	93.2	93	<1	47	17-109
Pyrene	50	44.4	89	3	36	32-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values
* Values outside of qc limits

RPD: out of outside limits
Spike Recovery: out of outside limits

COMMENTS: _____

QUANT REPORT

Operator ID: JEFF
Output File: ^C0788::D3
Data File: >C0788::D4
Name: A1263MS
Misc: 032393

Quant Rev: 6 Quant Time: 930324 13:10
Injected at: 930323 20:53
Dilution Factor: 1.00000

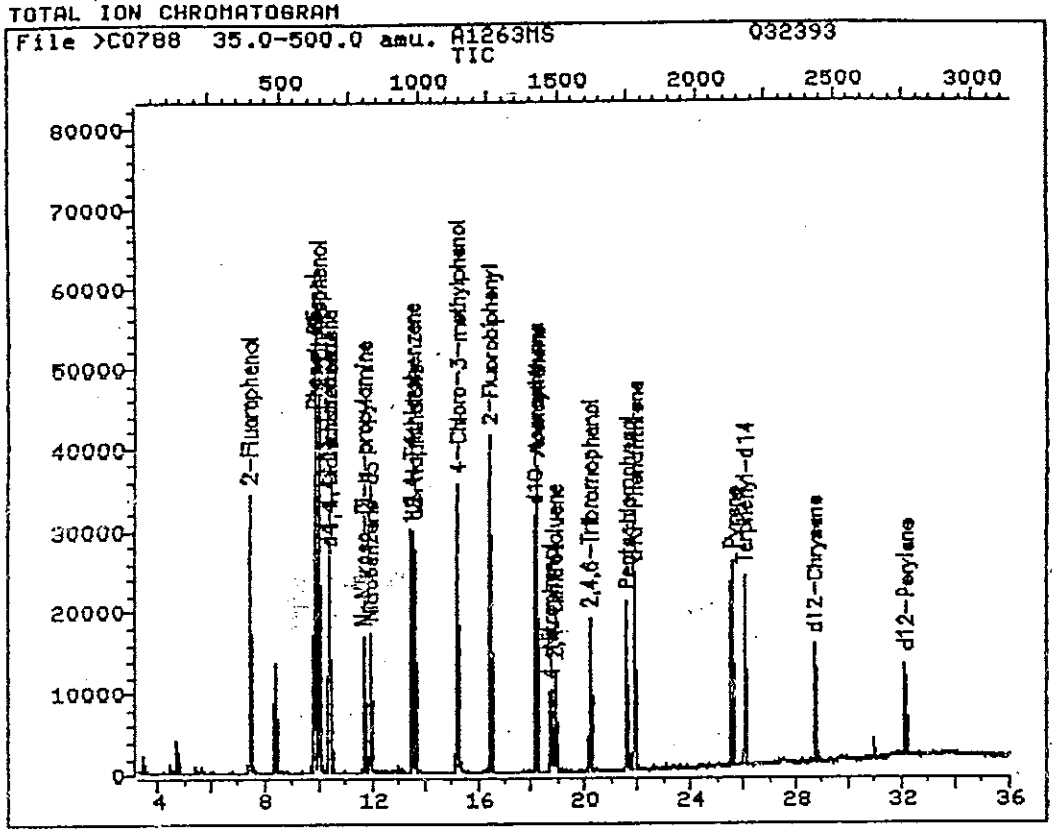
BTL# 8

ID File: ID0323::D5
Title: hSL BNA STD
Last Calibration: 930324 12:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.37	673	15240	40.00	UG/L	90
4)	2-Fluorophenol	7.39	388	18070	87.85	UG/L	91
5)	Phenol-d5	9.79	618	26597	98.58	UG/L	88
6)	Phenol	9.82	621	27774	71.67	UG/L	78
8)	2-Chlorophenol	9.96	634	24704	77.17	UG/L	96
10)	1,4-Dichlorobenzene	10.41	677	15179	39.29	UG/L	94
16)	N-Nitroso-Di-n-propylamine	11.63	794	6234	28.21	UG/L	89
18)	*d8-Naphthalene	13.57	980	29401	40.00	UG/L	88
19)	Nitrobenzene-d5	11.92	822	12362	47.08	UG/L	87
27)	1,2,4-Trichlorobenzene	13.49	972	13436	39.78	UG/L	98
31)	4-Chloro-3-methylphenol	15.21	1137	17363	80.42	UG/L	89
33)	*d10-Acenaphthene	18.10	1414	16481	40.00	UG/L	91
38)	2-Fluorobiphenyl	16.42	1253	28969	52.29	UG/L	95
43)	Acenaphthene	18.18	1422	22566	41.83	UG/L	95
45)	4-Nitrophenol	18.69	1471	4993	74.11	UG/L	98
47)	2,4-Dinitrotoluene	18.85	1486	6502	36.04	UG/L	93
53)	*d10-Phenanthrene	21.86	1775	23581	40.00	UG/L	99
56)	2,4,6-Tribromophenol	20.16	1612	4196	101.53	UG/L	97
59)	Pentachlorophenol	21.58	1748	5906	91.70	UG/L	94
64)	*d12-Chrysene	28.69	2429	13982	40.00	UG/L	97
65)	Pyrene	25.56	2129	29622	42.89	UG/L	99
67)	Terphenyl-d14	26.02	2173	20017	54.10	UG/L	87
73)	*d12-Perylene	32.13	2758	11675	40.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0788::D4 Quant Output File: ^C0788::D3
Name: A1263MS
Misc: 032393 BTL# 8

Id File: ID0323::D5
Title: hSL BNA STD
Last Calibration: 930324 12:17

Operator ID: JEFF
Quant Time: 930324 13:10
Injected at: 930323 20:53

QUANT REPORT

Operator ID: JEFF
Output File: ^C0789::D3
Data File: >C0789::D4
Name: A1263MSD
Misc: 032393

Quant Rev: 6 Quant Time: 930324 13:15
Injected at: 930323 21:39
Dilution Factor: 1.00000

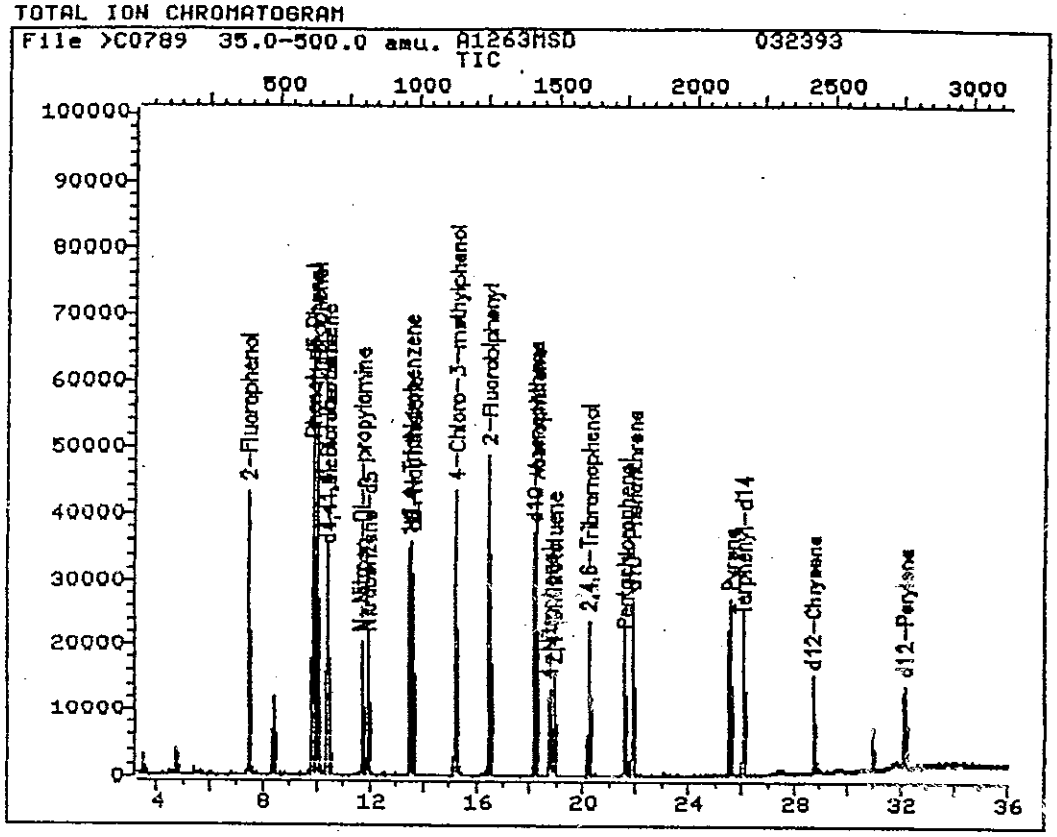
BTL# 9

ID File: ID0323::D5
Title: hSL BNA STD
Last Calibration: 930324 12:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.37	673	18428	40.00	UG/L	96
4)	2-Fluorophenol	7.40	388	23315	93.74	UG/L	89
5)	Phenol-d5	9.80	618	32308	99.03	UG/L	89
6)	Phenol	9.83	621	32912	70.23	UG/L	76
8)	2-Chlorophenol	9.96	634	29464	76.12	UG/L	97
10)	1,4-Dichlorobenzene	10.41	677	18151	38.86	UG/L	92
16)	N-Nitroso-Di-n-propylamine	11.63	794	7487	28.02	UG/L	92
18)	*d8-Naphthalene	13.57	980	35921	40.00	UG/L	89
19)	Nitrobenzene-d5	11.92	822	15125	47.15	UG/L	85
27)	1,2,4-Trichlorobenzene	13.48	971	15524	37.62	UG/L	91
31)	4-Chloro-3-methylphenol	15.21	1137	20797	78.84	UG/L	89
33)	*d10-Acenaphthene	18.10	1414	19261	40.00	UG/L	92
38)	2-Fluorobiphenyl	16.42	1253	35042	54.13	UG/L	94
43)	Acenaphthene	18.18	1422	25823	40.96	UG/L	95
45)	4-Nitrophenol	18.69	1471	5500	69.85	UG/L	95
47)	2,4-Dinitrotoluene	18.85	1486	7735	36.69	UG/L	93
53)	*d10-Phenanthrene	21.86	1775	26351	40.00	UG/L	99
56)	2,4,6-Tribromophenol	20.16	1612	5103	110.50	UG/L	96
59)	Pentachlorophenol	21.57	1747	6706	93.17	UG/L	96
64)	*d12-Chrysene	28.69	2429	14191	40.00	UG/L	97
65)	Pyrene	25.56	2129	31142	44.43	UG/L	98
67)	Terphenyl-d14	26.02	2173	21466	57.16	UG/L	87
73)	*d12-Perylene	32.13	2759	12259	40.00	UG/L	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0789::D4 Quant Output File: ^C0789::D3
Name: A1263MSD
Misc: 032393 BTL# 9

Id File: ID0323::D5
Title: hSL BNA STD
Last Calibration: 930324 12:17

Operator ID: JEFF
Quant Time: 930324 13:15
Injected at: 930323 21:39

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21ST CENTURY ENVIRONMENTAL Contract:N/A

Lab Code: NJ 08031 Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix Spike - EPA Sample No.: A1254

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Lindane	100	0.00	88	88	46-127
Heptachlor	100	0.00	94	94	35-130
Aldrin	100	0.00	90	90	34-132
Dieldrin	100	0.00	66	66	31-134
Endrin	100	0.00	101	101	42-139
4.4'-DDT	100	0.00	83	83	23-134

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lindane	100	101	101	14	50	46-127
Heptachlor	100	108	108	14	31	35-130
Aldrin	100	103	103	13	43	34-132
Dieldrin	100	76	76	14	38	31-134
Endrin	100	121	121	18	45	42-139
4.4'-DDT	100	97	97	16	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of qc limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

00134

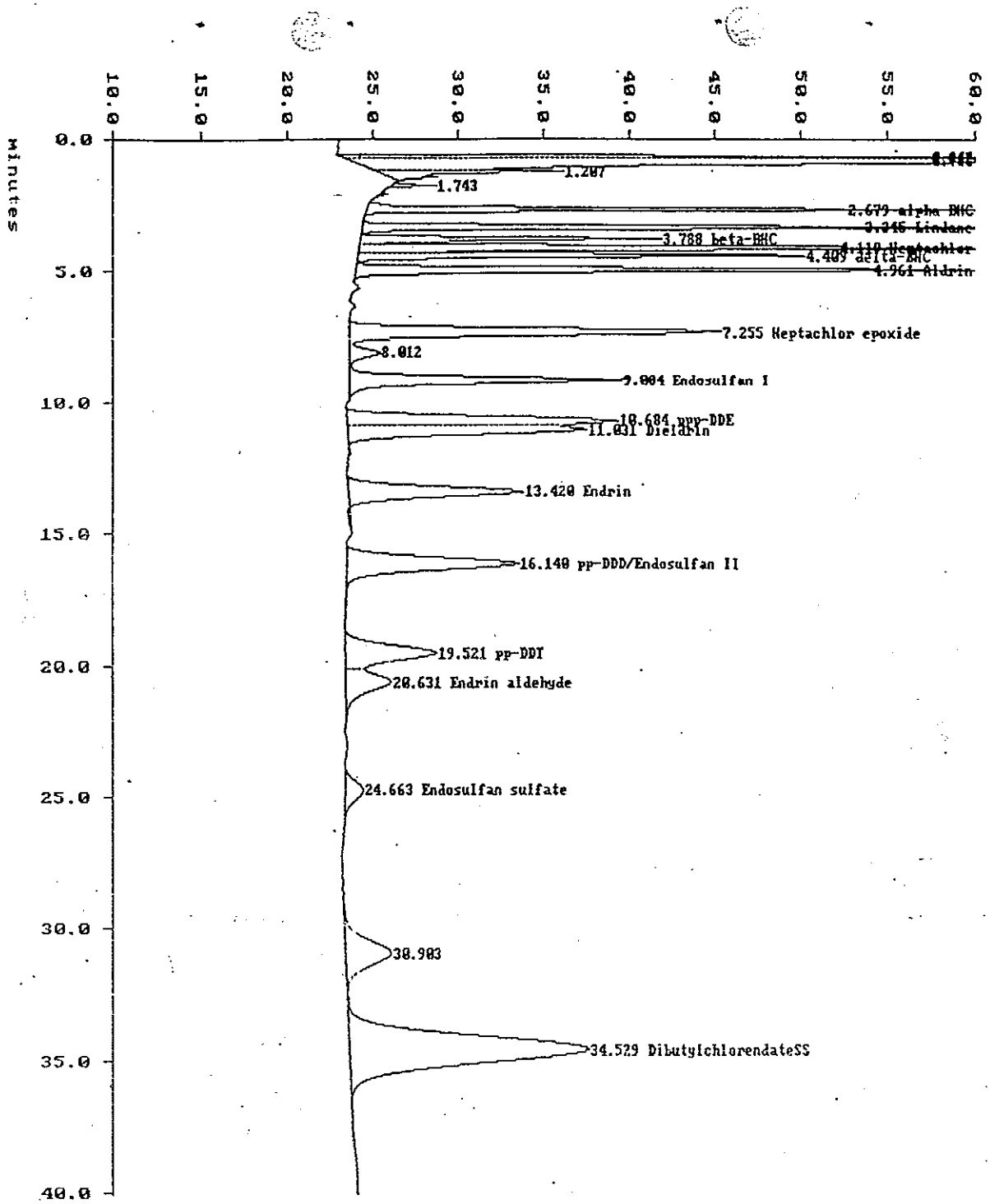
Instrument: PE-1
Column: SP 2250/2401

File : AS100_01.R01 A1254 MS 10.03g Keegan
Run : 01 Queue : PEST Set Number : 1 Type : Sample
Path : C:\PP2
Collection : 10:35:48 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Integration: 11:15:56 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993]
Report : 19:22:19 Mar 16 1993 Method : PPP-DBC [18:59:40 Mar 16 1993]

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.647	1133836	T		0.0000	unknown
2	0.716	826475	T		0.0000	unknown
3	0.783	1917891	T		0.0000	unknown
4	1.207	90951			0.0000	unknown
5	1.743	14099	V		0.0000	unknown
6	2.679	415954	V	2.677	0.0901	alpha-BHC
7	3.345	371069	T	3.341	0.0884	Lindane
8	3.788	150370	T	3.781	0.0795	beta-BHC
9	4.119	375564	T	4.117	0.0935	Heptachlor
10	4.409	242755	V	4.403	0.0628	delta-BHC
11	4.961	383545		4.960	0.0902	Aldrin
12	7.255	331608	T	7.251	0.0884	Heptachlor epoxide
13	8.012	40930	T		0.0000	unknown
14	9.084	317545		9.085	0.0881	Endosulfan I
15	10.684	344808	T	10.680	0.1132	ppp-DDE
16	11.031	294799		11.032	0.0657	Dieldrin
17	13.420	282022		13.427	0.1012	Endrin
18	16.140	335101		16.136	0.1060	pp-DDD/Endosulfan II
19	19.521	219076	T	19.517	0.0832	pp-DDT
20	20.631	128012		20.616	0.0634	Endrin aldehyde
21	24.663	55721		24.627	0.0223	Endosulfan sulfate
22	30.903	182290	T		0.0000	unknown
23	34.529	1004450		34.461	0.2700	DibutylchlorendateSS
				37.533		Methoxychlor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20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.207
1.743
3.788 beta-BHC
4.409 delta-BHC
7.255 Heptachlor epoxide
8.012
9.004 Endosulfan I
10.684 pop-DDE
11.031 Dieldrin
13.420 Endrin
16.140 pp-DDD/Endosulfan II
19.521 pp-DDT
20.631 Endrin aldehyde
24.663 Endosulfan sulfate
30.983
34.529 DibutylchlorendateSS

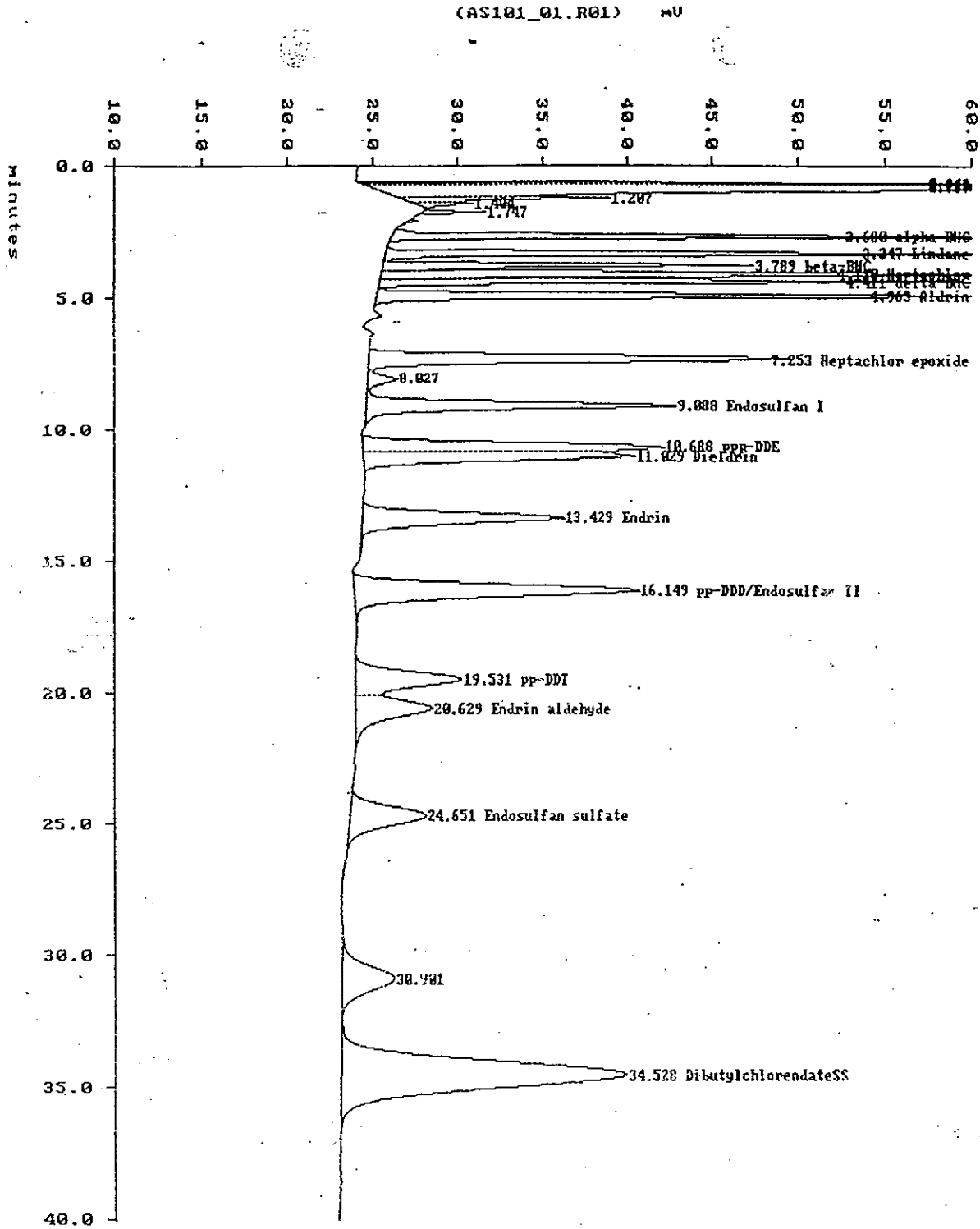
Instrument: PE-1
Column: SP 2250/2401

File : AS101_01.R01 A1254 MSD 10.02g Keeg
Run : 01 Queue : PEST Set Number : 1 Type : Samp
Path : C:\PP2
Collection : 11:17:53 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993 :
Integration: 11:58:02 Mar 16 1993 Method : PPP-DBC [02:03:16 Mar 16 1993 :
Report : 19:24:26 Mar 16 1993 Method : PPP-DBC [18:59:40 Mar 16 1993 :

Sample Amt : 1.00000e+000 Dilution: 1.00000e+000

EXTERNAL STANDARD (AREA)

Pk #	RT	Area	BC	ExpRT	pg	Name
1	0.643	347640	T		0.0000	unknown
2	0.720	867957	T		0.0000	unknown
3	0.787	3261569	T		0.0000	unknown
4	1.207	80383	T		0.0000	unknown
5	1.404	23911			0.0000	unknown
6	1.747	20700	V		0.0000	unknown
7	2.680	472672	V	2.677	0.1024	alpha-BHC
8	3.347	425332	T	3.341	0.1014	Lindane
9	3.789	188748	T	3.781	0.0997	beta-BHC
10	4.120	432507	T	4.117	0.1076	Heptachlor
11	4.411	363007	T	4.403	0.0938	delta-BHC
12	4.963	438517		4.960	0.1032	Aldrin
13	7.253	378853	T	7.251	0.1010	Heptachlor epoxide
14	8.027	41609	T		0.0000	unknown
15	9.088	361320		9.085	0.1003	Endosulfan I
16	10.688	383090	T	10.680	0.1258	ppp-DDE
17	11.029	341192		11.032	0.0760	Dieldrin
18	13.429	338124		13.427	0.1213	Endrin
19	16.149	556683		16.136	0.1761	pp-DDD/Endosulfan II
20	19.531	255089	T	19.517	0.0969	pp-DDT
21	20.629	219538		20.616	0.1087	Endrin aldehyde
22	24.651	235668		24.627	0.0941	Endosulfan sulfate
23	30.901	206620	T		0.0000	unknown
24	34.528	1210829		34.461	0.3255	DibutylchlorendateSS
				37.533		Methoxychlor


(AS101_01.R01) mV
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
Minutes
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
1.207
1.747
3.789 beta-BHC
7.253 Heptachlor epoxide
8.027
9.088 Endosulfan I
10.688 pp-DDE
13.429 Endrin
16.149 pp-DDD/Endosulfan II
19.531 pp-DDT
20.629 Endrin aldehyde
24.651 Endosulfan sulfate
30.981
34.528 DibutylchlorendateSS

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

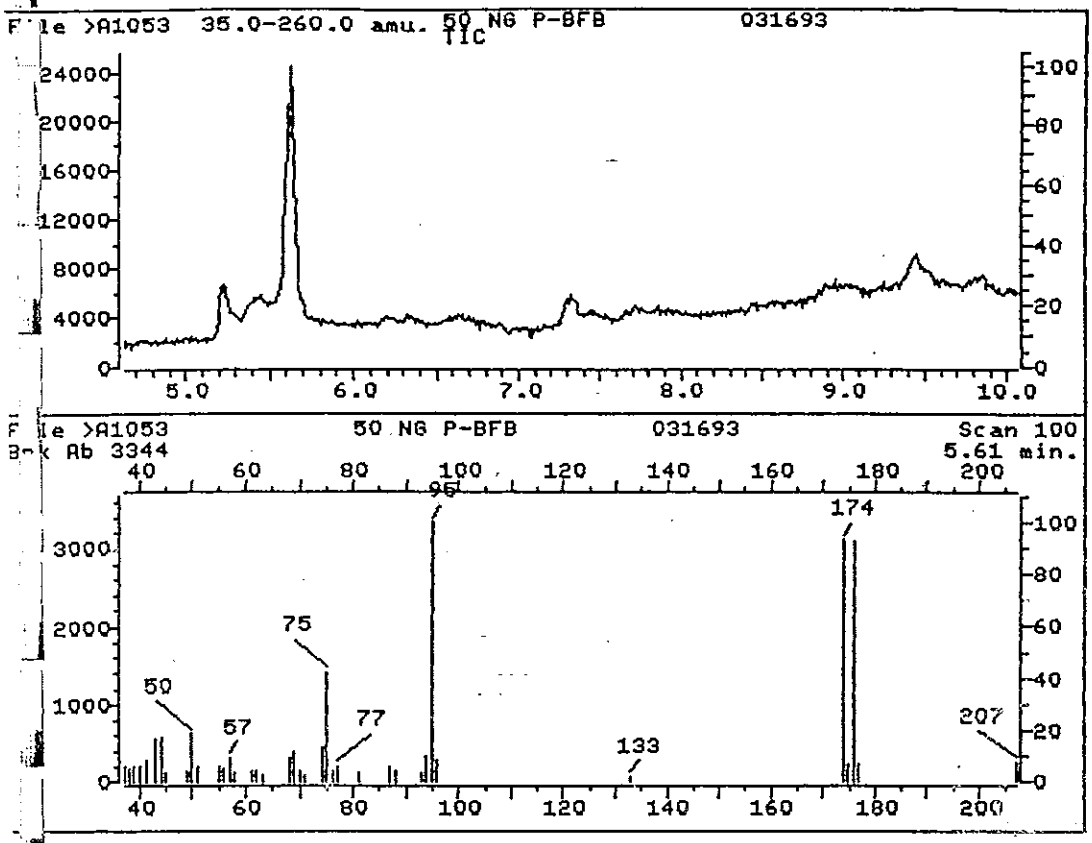
DATE AND TIME OF INJECTION: 3/16/93 12:01
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Lynch.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	19.08	19.08	Ok
75	30-60% of mass 95	42.61	42.61	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.61	8.61	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	93.33	93.33	Ok
175	5-9% of mass 174	7.03	7.53	Ok
176	95-101% of mass 174	92.85	99.49	Ok
177	5-9% of mass 176	6.46	6.96	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A1053::D3		50 NG P-BFB		3/16/93	12:01
>A1055::D3		50 PPB VOA CHK STD		3/16/93	13:47
>A1057::D3		PROCEDURE BLANK		3/16/93	16:57
>A1058::D2		A1260		3/16/93	17:47
>A1059::D2		A1265		3/16/93	18:22
>A1060::D2		A1266		3/16/93	18:56
>A1061::D2		A1254		3/16/93	19:31
>A1062::D2		A1255		3/16/93	20:12
>A1063::D2		A1256		3/16/93	20:47
>A1064::D2		A1257		3/16/93	21:22
>A1065::D2		A1258		3/16/93	21:57



>A1053 50 NG P-BFB 031693
100 NRM

File: >A1053 Scan #: 100 Retn. time: 5.61

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
7.05	5.772	49.05	4.127	62.10	4.217	76.10	4.217	96.00	8.612
8.05	5.173	50.05	19.079	63.10	2.871	77.00	5.951	132.95	1.944
9.05	5.861	51.05	6.071	68.10	9.420	81.00	3.319	173.90	93.331
9.95	5.921	55.05	5.891	69.10	11.962	87.00	5.831	174.90	7.028
1.15	8.373	56.05	4.994	70.10	3.828	88.00	4.575	175.90	92.853
3.05	16.717	57.05	9.240	71.10	2.572	93.00	3.648	176.90	6.459
4.05	17.315	58.05	3.439	74.10	13.666	94.00	10.377	206.95	7.566
5.05	3.439	61.10	3.917	75.10	42.614	95.00	100.000		

T,FF

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

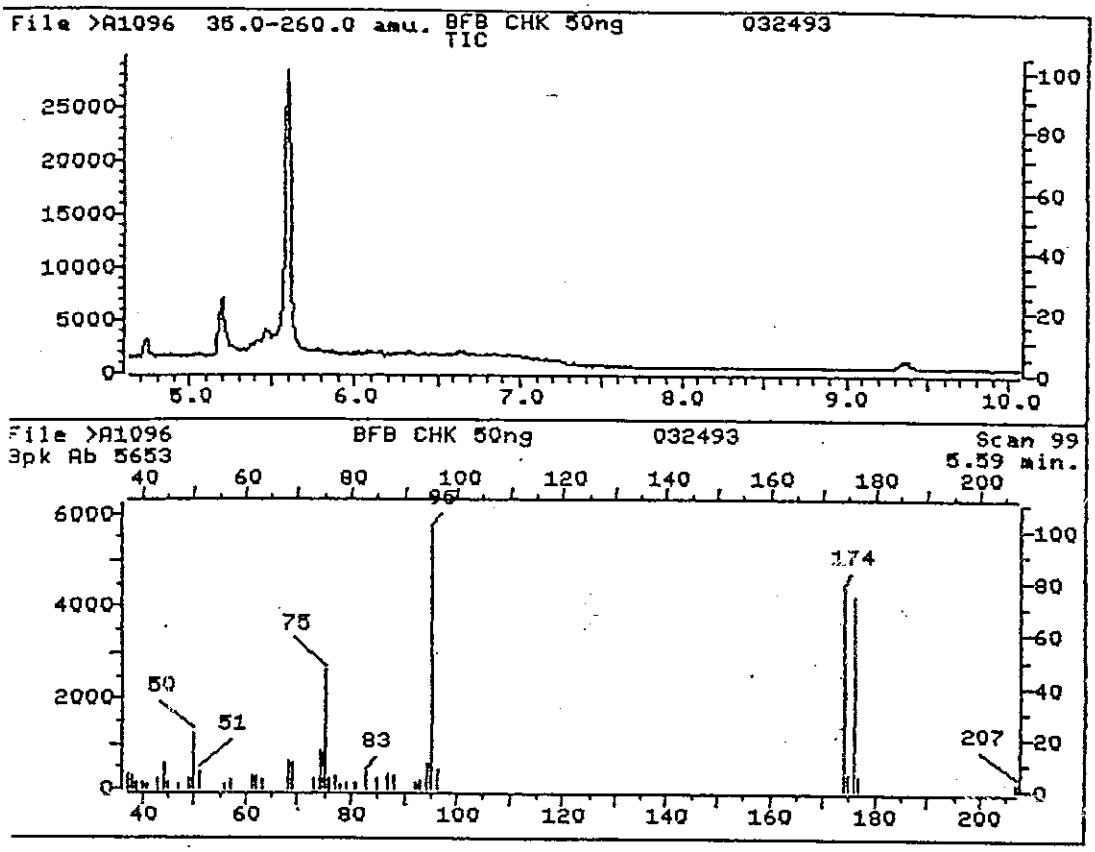
DATE AND TIME OF INJECTION: 3/24/93 9:18
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Pym

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.71	21.71	Ok
75	30-60% of mass 95	46.26	46.26	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.75	7.75	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	77.66	77.66	Ok
175	5-9% of mass 174	5.61	7.22	Ok
176	95-101% of mass 174	74.65	96.13	Ok
177	5-9% of mass 176	5.11	6.85	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A1096::D2		BFB CHK 50ng		3/24/93	9:18
>A1097::D2		HSL CAL CHK 20ppb		3/24/93	10:32
>A1098::D2		HSL CAL CHK 50ppb		3/24/93	11:28
>A1099::D2		HSL CAL CHK 100ppb		3/24/93	12:05
>A1100::D2		HSL CAL CHK 150ppb		3/24/93	12:44
>A1101::D2		HSL CAL CHK 200ppb		3/24/93	13:30
>A1103::D2		BLANK		3/24/93	16:25
>A1106::D2		A1290		3/24/93	18:11
>A1107::D2		A1259		3/24/93	18:46
>A1108::D2		A1261		3/24/93	19:22
>A1109::D2		A1262		3/24/93	19:57
>A1110::D2		A1263		3/24/93	20:32
>A1111::D2		A1264		3/24/93	21:07



>A1096 BFB CHK 50ng 032493
99 NRM

File: >A1096 Scan #: 99 Retn. time: 5.59

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	5.696	49.05	4.405	68.10	10.525	79.00	2.600	94.10	10.366
38.05	5.272	50.05	21.705	69.10	9.995	81.00	2.406	95.10	100.000
39.05	2.919	51.05	7.111	73.00	4.192	83.00	6.651	96.10	7.748
39.95	2.530	56.05	1.999	74.10	14.647	85.00	4.139	174.00	77.658
41.05	1.734	57.05	3.485	75.10	46.259	87.00	5.891	175.00	5.608
43.05	4.139	61.10	5.236	76.10	3.927	88.00	4.953	176.00	74.651
44.05	10.402	62.10	4.635	77.00	5.378	92.10	2.653	177.00	5.112
45.05	2.370	63.10	3.113	78.10	1.857	93.00	3.573	207.05	2.936
47.05	1.716								

21ST CENTURY ENVIRONMENTAL INC.

GC/MS STANDARD DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP) TUNE
CRITERIA FRO SEMIVOLATILES 50ng

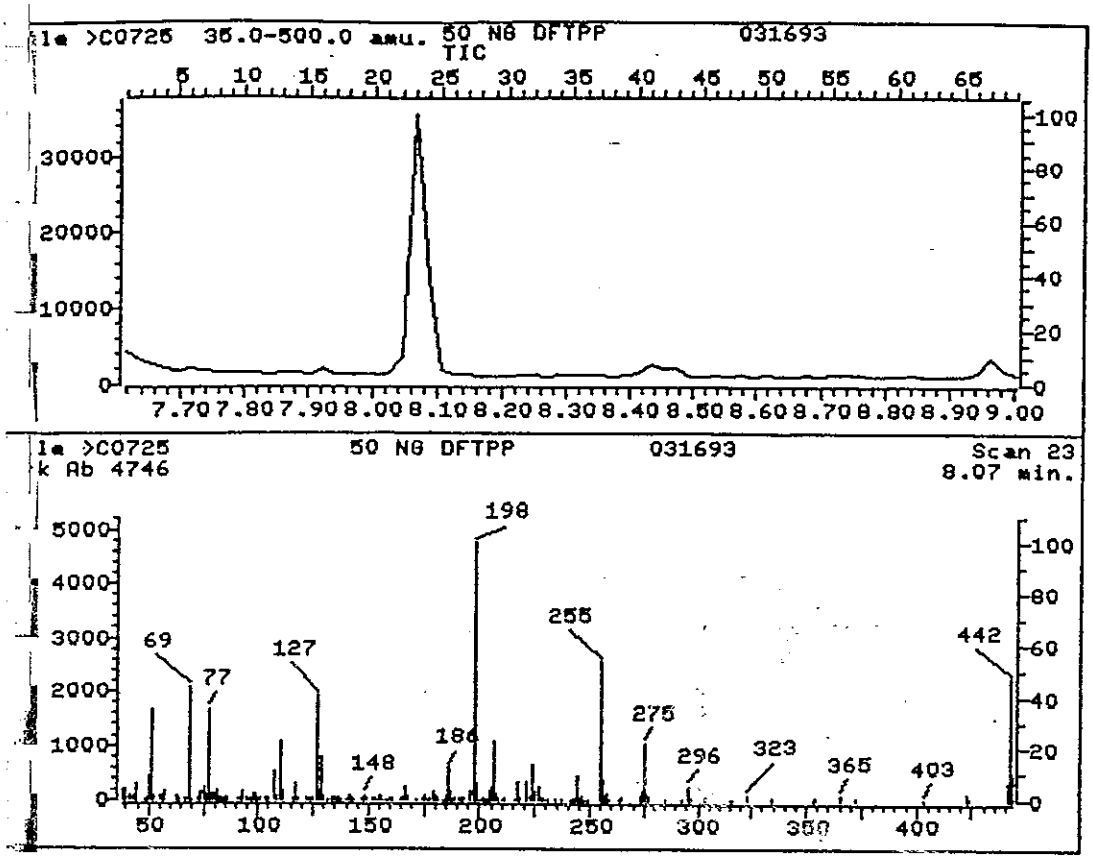
DATE AND TIME OF INJECTION: 3/16/93 12:14
INSTRUMENT ID: 5970

DATA RELEASE AUTHORIZED BY Richard W Pyne.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	34.93	34.93	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	43.66	43.66	Ok
70	Less than 2% of mass 69	.44	1.01	Ok
127	40-60% of mass 198	40.50	40.50	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.13	6.13	Ok
275	10-30% of mass 198	21.74	21.74	Ok
365	Greater than 1% of mass 198	1.85	1.85	Ok
441	0-100% of mass 443	6.76	73.96	Ok
442	Greater than 40% of mass 198	46.82	46.82	Ok
443	17-23% of mass 442	9.14	19.53	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE TIME
>C0725::D2		50 NG DFTPP		3/16/93 12:14
>C0726::D2		50 PPM BNA STD		3/16/93 12:33
>C0727::D2		120 PPM BNA STD		3/16/93 14:39
>C0728::D2		80 PPM BNA STD		3/16/93 15:26
>C0729::D2		120PPM BNA STD		3/16/93 16:13
>C0730::D2		160PPM BNA STD		3/16/93 17:00
>C0731::D2		BLANK		3/16/93 17:47
>C0732::D2		AQUEOUS BLNK 03/15		3/16/93 18:45
>C0733::D2		A1265 FIELD BLNK		3/16/93 19:32
>C0734::D2		A1255 SITE B		3/16/93 20:19
>C0735::D2		A1256 SITE C		3/16/93 21:06
>C0736::D2		A1257 SITE D		3/16/93 21:53
>C0737::D2		A1258 SITE E		3/16/93 22:40



>C0725 50 NG DFTPP 031693
23 NRM

File: >C0725 Scan #: 23 Retn. time: 8.07

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.15	.674	91.05	.780	141.00	2.107	193.00	1.096	246.95	.295
39.00	4.340	92.05	.548	141.90	.695	196.10	3.477	248.85	.442
39.90	4.235	93.05	3.729	143.00	.485	198.00	100.000	255.00	53.519
41.10	1.643	95.05	.548	147.05	1.032	199.00	6.131	256.00	7.354
43.10	1.791	96.05	.421	147.95	2.128	200.10	.506	257.00	.590
44.00	6.153	97.05	.695	149.05	.737	201.60	.695	258.00	2.887
48.00	.316	98.05	2.655	152.05	.527	202.80	.506	259.00	.442
49.00	.611	99.05	2.255	152.95	.822	203.10	.506	264.00	.337
50.10	8.976	99.95	.295	155.05	1.370	204.00	3.498	264.30	.274
51.10	34.935	101.00	1.243	156.05	1.686	205.00	5.310	265.00	1.117
52.10	1.707	104.00	.885	157.95	.485	206.00	22.566	272.95	1.665
55.05	1.580	104.90	1.117	159.15	.358	207.10	2.676	274.05	3.540
55.95	1.370	107.00	10.893	160.05	.759	208.05	.948	275.05	21.745
57.05	3.540	108.00	1.749	160.95	.990	210.05	.464	276.05	2.571
63.05	1.433	110.00	22.461	164.90	.885	210.95	1.011	277.05	1.601
64.05	.527	111.00	3.540	166.00	.969	216.05	.442	285.00	.274
67.15	.527	116.05	.716	167.00	5.394	216.95	6.595	293.00	.316
69.05	43.658	116.95	6.195	168.00	2.044	218.05	.737	296.00	5.289
70.00	.442	117.95	.611	171.90	.421	221.05	6.595	297.00	.569
72.30	.232	122.05	.474	174.10	.716	223.00	1.370	298.05	.758

74.00	2.772	122.75	.737	175.70	.442	223.00	3.245	316.00	.358
75.00	5.436	124.95	.630	177.05	1.032	227.00	5.215	323.00	1.812
76.10	2.149	127.05	40.495	178.95	3.413	228.00	2.116	334.05	1.138
77.10	35.188	128.05	3.182	180.05	2.065	229.00	1.285	352.90	.358
78.10	2.908	128.95	16.709	181.05	1.222	231.10	.442	354.00	.611
79.00	2.465	130.05	1.622	184.15	.379	234.10	.358	365.05	1.854
80.00	2.065	131.90	.358	185.05	1.960	237.00	.421	372.15	.674
81.00	3.329	134.00	.590	186.05	12.284	240.95	.337	402.95	.421
82.10	.906	135.10	1.180	187.05	3.603	241.95	.759	423.05	2.950
83.00	1.201	135.90	.569	187.95	.379	242.95	.674	424.05	.695
84.10	.464	137.00	.695	189.05	.864	244.05	9.355	441.10	6.764
85.05	.864	137.80	.379	191.15	.548	245.05	1.159	442.10	46.818
85.95	.801	140.20	.337	192.05	1.011	245.95	1.938	443.10	9.145

21ST CENTURY ENVIRONMENTAL INC.

GC/MS STANDARD DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP) TUNE
CRITERIA FOR SEMIVOLATILES 50ng

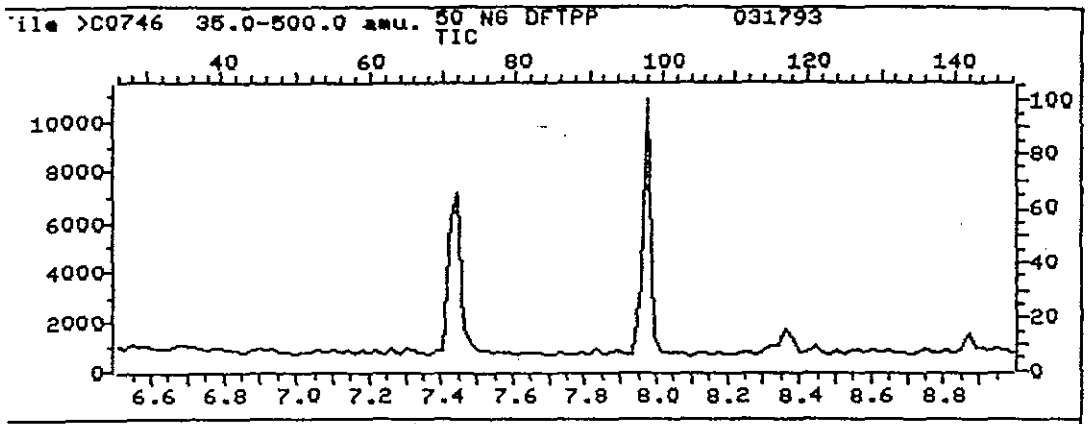
DATE AND TIME OF INJECTION: 3/17/93 13:09
INSTRUMENT ID: 5970

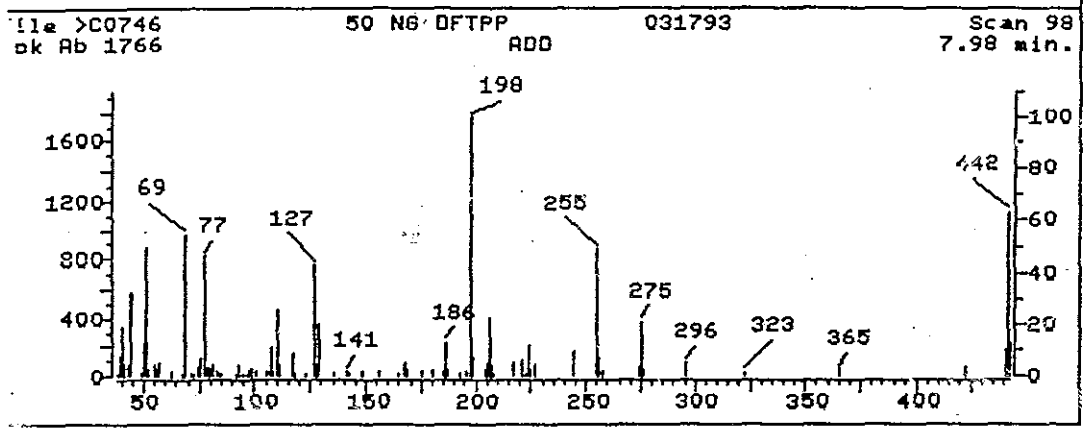
DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	49.72	49.72	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	54.70	54.70	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	42.81	42.81	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.96	6.96	Ok
275	10-30% of mass 198	20.95	20.95	Ok
365	Greater than 1% of mass 198	2.49	2.49	Ok
441	0-100% of mass 443	9.85	78.38	Ok
442	Greater than 40% of mass 198	63.25	63.25	Ok
443	17-23% of mass 442	12.57	19.87	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
I>C0746::DA		50 NG DFTPP		3/17/93	13:09
I>C0748::DA		50 PPM BNA STD		3/17/93	15:24
I>C0749::DA		NA BLANK 031593		3/17/93	16:36
I>C0750::DA		A1261 SITE AA		3/17/93	17:23
I>C0751::DA		A1262 SITE BB		3/17/93	18:10
I>C0752::DA		A1263 SITE CC		3/17/93	18:58
I>C0753::DA		A1264 SITE DD		3/17/93	19:45
I>C0754::DA		A1254 SITE A		3/17/93	20:31
I>C0755::DA		A1102		3/17/93	21:18
I>C0756::DA		A1103		3/17/93	22:05
I>C0757::DA		A1104		3/17/93	22:52
I>C0758::DA		A1105		3/17/93	23:39
I>C0759::DA		A0792 CYCLECHEM		3/18/93	0:25
I>C0760::DA		A0793 CYCLECHEM		3/18/93	1:12
I>C0761::DA		A0794 CYCLECHEM		3/18/93	1:59
I>C0762::DA		A0795 CYCLECHEM		3/18/93	2:46
I>C0763::DA		A0796 CYCLECHEM		3/18/93	3:32





>C0746 50 NG DFTPP 031793
98 ADD NRM

File: >C0746 Scan #: 98 Retn. time: 7.98

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.00	.793	74.00	3.228	107.00	10.476	167.95	2.718	222.85	.849
39.00	7.135	75.10	6.512	108.05	1.586	175.05	1.529	223.95	11.608
40.00	19.479	77.10	45.980	109.95	26.104	180.00	2.152	224.85	2.378
41.00	4.983	78.00	3.228	110.95	4.417	184.90	1.982	226.95	4.020
43.10	4.190	79.10	3.171	116.95	8.607	186.00	12.627	244.00	9.570
44.00	32.390	79.95	2.888	117.05	1.019	186.90	2.322	254.95	48.584
48.90	.736	80.95	4.247	118.05	.623	193.00	1.189	255.95	6.569
50.00	12.741	83.05	1.812	123.00	1.133	195.75	1.982	257.95	1.416
51.05	49.717	84.05	.566	127.00	42.809	195.95	1.925	274.00	3.681
51.95	2.322	85.05	1.019	128.00	3.624	197.95	100.000	274.90	20.951
55.05	4.190	91.95	1.076	129.00	19.706	198.85	6.965	276.00	2.775
55.95	1.869	93.05	4.247	135.00	1.019	204.05	2.548	295.80	4.757
57.05	4.700	95.00	.793	140.85	1.699	205.05	5.436	322.90	1.189
63.05	1.472	97.10	.849	141.95	.963	205.95	22.593	364.90	2.492
67.10	.793	98.00	2.831	148.05	1.699	206.95	4.247	422.90	3.171
69.00	54.700	99.00	2.831	156.00	1.699	207.85	1.076	441.00	9.853
71.00	1.189	101.00	1.755	165.00	1.133	216.90	5.040	442.00	63.250
72.80	.623	105.00	1.359	166.95	4.700	221.00	5.889	442.90	12.571